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Psychological Society

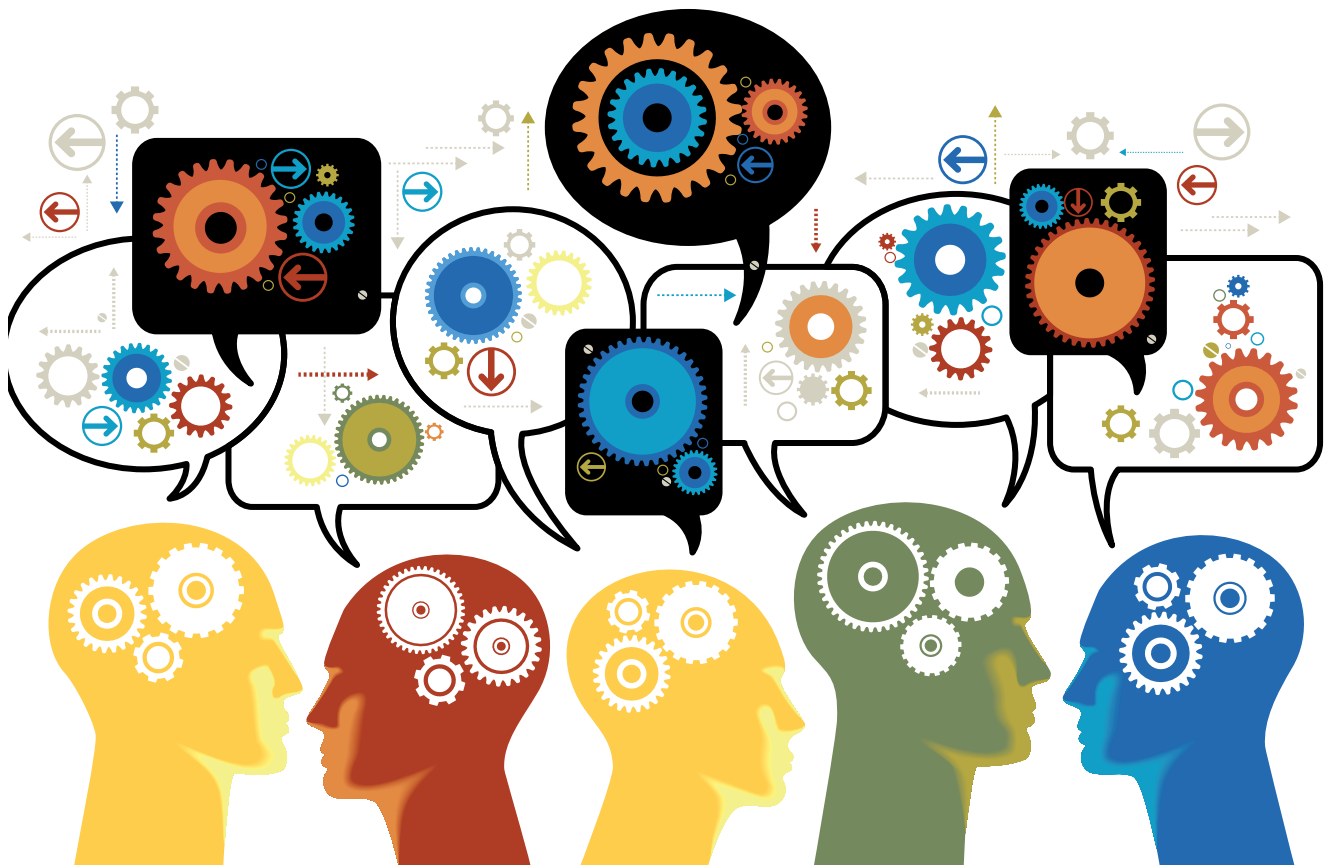


Division of
Occupational Psychology

Applying the science of psychology to work

DOP Annual Conference 2015

7–9 January – The Hilton, Glasgow



Learning, Sharing, Impacting

Book of Abstracts

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Posters

DOP01

A study of university graduates' perceptions of selection processes in UK-based organisations.

Kristina Aloyan

Theme **Psychological Assessment at Work**

The present study explores graduates' experiences with recruitment and selection processes. Its main objective is to uncover how recruitment and selection are perceived by recent university graduates, which factors are important for them and what challenges they usually face.

How is it linked to the conference?

This study is relevant to the conference theme—*Learning, Sharing and Impacting*—because it provides insight into the relatively unexplored topic of graduates' experiences. Moreover, it helps to share their views, which can have a significant impact on the dynamics of the British graduate labour market. This research is appropriate for the strand of the *Psychological Assessment at Work*, because it directly tackles the issue of employee attraction and selection in organisations.

Why is it interesting?

The public and organisations may find this research interesting because of three reasons. Firstly, there has been increasing competition on the graduate market, which offers a diverse workforce (King, 2003). Therefore, job search and selection procedures have become more complex for graduates. Secondly, from the demand-side, employers have become concerned with talent management as a driving force for business (Connor & Shaw, 2008). Attraction and selection of the right candidates and their professional development into future leaders has become a strategic choice for organisations. Thirdly, the increased popularity of graduate schemes suggests that UK-based companies are ready to invest into entry-level candidates and track their career (Bedingfield, 2005).

Why is this study useful & stimulating?

This research reveals problems of recruitment and selection procedures that remain unrecognized by British companies and by society. It is notable that organisational attempts to increase the effectiveness of selection may trigger graduates' negative reactions, decrease their employment interest and damage a company's reputation (Smither et al, 1993). In order to develop the right policies, an understanding of graduates' needs and concerns is required. Thus, qualitative research based on the interview technique is deemed to be beneficial to uncover methods to improve the flaws of graduate recruitment and selection.

What is novel in this?

Unlike previously conducted studies that predominantly focus on quantitative research, my study adopted qualitative design to scrutinise the perceptions of graduates regarding recruitment and selection at a more individual level. The study is valuable because it brings the research attention to university graduates rather than employers. Therefore, it aims to shift the focus from widely discussed employers' perspectives to the perspectives of university graduates.

The underpinning theories

Graduate employment is broadly scrutinised in the literature (Archer & Davison, 2008; Brynin, 2000; Connor & Shaw, 2008; Roffe, 1999). Scholars address a variety of issues including educational gaps influencing recruitment, the role of graduate schemes and graduate selection challenges in SMEs and large organisations (Bedingfield, 2005; Elias & Purcell, 2004; Hayman & Lorman 2004; Heaton, McCracken & Harrison, 2008). Considering education, Heaton, McCracken and Harrison (2008) mention that UK-based companies face difficulties in attracting the right level of candidates. Regardless of the large pool of applicants, they report a lack of candidates that would match the entry level criteria.

Owen (2004) highlights that despite a complex structure of university programmes, graduates are not prepared for work in terms of core skills. Thus, employers need to invest in graduates to bridge this gap according to their requirements. In support, scholars (Andrews & Higson 2008; Raybould & Sheedy, 2005) argue that specific knowledge is considered to be an additional contribution rather than graduates' main advantage. Employers are more interested in soft skills, which are applicable to different areas of business, than in graduates' specific knowledge. Elias and Purcell (2004) explored graduates' views concerning these educational flaws. They surveyed graduates seven years after obtaining a relevant degree and discovered the discrepancy between skills, which were developed during formal education and those used at

workplaces. Graduates reported that little attention was devoted to communication, problem-solving and team-working ability despite their importance for jobs.

A large part of the literature is devoted to graduate schemes that are aimed at developing a desired employee profile (Bedingfield, 2005; Hayman & Lorman, 2004; Hogarth et al, 2007; Shaw & Fairhurst, 2008). Bedingfield (2005) outlines several reasons for the popularity of graduate schemes, including candidates' ongoing development aligned with company needs, low starting salaries and reduced temporary employment. According to the CIPD (2004), companies may save £4,100 in long term by hiring a graduate because of the relatively low starting wages offered to graduates. Moreover, Purcell, Morley and Rowley (2002) report that employers acknowledge that the right advertising and marketing are key aspects of effective graduate recruitment.

However, a difference in recruitment and selection strategies among SMEs and large corporate organisations should be highlighted. Large firms advertise and offer comprehensive and well-organised programmes that attract many applicants, whilst SMEs are more limited due to their scale and budget, offering less structured routes (Hogarth et al, 2007). Remarkably, these differences shape graduates' expectations regarding their future careers (Heaton, McCracken and Harrison; 2008). Stewart and Knowles (2000) examined the practice of 30 UK-based SMEs and identified that interviews were the most popular selection method for graduates, followed by personality tests. However, the use of personality tests raises concerns regarding the quality of selection, given their complementary rather than main function in hiring candidates.

Despite the extensive discussions on graduate schemes, few studies examined graduates' perceptions (e.g. King, 2003; Scholarios, Lockyer & Johnson, 2003; Wehner, Giardini & Kabst, 2012). The evidence shows that recruitment and selection are crucial for graduates as pre-socialisation stages, which shape further employment relations (Scholarios, Lockyer & Johnson, 2003). Wehner, Giardini and Kabst (2012) argue that the outsourcing of recruitment creates a negative attitude among graduates, decreases the attractiveness of companies and influences candidates' perceptions of fairness. Additionally, King (2003) outlines that despite employers' confidence in the popularity of rapidly changing careers, graduates tend to value stable working arrangements. He also emphasises that SMEs are often neglected in research on graduates' experience.

With respect to these underpinning theories, my study explores the following: *How do university graduates perceive processes of recruitment and selection in UK-based organisations?*

- 1) Which aspects of recruitment and selection are crucial for university graduates?
- 2) What are the main challenges of recruitment and selection that university graduates face?

Methodology

The study adopted a purposive sampling strategy. The sample consisted of 20 postgraduate students who were finishing their programmes by 2015 or who had already finished their MSc programme during the period from June 2013 to June 2014. The semi-structured interview technique was applied to collect the data. Interviews lasted approximately 30 minutes. Template analysis was employed in this research to scrutinise the collected data (Brooks & King, 2014). The Social Process Model of Selection (SPS) of Derous and de Witte (2001) served as a basis for 'a priori' themes and generation of the initial template, which is now used for further data analysis. Currently, the study is in progress and it will be finished by the 25th September 2014.

Anticipated results & discussion

At this stage of the research, it has become evident that university graduates have specific understanding of recruitment and selection procedures and the importance of certain aspects, including feedback and transparency of selection. It is anticipated that the initial template that revolves around the SPS model will change significantly and will result in a more narrow range of factors that are crucial for graduates in recruitment and selection. It is also anticipated that the size of companies and their image may have an impact on graduates' experiences. The initial data review demonstrates similarity of experiences despite the differences in educational background of graduates. Moreover, although graduates are searching for jobs across different industries, they express common concerns associated with recruitment and selection practices. It can be predicted that graduates may face challenges at the initial stages of selection, specifically at the sourcing stage when companies need to narrow down large applicant pools. Moreover,

they may face difficulties when exploring the amount of vacancies and the quality of information presented in them to make an application decision.

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DOP02

Why do some women not lead?

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Theme **Leadership, Engagement and Motivation**

Clear stereotypes exist around leadership, gender and nationality (Snaebjornsson & Edvardsson, 2012). In Europe, Germany ranks as one of the lowest countries to have women leaders (UNECE, 2013). This paper examines women's perception of leaders and their stereotypes about female leaders. Interpretative Phenomenological Analysis (IPA) was used in order to examine the participant's experience of four German women who had worked for at least 10 years. The analysis demonstrated that the participants all wished to gain a leadership role but felt there were prejudices and stereotypes which hindering them and women in general from becoming a leader.

Introduction

There are several different approaches to explain the situation that women often do not occupy managerial positions. The role congruity theory (Eagly & Karau, 2002) explains the lack of women in higher leading positions with gender roles and leadership roles which are not congruent to each other. This means that the female gender roles are contrary to leadership roles. Therefore women are perceived as wrong fit for leading roles, because leading behaviour is more seen as male behaviour (Eagly & Karau, 2002). Another interesting concept which might help understand women in leadership is the so called imposter syndrome. This says that women in leading positions feel like impostors as they do not feel capable of doing the leading job (Boots & Biggs, 2014).

Snaebjornsson & Edvardsson (2012) focussed on leadership, gender and nationality. Their findings suggest that although women and men are seen as equally efficient in leading positions female, participants tend to believe that a successful manager has to be a man. Furthermore these findings seem to be stable around the world as the research included papers from America, Asia, Africa and Europe. This may indicate that women do not believe they have the traits considered as essential to be a good leader.

In 2012, only 13% of directors in the 200 biggest companies in Germany were women and only 4% were managing directors (Bundesministerium für Familie, Senioren, Frauen und Jugend, 2013). While this is common across Europe, in Germany it seems to be more of an issue possibly due to cultural stereotypes (UNECE, 2013). The purpose of the study was to find out whether there were any attitudinal reasons for why women in Germany often do not occupy leading positions in higher managerial levels.

Research Design

This study uses Interpretative Phenomenological Analysis (IPA) in order to examine the participant's experience. Four women, all in the age between 37 and 48 years, working for at least 10 years and with an University degree were interviewed in a semi-structured format around the following questions: 1) Which traits do leaders need in your opinion? 2) Would you prefer a male or a female leader? 3) Do you have any experience with a female leader? 4) What do you think about women occupying leading positions? 5) What do you think is the most common stereotype about women in leading positions? 6) Do you think it is more difficult for women to reach a leading position? 7) What do you think is the most important personality trait that women in leadership positions have? 8)

Do you think you have traits that might contribute towards a leading position?

The interviews were analysed by using the principles of an interpretative phenomenological analysis (Smith et al., 2009). Each transcript has been looked at and coded separately. Moreover background data about the women's career development has been gathered as well in order to understand the participants' way to make sense of their current situation. This means each interview has been looked at with the background of the participant's experiences in mind. This provides a double hermeneutic for the research (Hefferon, 2011).

Results

The initial coding and then the experiences of the individuals who took part in the study generated 46 codes. These codes were then clustered generating eight themes as shown in Table 1. These themes all relate to the experience the women have and from which they retrieve their perceptions and explanations for their current situation. This is a very important part of IPA as it provides the double hermeneutic as the researcher makes a sense of the sense-making of the participants in their narrative (Smith, et al., 2009).

Table 1: Overall themes and initial codes

Leadership skills (71)	Preference for male or female (37)	Women in Leading Positions (62)	Gender roles and prejudices (51)	Own Capability (26)	Privileged men (10)	Inequality/preference (17)	Structural and cultural difficulties (32)
Assertiveness (5)	No preference (5)	Competition between women (6)	Men find women suspicious (9)	Not fully capable (14)	Men more competitive (2)	Inequality in requirements (6)	Competence not quota (4)
Authority (9)	Genders different (5)	Act manly (13)	Quota (3)	Capable, but with restrictions (9)	Leader traits are manly traits (2)	No inequality (4)	Women stand in own way (8)
Control (4)	No experience with female leader (5)	Women too modest (4)	No assertiveness in women (6)	Fully capable (3)	History of male leaders (6)	Men with preferences (7)	Leading position or family (5)
Social Skills (29)	Traits more important than gender (13)	No weakness allowed (2)	Lack of competences in women (5)				More difficult to get leading position (7)
Professional knowledge (3)	Bad leading (4)	Suitable for leading positions (5)	Men decide about leading positions (5)				Not all want to be leaders (8)
Presentation skills (5)	Preference for male (5)	No responsibility (2)	Women have to be better (8)				
Being congruent (6)		Female leading style (19)	Gender roles (8)				
Organisational commitment (4)		Want to be different (11)	Mixing role specific traits (7)				
Being respected (4)							
Being authentic (2)							

The figures in brackets show the number of use of each code or theme.

Discussion and analysis

The theme of “women as leaders” was addressed by the women differently. Amy for example suggests that there is a difference between male and female leadership behaviour. They appear soft and weak to men but Amy says that in her opinion they achieve their targets as well. Therefore is female leadership a good way to lead for her as well? Interestingly, her narrative implies that she thinks men do not take a female leadership style serious and have the opinion that women cannot lead because they are too soft:

I think women ... female leaders address some topics differently than, well, well, actually in a female way if I can say that ... sometimes in men's eyes it appeals very feminine, very soft

Amy states that a female leaders should be herself and act authentically because only then will they be taken seriously. This shows that gender differences are very important:

Still I think good female leaders, they don't want to be like men.

Eagly and Johannesen-Schmidt (2001) state, that it is important to look at typical female leading styles as this has a great impact on people's view about their effectiveness and suitability for leading positions. According to Eagly and Carli (2003), women lead in a more interpersonal and democratic way than men. A meta-analysis of Eagly and Johnson (1990) investigating differences in leading styles of women and men showed the same results. It is evident in the meta-analysis of Eagly and Johnson (1990) that women exercise less power when in leading positions than men.

Women seem to show more evidence of a transformational leading style than men (Eagly & Johannesen-Schmidt, 2001). However, the effects are very small and Eagly and Johannesen-Schmidt (2001) suggest that research should do more primary studies on those leading styles and gender differences. Women are often related to the transformational leading style, as this style focusses on the consideration and stimulation of employees (Van Engen, Van der Leeden & Willemsen, 2001), thus is an interpersonal style. Although the effects regarding differences between male and female leading styles are very small and partly negligible (Van Engen et al., 2001) the women in the present study perceived them as given in their contexts.

Structural and Cultural Difficulties were also seen as very important. The participants felt that there was a male dominated cultural bias. And that the character traits needed for a leadership position were essentially male attributes.

I think, that the criteria to climb up the hierarchy ladder are very manly

This suggests the hierarchy structure suits men better and there are more men in leading positions because they fit in whereas women may not. The theme of "inequality" was evident in all four interviews, with some important differences. Amy believes that there are unequal chances for women and men to get into leading positions. In her opinion women always have to work harder than men because higher standards are applied to them. This is because women are less often in leading positions and have to assert themselves in the position.

You always have to prove yourself in certain situations because you are a woman. And between men it sometimes might be ... Well I think it plays an important role whether you are a woman.

Another example demonstrated that women also had to work harder if they were leaders:
Men among themselves know what they get themselves into. But if suddenly there is Mrs Leader somewhere in the corner then they think: Wow what kind of woman is that?

The theme of "privileged men" also was evident in some accounts. Laura states several times in the interview that male leadership is the result of history. There is a historical trust in men as leaders and this is learned for generations, which is part of social learning:

So male leadership is learned ever since, since hundreds of thousand years.

The findings of this study suggest that women have difficulties to get into leading positions and that they know about stereotypes and gender roles. They seem to be aware of the issues following those stereotypes and roles and think that it is more difficult for them to get promoted into higher leading positions. Women are aware of social standards and also think accordingly about the issue of women in leadership but the evidence that they want to conform to those standards is not given. They rather have to behave accordingly because their environment still expects that.

Women want to become leaders in their career but organisations have to work on their attitude towards female leaders and on their hierarchy system to make it more possible for women to reach further levels of leadership. It may be interesting for further studies to take a closer look at women's experience with promotion and selection as this study suggested many of the attitudes were formed when competing with male competitors.

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DOP03

Applying evidence-based policy at the Police Federation

Fran Boag-Munroe, Mary Elliott & Sarah Knapper, Police Federation

Theme Research Design, Analytical Techniques and Practical Applications

Introduction

In April 2013 the Home Secretary, Rt Hon Theresa May MP, announced the establishment of a pay review body for police officers. The Police Remuneration Review Body (PRRB) reflects a significant change in the process through which police remuneration will be determined in future. It also requires a shift in the way in which staff associations look to maintain and improve police officers' pay and conditions, moving away from a focus on collective negotiation towards an evidence-based approach to policy and representation. This paper describes the steps taken by the Police Federation of England and Wales (PFEW), who represent all police officers up to and including the rank of chief inspector, to implement an evidence-based approach to remuneration policy within the context of preparation for the first PRRB submission in November 2014. We begin by briefly setting out the background to the UK Government's recent changes to police officers' pay machinery and the rationale for a focus on evidence-based policy within the PFEW. We then describe the evidence-based policy framework adopted by the PFEW and the actions and activities undertaken by the PFEW to date to ensure that the recommendations of the first pay review body are informed by the best available evidence. The paper concludes with a discussion of the next steps to be taken by PFEW prior to the Police Remuneration Review Body in November 2014, as well as how this paper will be developed prior to the Division of Occupational Psychology's Annual Conference in January 2015.

We foresee that this paper will be of relevance for both a public and a practitioner audience. For the public, safeguarding a motivated, capable and sufficient police service is a crucial concern; therefore the approach adopted by the PFEW to ensure this will be of considerable public interest. For practitioners, we apply principles of evidence-based decision-making within a novel context. In doing so, we feel that we can make a useful contribution to the "Research Design, Analytical Techniques and Practical Applications" strand of the DOP conference. However we additionally aim to share the evidence-based approach to remuneration policy adopted by the PFEW with colleagues who work with, or on behalf of, other staff associations and trades unions, who are also looking to represent their members as effectively as possible. In doing so, we show clear links to the DOP conference theme of Learning, Sharing, Impacting.

Background and Rationale

Since the 1950s, police officer pay has been determined through negotiating machinery: the most recent iteration, the Police Negotiating Board (PNB), was formed in statute in 1980. In October 2010 the Home Secretary announced the most comprehensive review of police pay and conditions in more than 30 years. The independent review was led by former rail regulator, Tom Winsor, and looked at how the police service could manage its resources more cost-effectively, taking into account the state

of public finances. One of the key recommendations of the report was to abolish the PNB and replace it with an independent pay review body. The justification for this was that the negotiating machinery was costly, cumbersome, bureaucratic and slow. In April 2013 the Home Secretary announced the establishment of the PRRB. In September 2014, the PNB will be formally abolished and replaced with the PRRB.

The remit of the PRRB is to independently review evidence submissions from key stakeholders in order to make pay and remuneration recommendations to the Home Secretary. This change in mechanism has removed the focus away from negotiation and towards an evidence base. In order to adequately represent their members' needs in this new environment, the PFEW had to begin creating an impact through the submission of effective, well conducted, transparent and persuasive evidence to the review body.

Although the adjustments to the officers pay machinery was one of the chief causes, it was not the only reason that the PFEW started moving towards evidence-based policy: recommendations from a recent independent review of the PFEW, has also had a definitive impact. Another core reason for the PFEW to move towards evidence-based policy is the impact of social change. With the growth of public access to information, it is increasingly important that policy decisions are credible and transparent in order to hold up to scrutiny. Consistent use of a structured evidence-based policy process is one way to meet these challenges whilst championing scientific methodology within the HR community. In combination, these factors have all created a climate for the implementation of a rigorous, evidence- based approach to policy within the PFEW.

Evidence-based policy

Evidence-based policy has derived, at least in part, from the ideas of evidence- based medicine. This movement gained momentum in the early 1990's and highlighted the need for a more structured approach to medical decision-making. More specifically, it emphasised the need to improve patient outcomes by making decisions informed by scientific research. Evidence-based policy uses the same principles, but is concerned with the need to improve policy (rather than patient) outcomes. However, the findings from scientific research alone do not always provide enough contextual or idiosyncratic information for definitive decision-making. Such information is particularly important in an arena where factors such as government policy and multiple stakeholder views need to be taken into account. For that reason, the PFEW's evidence-based policy framework consists of 4 main exploratory areas based on Briner, Denver and Rousseau's areas of evidence based management (2009), that aim to inform and ultimately direct policy decisions:

1. Stakeholder preference; e.g. focus groups and surveys
2. Evaluated evidence; e.g. case studies, academic research
3. Practitioner judgement; e.g. views of local representatives based on experience; and
4. Context - Organisational circumstances; e.g. changes to job roles or the economy.
- 5.

It must be noted that as a staff association whose existence and conduct is enshrined in statute, any final policy decision remains in the hands of those with statutory authority within the organisation. From a practitioner perspective, our focus is on supporting and enabling those officials who do have the statutory and democratic authority within the PFEW to make policy decisions on the basis of the best evidence available. In the second half of this paper we discuss the actions taken so far to utilise this evidence-based approach and provide an insight into the next steps that will be followed in the run up to the first PRRB in November 2014.

Evidence-Based Policy and the Police Remuneration Review Body

The PRRB is likely to focus on four main areas when it meets in November 2014: alignment to government policy regarding pay, contextual issues such as changing requirements with regards to policing, the suitability of current remuneration practices to retain and motivate capable and experienced police officers, and whether police remuneration is appropriate for their job role, in particular in relation to other comparison professions. The Research and Policy Support Department of the PFEW consequently adopted these areas as a framework for gathering useful and relevant evidence to support and inform the formulation of the remuneration policy to be presented to the PRRB.

A key step in the evidence-gathering process was to conduct a wide-ranging workforce survey of PFEW members. This step was very important and represents the first area of the PFEW's evidence-based framework, *Stakeholder Preference*. Unlike many other public service organisations, including the NHS and the armed forces, there have been few systematic attempts to collect data at a national level from police officers concerning their motivation, relationship with the Police Service and attitudes in relation to pay and conditions.

To address the PRRB's focus on suitability of current remuneration in regards to retaining and motivating high quality officers, the second area of the PFEW evidence-based framework, *Evaluated Evidence*, was used to construct the survey. Several pre-validated scales on key psychological constructs were used and had been determined through reviews of the relevant academic literature.

The survey was distributed to officers in Spring 2014 and over 32,000 usable surveys were returned, representing a 25% response rate. This level of response rate allowed the PFEW to conduct statistical modelling to draw more robust conclusions about the conditions under which officers were most likely to be demotivated or intend to leave the police service. This enabled more systematic conclusions to be drawn regarding the impact of current remuneration practices on retention and motivation, in a way that could more effectively support and inform the formulation of policy.

The third area of the PFEW's evidence-based policy framework, *Practitioner Judgement*, was satisfied by extending the results of the workforce survey through a series of focus groups with PFEW representatives and committee members. Within these focus groups participants discussed the survey findings in the context of their personal experiences and the feedback they had received from other officers. This mixed method approach provided greater richness of explanation than could have been achieved by the quantitative data alone. Significantly, however, it also built in a critical evaluation of the evidence gathered within the survey. Participants discussed the representativeness of the findings across all job roles as well as moderating factors which needed to be considered, which survey data alone would have been unable to capture. This ultimately enabled multi-source, critically appraised evidence to be presented to policy-makers to inform their decision-making.

The last area of exploration according to the PFEW evidence-based policy framework is *Context – Organisational Circumstances*. This area is in the process of being explored through a job evaluation project in collaboration with an external research service provider. The project is addressing the appropriateness of police remuneration for the roles and responsibilities of officers in today's society, and will ideally allow contrast to other comparison occupations. An analytical job evaluation approach is being adopted with a clear and transparent methodology. Through this, the PFEW is seeking to prevent subjective comparisons between police officers and other professions and to allow the remuneration policy presented to the PRRB to be supported by an accurate, evidence-based understanding of police officers' role in the 21st Century.

Whilst the above evidence-gathering activities were being undertaken, changes were also being made within the PFEW to support and promote an evidence-based approach to policy. New research personnel were hired within the Research and Policy Support Department, to increase the organisation's capacity to undertake systematic literature reviews, undertake further primary research projects, analyse and evaluate existing data and research and interact more frequently with external experts. Briefings were held with elected officials and staff to provide information and education on the importance of evidence-based practice. In order that officials could more effectively draw on evidence when making decisions, steps were also taken to make this evidence available to officials in a simple and user-friendly way. For example literature reviews, management information and other statistics were all circulated more frequently and made more accessible to allow principles of evidence-based policy to be more successfully enacted.

Next Steps

Since the PFEW has successfully started to use the evidence-based policy framework, the next logical step is to embed these practices within the organisation and to raise the organisation's profile through good practice and further academic endeavours such as research publication. Continuing to encourage systematic use of the evidence-based policy framework will allow the practice to become rooted within the organisation. Additional awareness exercises will also be undertaken to increase

internal stakeholders' understanding of the purpose and importance of evidence-based policy. This will include information sharing through the PFEW extranet and newsletter and dissemination of the PRRB submissions. In addition, an internal review of PFEW policies will be conducted using the evidence-based policy framework and over time will ensure that all internal policies will be reflective of this approach. Finally, the PFEW will also seek further links with external experts for validation, sharing of best practice and hopefully to increase access to relevant research literature and new networking opportunities.

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DOP04

“Generation Me, Me, Me”?? Accommodating Generation Y in the Workplace

Lucy Bolton, Dr, Gail Clarkson & Prof, Chris Clegg, Socio-Technical Centre, Leeds University Business School

Theme **Psychological Assessment at Work**

“Every generation laughs at the old fashions, but follows religiously the new.” Henry David Thoreau (1854)
Generation Y, or GenYers as they are known, (i.e., those individuals born from the 1980s to late 1990s), are now entering employment. There is evidence to show that they not only have different expectations of work e.g. job mobility, use of social media, flexible/home working, extended social networks, but also different work values and attitudes e.g. less formality, faster progression, individualistic focus as compared to previous generations (Lyons & Kuron, 2014; Patterson, 2005; Twenge, 2006).

Due to the ageing workforce retiring over the next eight years, there will be a shortfall of workers to fill 13.5 million jobs and only 7 million young people entering the workforce in the UK (Bosworth & Kik, 2009). Therefore organisations need to understand how to adapt themselves to cope with this influx of a new generation, with different organisational requirements, attitudes and competencies. This calls for a new approach to organisational design with jobs and roles designed around the nature of changing employees and their new skills, competencies, values etc. (Grant, Fried, Parker & Frese, 2010). Now more than ever, there is a growing need to understand how the design of jobs within companies can accommodate this new generation, especially from an organisational perspective to improve overall effectiveness and individual performance and well-being. Organisations want to utilise and operate their workforce to the best of their abilities and maximise the potential of skills of GenY e.g., technology, networks, as well as recruit, manage and maintain the ‘best’ employees.

There is evidence to support generational differences at work, for example, it has been suggested that GenYers respond poorly to inflexible, hierarchical organisations and expect flexible work schedules (Deloitte, 2010, 2012; Hershatter & Epstein, 2010; Lyons & Kuron, 2014). GenYers have been nicknamed ‘trophy kids’ and hold the belief that they are entitled to progression in the workplace, thinking in the short-term (*The Times*, 2013: 43) and therefore the phrase ‘job for life’ does not always hold true for these individuals. Research has found that Generation Y are more mobile in their careers, with successive generations being less inclined to follow a ‘traditional’ linear career path in organisations (Becton, Walker & Jones-Farmer, 2014; Dries, Pepermans & De Kerpel, 2008). Regarding job characteristics, Zaniboni, Truxillo and Fraccaroli (2013) found that younger workers experienced better outcomes (lower burnout and turnover intentions) with increased task variety as opposed to increased skill variety.

The current job design literature is focused around traditional models e.g. Hackman and Oldham’s Job Characteristics Model (JCM) (1976), and this area of research needs to evolve. Such a linear model suggests that there is fragmentation between job design research and actual practice of designing jobs within organisations. There is therefore a need to develop a dynamic, interactive job design framework accommodating such generational differences (Grant et al., 2010), especially as there is evidence suggesting that GenYers are active job crafters (Kim, Knight & Crutsinger, 2009).

Research Objectives

How can organisations utilize and accommodate this changing workforce to the best of their ability through their job design? The proposed PhD research aims to answer this question and develop a job design

framework to understand the key job characteristics that are impacted by the new work values and attitudes, career expectations, and subsequently competencies and behaviours of GenYers. Currently there are many anecdotal ideas about Generation Y within organisations that are not based on scientific literature – usually written for a popular audience. Due to this ‘media hype’, an image has been created of Generation Y, which may be causing stereotyping and restricting their potential in the workplace and society. Academic research available is very descriptive, rather than explanatory, and is conducted across a variety of contexts (Lyons & Kuron, 2014).

Research Design

This research is in its early stages, yet due to engagement with a number of large blue-chip organisations across the financial, retail, consultancy, engineering and telecommunications sectors data collection will be starting over the next few months. A holistic, worker-centric perspective will be adopted to look at various key factors/variables. Longitudinal data collection will take place gathering data within organisations from samples of new starters, 3 year tenured individuals, and 5 year tenured individuals. In addition, data will be collected from final year university students prior to work, as well as school leavers/non-higher education individuals.

- **Phase 1:** ‘As-is’ to understand the differing work values, career expectations, attitudes and behaviours of Generation Y workers including, job crafting behaviours, self-efficacy etc. Measures via survey will also be taken of the perception of their own generational characteristics in the workplace. Not only will this study focus on Generation Y, but also ‘Baby Boomers’ (1945-1960), Generation X (1961-1980), and where relevant, the more recent, Generation Z (1995+).
- **Phase 2:** Design and develop a new framework for the process of job design in the context of GenYers. Identify key competencies, behavioural indicators and motivational measures and the impact upon tasks, knowledge and physical aspects of job roles. Scenario planning techniques will be used to develop new ways of working.
- **Phase 3:** Trial and evaluate job design framework involving workshops with participants/key stakeholders.
- **Phase 4:** Finalise the job design framework and develop Best Practice guidelines to accompany the framework.

Chronological age is easy to measure but can also indicate other factors e.g., life stage, health, experience, motivation. We therefore need to look beyond the number to understand what age means in the workplace and explore such variables further. It is important to gain a better understanding of how age-related changes in psychological attributes affect organisational outcomes (Ng & Feldman, 2008; Schwall, 2012).

Conclusions

The number of generational studies in the field of Occupational Psychology has increased over the years, becoming an important topic for the field (Lyons & Kuron, 2014; Truxillo & Fraccaroli, 2013). There is a need for more scientific research on how jobs are designed, in terms of the evolving competencies existing within them brought in by new generational workforces.

The purpose of this poster is to highlight the changing diversity of the workforce. By adopting a systematic method will allow the interdependent and interacting characteristics of jobs (e.g. tasks, knowledge, physical aspects), and the wider organisation (e.g. culture, goals), to be considered when investigating the relationship with the different generational requirements and expectations (e.g. values, tools, processes, skills etc.). E.g.

- ☛ What is the best type of culture to accommodate GenYers?
- ☛ What is the most effective organisational design for GenYers?
- ☛ What processes would suit GenYers, encouraging effective performance?
- ☛ What level of technology would GenYers like in their roles?
- ☛ What are the priority goals of GenYers?
- ☛ What types of roles do GenYers prefer?
- ☛ How has the environment within which they have grown up in impacted these requirements?
- ☛ How do these ideas impact organisational activities such as team-working and organisational change?
- ☛ Can an organisation use this preference for flexible working to their advantage during times of rapid change?

Through the use of this framework and Best Practice document, organisations will be better able to understand their Generation Y employees and make more informed decisions in terms of job design, including:

- Help with the attraction, recruitment and selection of new employees;
- Design tasks around preference for flexible/non-flexible working;
- Design effective processes to foster the innovation and creativity of Generation Y employees;
- Make decisions on training, learning styles, performance appraisal and career development;
- Understand crafting of roles conducted by GenYers;
- Develop future leaders to the best of their potential;
- Identify and address any conflict evident between differing generations (and/or teams).

Furthermore, this study will improve the well-being and satisfaction of the employee, improving organisational performance. This will subsequently provide improvements for the economy in terms of organisational performance/effectiveness. This research will also help to further the multi-generational workforce literature, which is constantly changing as organisations and their workers evolve. It is important for Occupational Psychology to help address the challenges of not only a multi-generational workforce, but also the job and organisational requirements of Generation Y.

Learning, Sharing, Impacting

This research relates to the 2015 DOP Conference theme by allowing more learning to take place about generational differences in the workplace; an issue for every organisation. This research will be sharing the latest ideas from this field, and through the organisational engagement with such large companies, a real difference will be made for the design of job for the future workforce to meet their needs and requirements.

Key point/messages to put into 60 second opening pitch for this poster:

- Generation Y are entering the workforce - How can we design jobs to accommodate them?
- Brief run through of some of the aspects to consider:
 - Job characteristics
 - Work values
 - Work attitudes
 - Career expectations
- Importance for organisations e.g., recruitment.

Proposals to augment or enliven the basic poster display:

I would like to have a live Twitter feed on a laptop by my display (if possible) to demonstrate the interest in Generation Y. I search this topic daily and there are a variety of opinions, ideas and thoughts shared via this media. There is also a simple animation/cartoon available explaining why Generation Y are unhappy and are struggling in the workplace – I would like to consider having this on a one page handout.

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DOP05

"We're all part of the system!" Socio-Technical Systems Approach to developing Cost Engineering Capability

Lucy Bolton & Prof, Chris Clegg, Socio-Technical Centre, Leeds University Business School
 Theme **Research Design, Analytical Techniques and Practical Applications**

Introduction/Research Objectives

This paper aims to demonstrate to the Occupational Psychology community that Socio-Technical Systems Theory (STST) and its associated principles are still as relevant today when designing engineering systems as when they first appeared in our domain in the 1960's. This research was conducted in a large blue-chip engineering company, with the aim of improving capability within a cost engineering system through the introduction of a competency framework and capability maturity tool; thereby allowing the company to support these skills and be more cost-competitive.

To this day STST advocates that the social aspects of a system (e.g., people, culture, working practices) must be considered in parallel with the technical aspects (e.g., tools, technologies, metrics) (Cherns 1976, 1987; Clegg, 2000) i.e., the joint optimisation of both social and technical features. Since Trist and Bamforth (1951) first coined the term in the early 50's, the merits of applying socio-technical principles to the design of work systems have been well documented (e.g., Axtell et al, 2001; Davis et al., 2014). Typically in engineering change programmes, more emphasis is placed upon the technological, rather than the social aspects, of a system. However, the core premise of any socio-technical approach is that design is systemic.

Cost is a crucial attribute in engineering, ensuring that competitive products are produced to meet customer requirements and the business case. Unit cost is particularly critical in the early stages of the design process as this is when a majority of costs are locked into the product (approximately 80%). Ineffective cost engineering at this stage will lead to fire-fighting further down the line which is both costly and time-consuming. Cost engineering therefore needs to be recognised at the organisational skill level.

Preliminary research within the organisation highlighted a lack of desire from employees to work in the area of cost engineering due to there being no clear career structure or employee progression. Engineers typically preferred to work in the areas of design, manufacturing or service rather than cost. By improving the awareness and knowledge of cost skills, and the associated roles, employees would understand that cost engineering impacts every part of the design, production and maintenance of an engine. To address this issue a cost engineering technical competency framework and capability maturity tool (i.e., a health check tool) were developed to improve understanding and visibility of cost engineering. Competency modelling has been a very popular activity within organisations (Campion et al., 2011; Kurz & Bartram, 2002; Schippmann et al., 2000; Spencer & Spencer, 1993), and there is much evidence that such approaches to work design improve organisational effectiveness, creating a competitive advantage (Bonder, Bouchard & Bellemare, 2011; Lawler, 1994; Lado & Wilson, 1994).

One of the key principles to STST is that systems and their design should be owned by the end-users (Clegg, 2000). This research project applies the socio-technical principles from the very earliest stages of design and is distinctive as it represents an end-user owned system, where recipients of change are responsible for pulling through the changes required (Clegg & Walsh, 2004). This research also adds value through its multidisciplinary approach bringing together Psychologists and Engineers, thereby offers a relatively unusual example of the application of socio-technical principles in a real world organisational setting.

Research Design/Methodology

A socio-technical approach was adopted, ensuring a process with input from the end-users of the new systems i.e., cost engineers, cost experts. This was beneficial in that it helped to create buy-in from the end-users to the new ways of working, as well improving commitment to, and acceptance of, the new cost engineering skill system (Clegg, 2000; Clegg & Walsh, 2004; Damodaran, 1996; Kujala, 2003; Lockton, Harrison & Stanton, 2010).

Due to the abstract nature of guidance provided by STST (Baxter & Sommerville, 2011), it has manifested itself in a wide range of methods. Therefore, whilst the methods described in this paper were not derived directly from STST, the way in which we have applied them within the organisation has a strong basis upon STST principles. Both the cost engineering competency framework and capability maturity index tool were developed by conducting a number of workshops, semi-structured interviews and evaluation activity:

- Benchmarking interviews with Skill Set Owners of other Engineering skills were conducted initially. The purpose of skills sets within the organisation is to promote and develop technical competencies for the benefit of individual engineers and the overall company.
- Workshops were carried out with subject matter experts to discuss and summarise the key competencies and criteria to define capability.
- 16 semi-structured interviews with individuals in various cost roles across the organisation were conducted. Interviews assessed the current competency framework and capability maturity criteria.
- Validation workshops were conducted with three members of the central cost team to assess the final framework and capability tool. Further workshops are due to take place.

All data collection was conducted in line with the Ethical Code of Conduct as defined by the British Psychological Society (BPS) e.g., confidentiality, consent, withdrawal.

Data Analysis/Results

A thematic analysis was carried out on all interview data. A technical competency framework was developed with 20 final competencies. The capability maturity tool was developed with criteria across five aspects: people, organisation, processes, tools, and data/information. Further information on these specific outcomes will be provided during the presentation.

High level key themes to emerge from the interviews about a cost engineering skill set based on a socio-technical framework (Davis et al., 2014) are summarised below:-

- Work & Structures – Move to a distributed service model; be aware of ‘job creep’; cost engineering should become its own skill set.
- Processes – Cost is less established; there needs to be more risk-taking when costing.
- Tools/Technology – Need to apply cost modelling work accurately (usability); more predictive modelling is needed.
- Goals/Metrics – Ensure SMART goals for cost; communicate cost goals; measure people for the correct behaviours.
- Culture – Cost understanding/education; responsibility for cost.
- People- Improve training & succession planning; clear skills; clear career progression.

Discussion/Conclusions

The development and introduction of a competency framework and capability maturity tool has been very symbolic and powerful for the area of cost engineering and those working within it. Such team identity, and inclusion within a visible group with defined values, has also been found to improve creativity, commitment and organisational citizenship behaviours (Ellemers et al., 2013; Janssen & Xu Huang, 2008; Mitchell et al., 2012). It is essential that behavioural or KSAO indicators in a competency framework are directly relevant to the job role and context in. Therefore, such a tailor-made approach to competency development is vital to developing a useful and effective competency framework.

The technical cost engineering competency framework is starting to be communicated globally and used by managers and individuals of cost teams in the organisation as part of their professional development. We are keen to continue the adoption of a process with continual feedback as it is important to recognise that the competency framework will not be static and will evolve with the changing organisational requirements in response to external influences e.g., customer demand, service models, legislation. Further evaluation of the framework will allow the correlation of competencies with high performance, helping to design training, develop clear job descriptions and help with recruitment (e.g., competency-based interviews).

It is relatively rare that socio-technical principles are successfully applied to the design of new work systems. These principles have been applied from the very earliest stages of design, rather than during implementation as is frequently the case. Our work is therefore characterised by true end user ownership where recipients of change are responsible for identifying problems and pulling through the changes required to meet their needs. Through the involvement of end-users and meeting process requirements, our approach will allow changes to be sustained.

Implications of this research include:

- Generating more effective cost engineering capability through the introduction of a cost competency framework and capability maturity tool;
- Familiarising the organisation with the socio-technical approach so they may apply this within future change projects;
- Sustaining new ways of working through involvement of end-users and meeting system requirements.

Learning, Sharing, Impacting

This research relates to the 2015 DOP Conference theme through its impact on the organisation and the sharing and learning from a real-life engineering project adopting a STST approach. The impact of this work has also spread externally of the organisation as I have organised and facilitated two benchmarking workshops with my client organisation and four other large, multinational blue chip companies from the aerospace and automotive industries. The aim of these workshops was to share best practice about a specific topic on cost engineering.

Electronic copies of the slides for this session can be made available to the conference attendees.

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DOP06

Should video interviewing replace telephone interviewing as an effective selection methodology?

Katie Bradley, SHL

Theme **Psychological Assessment at Work**

Should video interviewing replace telephone interviewing as an effective selection methodology?

Project Objectives

I had a discussion with the resourcing partner to understand why they were considering introducing video interviewing as an assessment methodology. Their responses matched findings from Aberdeen Group (2012) which found employers cited reducing costs and improving time to hire as key drivers for using video interviewing technology.

From this, I was able to understand the wider project context including the business rationale and supplier selection. I was then able to separate the specific objectives for my pilot study, which would be to determine whether video interviewing could replace telephone interviewing as an effective selection methodology.

Literature Review

- Video Interviewing Market Trends

In their review for Metashift, Alder and Bradley (2013) distinguish between onsite video interviewing (video conferencing at office location), live video interviewing (2-way conversation e.g. via skype) and asynchronous (1-way, recorded) video interviewing. Asynchronous (not occurring at the same time, Alder and Bradley 2013) allows the candidate to record themselves answering a set of questions the recruiter has provided. It was this type of video interviewing I would be using in the pilot study as this had already been selected by the lead resourcing partner as methodology to trial.

During my literature review I found most of the information on video interviewing came from the system suppliers, focusing in functionality and process benefits (e.g. Alder and Bradley (2013) note *recruiters can watch, review and share videos when they want, candidate can record their answers in a time and place convenient for them*) rather than exploring whether video interviewing provided a reliable and valid method of selection.

- Assessment & Selection Research & Theory

I found limited assessment & selection based literature on the use of asynchronous video interviewing in particular, with much of the research focusing on other types of video interviewing such as recorded or face to face. For instance Sellen (1995) argues that fewer visual cues observed from video interviewing result in less input from the candidate when compared with face to face interviews. Chapman & Rowe (2001) highlight the potential bias in favour of video applicants (video conference) relative to face to face applicants'. However these findings conflict with those from Iddekinge & Raymark (2006) who find the opposite bias.

I used additional assessment & selection theory and research (e.g. Cook, 2004 Reasons for poor validity; Conway et al 1995 Interview reliability) to ensure I would be applying interview best practice when using video interviewing methodology.

Pilot Study Considerations

- Pilot study methodology (3.1.6)

I wanted to understand whether or not factors associated with other methods of interviewing such as telephone or face to face (e.g. Reliability, Validity and Interviewer Bias concerns Cook 2004) were also found with video interviewing. In preparing this research design, I proposed to build in inter rater reliability checking by getting different raters (a sample of recruiters, a sample of hiring managers) to separately rate candidates to determine level of agreement. In addition to compare how candidates were rated during video interview or face to face format.

In order to check predictive validity of the video interview, I would only be able to look and how well video interviewing predicted performance at later stages of the selection process.

I would also need to gather information on user experience from candidate feedback, recruiter feedback and hiring manager feedback which I planned to gather by sending out surveys.

I identified 4 suitable roles (Regional Manager, Commercial manager, Project Manager, retail Assistant) that had high numbers of vacancies and were expected to involve large numbers of screening interviews.

Pilot Study User Feedback

- Candidate survey feedback

I completed a mix of quantitative and qualitative analysis; I reviewed trends by looking at the percentage of responses (yes/no questions or 1-5 ratings) for each question included in the candidate survey. I also reviewed the open text comment boxes to classify comments into themes (so split into topics such as functionality, face validity, general, then classified these as positive or negative comments). Examples of comments from candidates: "unexpected", "good", "a different way of doing things"

- Candidate anecdotal feedback

I also gathered anecdotal feedback passed on from recruiters, where candidates had provided additional comments on the video interviewing process when discussing next steps with recruiters.

- Recruiter feedback

While some recruiters had completed survey responses, most feedback was obtained by having verbal conversations with each recruiter. I took notes about their experiences and captured any relevant quotes they used to support their feedback. Recruiters had some concerns about losing human contact but overall found the video interviewing methodology gave them greater flexibility over telephone interviewing. They could watch candidate responses at a time that suited them, pause and re-watch if required. They acknowledged a key benefit was ability to maximise candidates – so if they thought a candidate wasn't right for their particular role but actually a good fit for the organisation, they could invite another recruiter or hiring manager to view the candidate video for another role.

- Hiring Manager feedback

I reviewed this for themes and picked out key quotes to evidence the themes. Hiring managers found the approach easy to use, added flexibility and saved them time with one commenting "1 hour instead of 5" to complete screening stage (when comparing video to telephone screening).

Pilot Study Additional Data

- Rating consistency

Recruiters were asked to rate candidates separately and select which candidates (if any) they would invite to progress to the next assessment stage. For the roles included in the pilot, there was consistency between recruiters for all candidates (3 recruiters invited to review a sample of 10 candidates for each role).

- Comparison of video and telephone ratings

With a small sample of candidates for one role, all candidates were invited to interview stage regardless of how they were rated in the video interviewing stage. The outcome of the face to face stage was consistent with the predictions made from the telephone interviewing stage – so candidates that would have not been invited to next stage, didn't perform as well at face to face stage.

- Predication of performance in selection process

I reviewed metrics to establish percent of candidates screened out by video interview stage and then % that went on to receive a job offer. For all 4 roles, successful job offers were made at the first round of face to face interviews. Anecdotal feedback from hiring managers and the recruitment team evidenced an improved calibre of candidate at the face to face stage.

Evaluation

Could video interviewing replace telephone interviewing as an effective selection methodology?

- Advantages of video over telephone interviewing

There were many benefits the video interviewing methodology gave to the selection process that telephone interviewing couldn't do. One of the key ones was standardising the process. Having prepared questions, consistent for all candidates would reduce the risk of interviewers asking inappropriate questions (leading, hypothetical, multiple choice, double questions, SHL, 2011).

In addition, as responses were recorded, hiring managers and recruiters could replay responses if required and not have to rely on notes or memory. Burnett et al (1998) found taking notes about what the interviewee said were linked to more accurate assessment. One of the difficulties with interviews (including telephone) is often the interviewer has to ask questions, sometimes think up next question (e.g. probing) and control the interview leaving less time for note taking. Cook (2004) describes the use of empirical interview in which telephone interview is recorded then scored later. Cook (2004) notes surprise this is not used more often given how hard it is to take detailed or accurate notes. So the video interviewing technology could also provide these benefits of removing the need for the interviewer to take notes.

- Disadvantages of video interviewing over telephone interviewing

Many of the risks of bias associated with face to face interviews (gender, ethnicity, age, physical attractiveness Cook, 2004) could also be a risk for video interviewing, where some of the visual ones e.g. physical attractiveness, would not be as applicable for telephone interview. However, the organisation already had training in place for hiring managers that covered awareness of these biases and Equality Act (2010).

Conclusions

- Is video interviewing a valid method of assessment?

Data collected from pilot study offers support towards predictive validity in relation to predicating successful offer of employment. Also anecdotal evidence supports improved calibre of candidate reaching face to face stage. The sample collected was small so limited the strength of findings is recognised. Longer term validation would be required to evaluate predictive validity to performance in role, after candidates had been in role 6 – 12 months.

- Is the methodology open to bias?

The approach is open to interview bias in a similar way as face to face interviews.

- Is there any negative impact on candidates?

The pilot study showed no indication of adverse impact to any candidate groups. However it is recognised this is something to be continually monitored. There are ethical considerations here as associated with any selection methodology, in relation to fair and equal use of assessment.

Some candidates reported not having a webcam or other technical issues that prevented them from completing the video interview. I reached the conclusion that telephone interviewing needed to be offered on request as an alternative so these candidates were not negatively impacted by not having the required technology.

- Business Satisfaction

Recruiter and hiring manager feedback supported user satisfaction with the approach. 100% of managers questioned would prefer the approach over telephone screening.

- Business Impact

Time to hire and quality of hire was reported for the business. E.g. 28 video interviews (7 hours @ 15 min each plus 2 hours set up an phone invitation, flexible between ad hoc requests) compared to 28 telephone interviews (28 hours interviewing plus several hours scheduling unable to deal with ad hoc requests).

- Ethical Considerations

Several ethical considerations were explored within the pilot study. Some had been anticipated (e.g. interviewer bias), some had come up as a result of candidate feedback (e.g. technical issues and offering telephone interviewing as an alternative). These were taken into account when recommending to the business the way in which video interviewing could be used.

- Should video interviewing replace telephone interviewing as an effective selection methodology?

My findings supported that yes video interviewing could replace telephone interviewing; however there would be several elements to consider when designing how it should be used and launching the tool across the business.

Recommendations from pilot study

My findings from the pilot study revealed that there were several advantages of using video interviewing over telephone interviewing. However, to mitigate some of the risks (e.g. in relation to bias, reliability and validity or risk of having a negative impact on candidate experience) I recommended implementing as long as certain interview best practice guidelines were followed.

- Recommended using clear positive and negative indicators to rate the interviews, which have been found to support higher validity (Taylor and Small 2002).
- Typically interviewers would be advised to avoid asking a question that is a multiple question, but without the opportunity for the interviewer to ask probing questions, I needed to make sure the question would give the candidate the opportunity to cover a full answer (e.g. Situation, Behaviour, Outcome, SHL 2011).
- Large support from research that structured interviews achieve far better results than unstructured interviews (Wiesner & Cronshaw 1998; Huffcutt & Arthur 1994)). By their nature, video interviews will be structured as a set of questions is added in advance and each candidate will get asked exactly the same questions in exactly the same way.
- Springbett (1958) found interviewers make up their minds after only 4 minutes of a 15 minute interview. Cook (2004) confirms several studies have found similar results in more recent years. My role was to ensure decisions were made on job relevant characteristics only. In line with Equality Act (2010) covering protected characteristics
- I recommended steps to avoid monitor process and check for any adverse impact or indirect discrimination or adverse impact on certain groups by monitoring process.

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DOP07

Exploring learner reactions to E-learning

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Theme **Learning, Training and Development**

Introduction

E-learning (or 'electronic' learning) can be defined as '*learning that is delivered, enabled or mediated using electronic technology for the explicit purpose of training, learning or development in organisations*' (CIPD E-learning factsheet, Aug 2013). Where the learning is delivered through the internet or an intranet, it can be described more specifically as 'online learning'.

The global growth of online learning has been dramatic. Official statistics are scarce, but it has been estimated that the worldwide market for self-paced E-learning reached \$35.6 billion in 2011, and is expected to expand to \$51.5 billion by 2016 (Docebo report, 2014). In addition, an analysis of replies from 1,081 organisations to the CIPD/Cornerstone OnDemand Learning and Talent Development Survey (2014) revealed that three-quarters report using E-learning, and 30% include it among their three most common L&D methods. The use of e-learning was found to be most common in the public sector and in larger organisations.

There are clear benefits to E-learning. Many of these stem from lower costs, both in terms of reduced training delivery costs and also a reduction in the time it takes to train people. This is known as learning compression, and is a result of factors such as the ability of learners to progress at their own pace rather than at the pace of the group. There is also less time spent on social interaction activities such as dealing with questions from others and introducing oneself to the group. Overall, it has been argued that E-learning '*can take anywhere from 25 to 60 percent less time to convey the same amount of instruction or information as in a classroom*' (Rosenberg, 2001). Another important factor is that travel time to and from a training event is eliminated, which reduces both costs and environmental impact.

What is less clear, however, is the extent to which E-learning is effective. This is alluded to in the fact that only 43% of the respondents to the CIPD/ Cornerstone OnDemand survey who included E-learning among their most common methods used, also included it among their most effective.

A meta-analysis of the research literature from 1996 through to July 2008 by the US Department for Education concluded that "*when used by itself, online learning appears to be as effective as conventional classroom instruction, but not more so.*" However, "*in recent experimental and quasi-experimental studies contrasting blends of online and face-to-face instruction with conventional face-to-face classes, blended instruction has been more effective.*"

There were several caveats to these conclusions, including an observation that "*the effectiveness of online learning approaches appears quite broad across different content and learner types*". This remark is important because it is easy to assume that it's the technology itself that results in change, rather than the content to which it is applied, and how people actually use that technology.

The aims of our research were to explore the area of 'learner types', and specifically to focus on how reactions to online learning differ according to the personality of the learner. Studying reactions to learning fits with the first level of Kirkpatrick's (1994) model of training evaluation, and could form the starting point

of a research program that extends to the other three levels (i.e. learning, behaviour, and results) in due course.

Previous research has explored the varying needs of students undertaking online learning (e.g. Mupinga et al, 2006), and it has been argued that learners' personality traits might be significant in understanding differences in learning outcomes from using e-learning systems (Al-Dujaily et al, 2013), and differences in how they perceive their distance learning experience (Irani et al, 2003).

Our research aims to contribute further to the body of evidence in this area, and to help inform the design of future online learning activities so that they meet the diverse needs of different types of learners.

Method

Participants

Participants in this study comprised 326 people who had attended certification training to become qualified to administer and provide feedback on a well-known personality questionnaire. The approach to training is very varied, and includes online learning modules, interactive classroom-based exercises, and a mix of group and individual work. It is best described as blended learning. In the interests of ensuring participant anonymity, no demographic information was captured. However, experience suggests that the vast majority of the sample would have been HR practitioners.

Measures

Learner reactions to the online learning modules were gathered via responses to an online post-course survey. Everyone who attended the training from mid-2013 onwards was invited to complete the survey. Participation was entirely optional and was anonymous. The survey comprised 25 questions covering reactions to different elements of the online learning experience. The questions were a mix of likert-type scales and free response questions.

Learner personality was described in terms of Myers-Briggs Type Indicator (MBTI) type. The MBTI instrument identifies an individual's four basic type preferences that combine into one of 16 different personality types. The preference pairs are:

Extraversion (E) vs Introversion (I) — indicating whether an individual gets energy from being around people or from time spent alone.

Sensing (S) vs Intuition (N) — indicating whether an individual becomes aware of specific facts and concrete details or prefers to focus on hunches and the big picture.

Thinking (T) vs Feeling (F) — indicating whether an individual tends to make decisions based on logical analysis and the principles involved or prefers to decide by considering his or her values and promoting harmony for the people involved.

Judging (J) vs Perceiving (P) — indicating whether the individual prefers his or her life to be planned and likes it when things are decided or prefers to go with the flow and likes keeping your options open.

MBTI best-fit type was used. This is the four-letter type that an individual thinks best describes themselves. It is decided on by the individual after he or she has learned about type, read type descriptions, and discussed their MBTI questionnaire results with a certified practitioner. This is considered to be the most accurate form of MBTI type.

Results

The sample was diverse in terms of personality preferences, as shown in Table 1.

Table 1: Sample personality preferences (n=326)

	E	I	S	N	T	F	J	P
N	207	119	135	191	161	165	197	129
%	63.5	36.5	41.4	58.6	49.4	50.6	60.4	39.6

The most commonly occurring 4-letter types were ENFP (n=39, 12.0%), ESFJ (n=36, 11.0%) and ENTP (n=35, 10.7%). Due to the modest sample sizes for each 4-letter type, the analysis focused on preference pairs and various two-letter combinations.

At the whole sample level, reactions to the online learning module were typically positive. 24% of the group awarded the module an 'excellent' rating overall, and 60% rated it as 'good'. 14% rated it as 'fair' and only 2% as 'poor'. This generally positive reaction was also found amongst ratings of separate elements of the online training.

Based on previous research, summarised in Myers and McCaulley (1985), we hypothesised that people with preferences for I rather than E, N rather than S, and T rather than F may respond most positively to online learning. We felt unable to hypothesise the relationship with the J/P dichotomy.

However, results of our analyses did not fully support these hypotheses. For example, chi-square analyses showed no significant differences in the overall reactions to the online learning from people with different personality preferences. There were also very few differences when reactions to more specific parts of the online learning were reviewed, such as how beneficial the learning was, and how clearly the information was presented.

However, a higher proportion of Extraverts than Introverts stated that their preferred learning environment was '*majority in the classroom*' (57% vs 47%). Introverts, on the other hand, were more likely than Extraverts to prefer an '*equal mixture of classroom and online*' (44% vs 34%). When we looked at reasons for this, we found that Extraverts were less comfortable with not having other learners around them and, to a slightly lesser extent, not having a trainer available. No meaningful differences were found in terms of other preference pairs.

Type preferences can be grouped together in a number of ways; one of which is called the Mental Functions. This grouping combines the S/N preference with the T/F one. This pairing is often viewed as learning styles or cognitive styles (Myers et al, 1998). It produces the following 4 styles:

- ST: Practical and matter-of fact.
- SF: Sympathetic and friendly
- NF: Enthusiastic and insightful
- NT: Logical and ingenious

When reaction data was analysed in terms of this grouping, the results fitted with our expectations. NT types were more likely than other types to prefer a higher proportion of online learning within the course, although even they were most likely to want the majority of the course taught in the classroom. SFs, in particular, were more likely to be uncomfortable not having access to a trainer.

Additional patterns were found which will be discussed further at the conference.

Discussion

This research has uncovered some interesting findings in terms of how people with different personality preferences and learning styles react to online learning.

The overall picture that our results paint is that the degree to which people view online learning as being a preferred learning environment is, to some extent, linked to their personality and learning style. However, their reaction to a *specific* online learning experience itself seems to be less linked to their personality. This distinction is not one that has been widely discussed in the literature. Such differences that are found tend to be in terms of comfort with the absence of opportunities for social interaction whilst undertaking online learning.

The online learning module that was used in this study was designed by occupational psychologists to take account of different learning styles. The learner reaction data suggests that, at the first level of the Kirkpatrick's (1994) model, the module is functioning well. Additional research will be conducted to explore how this extends to the three higher levels (learning, behaviour and results).

Learning points for online training designers to take away from this research include the importance of looking for ways to include elements of social interaction within the online learning experience, and to offer access to support from trainers. This may be in the form of telephone support. Doing this in a cost-effective manner is a very real challenge as the reduction in the need for social interaction is a key factor in making online learning so cost-effective.

Whilst technological advances and reduced costs may be seen as driving the shift towards online learning, research like this is necessary to ensure that the levels of learning achieved through online learning are optimised for people with different learning styles.

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DOP08

Work-life balance in the nigeria banking sector: A critical approach

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Theme **Well Being and Work**

INTRODUCTION

There is increasing interest in research on challenges employees confront in reconciling work and other personal life commitments. Many researches on work-life balance (WLB) addresses issues that are placed within the western developed economy context. Few studies conducted in Sub-Saharan Africa were also not robust enough to address some of the emerging perspectives within the context (Epie 2009, Ugwu 2009). It is imperative to examine the salient issues driving WLB in societies of Sub-Saharan Africa. The Nigerian banks provide appropriate context given the challenges in employment within the industry. The research attempts to fill a theoretical gap that will be inclusive of developing economy context. Drawing from the critical realist approach, the existing assumptions are questioned and other perspectives that could yield more middle range theories are developed. Critical management exposes the contradictions and managerialism impact in organizational management and practices (Davey & Liefoghe 2004, Morrow 1994). It looks at management from a perspective that other theoretical approaches have not addressed effectively or even ignored to acknowledge (Mir & Watson 2001, Alvesson 1984, Steffy & Grimes 1986). To challenge such dominance becomes necessary for emancipation and progressive change in the social system (Al-Amoudi & Willmott 2011, Feldman 2000).

The last two decades have witnessed steady growth in the employment of women and young adults in the Nigerian banks. The dual career family type has become common too. To cope with the challenges associated with these changes requires shift in management practices. The inability of organizations and public policy to respond to the issue of WLB therefore makes it increasingly difficult for employees to cope. The barriers to WLB are embedded often within externalities beyond the individual. To address this fully requires looking deeper in the working of modern organizations and the entire societal culture.

The banking sector in Nigeria is characterised by long work hour culture, low technology adoption, and high bureaucracy (Oke & Dawson 2012). The anti unionism posture makes it difficult for the marginalised workers to collectivise and speak with one voice (Okafor 2007). The institutions responsible for monitoring fair employment practices are equally weak. The contemporary work environment has also become precarious with high job insecurity and casualization as witnessed following consolidation and mergers within the banking sector (Chowwen & Ivensor 2009). This has remotely encouraged survival syndrome, presenteeism and workaholism that all adversely affect WLB.

The lack of social infrastructure such as urban planning, stable electricity supply, intra-city transportation network are other salient issues that influence WLB within the Sub-Saharan African context. These issues have often been taken for granted in discussing WLB in developed western societies. Previous research has also paid little attention in understanding how foisting an individualised work orientation in a strongly collectivist society impact on WLB. To have better insight on WLB and management across cultures requires integrating many of these factors (Hofstede 1991, Ackers 2002). The psychological factors (low range) and the social factors (high range) require synthesis to explain WLB issues and enhance development of middle range theories relevant to the Nigerian context and similar Sub-Saharan developing societies.

METHODOLOGY

The research is basically exploratory. I have also observed the limitations in the much cited Aryee (2005) theoretical position on WLB in sub Saharan Africa. I specifically identified the exclusion of some important determining factors in terms of weak institutions and stakeholders that regulate labour. The exploratory nature of this research will help to address the gaps by taking a critical realist approach that integrates multi-factorial dimensions in examining WLB. The grounded approach has been found to be effective in theory development (Hallier & Forbes 2004). WLB issues are lived experiences and shaped by the cultural and organization environment sometimes not too readily seen and belonging to that 'deeper realm' (Fleetwood 2006, Weicks 1995).

To ensure adequate representation one organization is selected from each of the old and new generation banks. The banks I selected were given pseudo names, (*Primus Bank and Integrity Bank*) to ensure confidentiality. Furthermore, bank employees in major Nigeria cities were interviewed for spatial coverage purposes. Approval was obtained from the management of the bank to conduct the study.

I used semi structured interview method for data collection. The interviews took place in varied locations with consideration given to convenience, time and privacy. The interview session lasted between 30 minutes to about an hour. The interviewees are a meaningful representation of the industry in terms of employee demography, spatial coverage and 'variation coverage' (Sools et al 2007). Thirty one (31) persons were interviewed; 18 from *Integrity Bank* and 12 from *Primus Bank*. Interviewed also one (1) staff of an old generation bank (outside of the selected cases for theoretical sampling purposes); and one (1) NUBIFIE executive at the union secretariat. In terms of gender, 14 women and 17 men participated in the interview (married 22, single 7 and separated/ divorced 2). Job position/grades of the interviewees were categorised into four, ensuring inclusiveness and theoretical sampling purposes (Willig 1999, Millward 2006). The rationale is to generate many data for comparison and ensure accuracy of account. This will contribute to appropriate theoretical development which is the central objective of my research (Carpenter & Suto 2008). The less empowered within the organizational hierarchy were also included in order to be heard as is the case in critical management research (Alvesson & Deetz 2000, Alvesson & Skoldberg 2000).

A quasi multi-sited ethnographic study was carried out as part of the triangulation strategy in 3 branches of each of the 2 banks (Hine 2007, Cassell & Symon 2011).

RESULT

The result of the research is summarised and presented as follows:

GENDER AND WORK

Women employment has altered role expectations of the career women (Ugwu 2009, Barnett & Baruch 1985, Aluko 2009)). The difficulty in meeting the increasing demands of both family and employer become a primary source of conflict and barrier to WLB (Boles et al 2001, Wesley et al 2009). This is not peculiar to Nigeria as across cultures women often face this challenge (Bianchi et al 2000, Doumbia & Meurs 2003, Duxbury & Higgins 1991, Kulik & Rayyan 2006). The difference however is that many of the banks in the research context lack policies and practices that can support working women (Oke & Dawson 2012, Chovwen & Ivensor 2009). The practice of extended maternity leave and various forms of part-time and alternative work arrangement are alien to Nigerian banks work culture (Allen & Russell 1999, Almer et al 2003, Brandth & Kvande 2002). These affect reconciliation of work and personal life. The organizations are also yet to fully align their employment policies and practices in the face of emergence of dual career family type (Bains 1985, Pierce & Delahaye. 1996, Rapoport & Rapoport 1976, Bruce & Reed 1994).

CHANGING NATURE OF EMPLOYMENT RELATIONSHIP

The astronomical rise in job loss within the Nigerian banking industry in the last decade had negative consequence on WLB of the survivors. The sense of vulnerability and apprehension of what the future holds in terms of their continued employment make the employees 'sit straight' as one interviewee put it (Mishra & Spreitzer 1998, Burke 1998). There has been a lot of research on downsizing impact on employees, but this has not properly been linked directly to WLB apart from casual relationship with antecedents of workaholism (Spence and Robbins 1992, Ito and Brotheridge 2006, Grunberg et al 2001, Burke & Cooper 2006).

THE NATURE OF WORK

There are structural defects and practices that act as a barrier to WLB of which I have classified them into multilevel analysis namely: structure of work, technology of work, work over-load, hours of work and appraisal of work. The standard work arrangement as practiced without flexible option makes work in the banking industry prone to work-life conflict (Parasuraman & Simmers 2001, Booth & Van Ours 2009, Brandth & Kvande 2001, Brewer 2000, Cohen & Single 2001). The low technology adoption to redesign jobs and services impacted negatively. Presenteeism in absence of this is therefore inevitable. The increase in tasks and responsibilities resulting in job intensification for employees were issues; same also with high targets handed down to those in marketing department.

HOURS OF WORK

From the interview narratives working hours has continued to increase notwithstanding statutory regulations and automation of some work processes (Golden 2009). The interviewee attributed this to the impact of downsizing. Working in a precarious environment has also encouraged presenteeism (Robert 2007). Consequently employees spent more time in the office and work related assignment rather than with family and in personal engagements (Drago et al 2009, Ng & Feldman 2008). The poor transportation system also was commonly found be a problem in places like Lagos and Port Harcourt.

INSTITUTIONAL ISSUES

Low intervention of government on matters of WLB and the perception that it is an internal affair for the organizations to drive has hindered embedding of WLB within the context. Giddens (2006) have maintained that low trust in institutions is reflective of weak regulatory systems. The organizational philosophy in terms of planning, people management and ethics of the banks also had implication on employee WLB.

LIVEABILITY OF URBAN NIGERIA

Research and literatures on WLB tend to concentrate more on the individual and organizational factors while paying little attention to the liveability of the urban settlements. The emerging data from my research has shown that this factor of how the geographical space and infrastructural provisions are planned is very important in discussing WLB in developing countries such as Nigeria.

DISCUSSION

To effectively understand WLB within the context therefore requires a middle range theory that can integrate both the individual, organizational and societal factors (Pinde & More 1979). This is grouped into the following: Work domain stressors; Family domain stressors; Organizational philosophy; and Institutional environment. They are however not mutually exclusive but interact within the broader societal systems and feedback loop to determine why there are WLB problems in the society. The individual workplace behaviour including response to WLB issues is influenced by the larger social and institutional framework. The culture and work orientation of people should be considered. WLB is part of cultural crises between indigenous value system and alien work orientation (Ahiazu 1989, Mangaliso 2001). It is importance to understand both these psychological issues and the often neglected wider environmental constraints in which the employees struggle with. There tend to be emphasis on training employees on time management and personal effectiveness to improve WLB without commensurate attention to these institutional barriers (Goodstein 1994, Golden 1998). Informal coping strategies are common however there are no clear policies on organizational support available to employees facing work-life challenges (Carlson & Perrew 1999, Tremblay et al 2011).

The precarious nature of contemporary employment characterised by supervisory reprisals, career penalties and lay-offs without due process and adequate compensation are critical to WLB problems. The outsourcing of employment and use of 'contract staff' has gradually become common within the context without effective regulation and therefore prone to exploitation that negatively impact on WLB. The absence

of effective institutions to check corporate abuse therefore deserves to be factored in theorising on WLB in developing society's context. To address work-family conflict in Nigeria need taking a more holistic approach. The restructuring of work especially providing flexible work arrangement, active stakeholders' participation, effective regulation and ethical human resources management among others are advocated to improve WLB within the context.

DOP09

Work-life boundary management and personality in homeworkers

Hannah Evans, Loughborough University

Theme **Well Being and Work**

An Introduction to the Study

This study explores the relationship between personality traits and work-life boundary management in home workers. Nippert-Eng (1995) suggests that the boundary between work and life can be managed by either segmenting or integrating. Segmenting occurs by separating the spheres of work and personal life and creating a definite distinction between the two, while integration makes the boundary permeable and flexible.

People working at home experience a different set of work-life boundary management issues from those working at a separate site from where they live because of the lack of physical and spatial boundaries that are automatically created when working and living in separate spaces. In particular, home workers are highly responsible for the management of their work-life boundary due to performing work in their own physical space and there being less external boundary control through colleagues and managers that may be accessible in a workplace such as an office.

Specifically, use of mobile technology such as mobile phones can serve as a boundary blurring tool, making it more difficult to maintain a solid boundary between work and life (Chesley, 2005). People who work from home often use mobile technology such as laptops and mobile phones so that they can perform work functions at home. Their high use of technology and working from their home environment makes it highly likely that the work-life boundary for these workers will be highly permeable.

In particular, personality traits could play a role in the way that people work from home and how they manage their work-life boundary. Extroverts tend to seek out the company of others, so extroverts working from home might feel the effects of separation from work colleagues more readily. It might be expected that they would contact others during work more frequently whether that be colleagues or non-work contacts to establish contact with others. People scoring highly in neuroticism tend to be less happy regardless of their environment and often experience more difficulties with managing boundaries in general, so it might be expected that given a highly integrated workplace such as working from home, where boundary management is much more in the hands of the worker in their own space, that maintaining the boundary could prove to be difficult. Similarly, people scoring highly in conscientiousness tend to be more productive at work and more thoughtful in how they manage the way that they work. Highly conscientious homeworkers may then find it easier to create and maintain their own boundaries and the flow of the boundary between work and life.

This study explores how personality factors influence the way that people working at home manage their work-life boundary in an environment where there is substantial merging between the two. The main psychological theories underpinning this research are work-life boundary theory (Nippert-Eng, 1995 and Ernst Kossek et al., 2012) and the five factor model of personality (Costa and McCrae, 1992).

This submission is appropriate for the strand of 'Well-being and Work' because it explores factors that influence the work-life balance of people in the workplace, in particular in a workplace environment that forces both work and life together.

Design and Methods

This study uses a quantitative approach to investigate the role that personality traits play in work-life boundary management in people working from home. The research involved collecting data via online survey using the TIPI (Gosling et al., 2003) to measure the 5 global personality traits; Extraversion, Conscientiousness, Agreeableness, Neuroticism and Openness to Experience (Costa and McCrae, 1992) and the narrow traits of gregariousness, dutifulness and immoderation using the International Personality

Item Pool, (Goldberg et al., 2006). Work-life boundary interference between work and personal life and personal life and work are measured by the WorkLife Indicator (Ernst Kossek et al. 2012).

Data was collected via an online survey, through social media, an online teleworking organisation and two Local councils. Data collection will end in August 2014. A pilot survey was carried out prior to launching the final survey.

Results and Discussion

Data collection will cease at the beginning of August 2014. To date, there are 366 respondents. The sample has 65% female and 35% male respondents, 60% are from the UK and 40% from abroad. There is a good range of respondents from different occupational categories and levels of seniority within the workplace. I will present the results at the conference from the full dataset.

The data has been partially analysed, but full analysis will take place once all of the data has been collated in early August 2014. SPSS will be used to analyse the data. Firstly, each item in the data set will be statistically checked, followed by performing descriptive statistical analysis for the entire dataset. Factor analysis will then be applied to check the psychometric properties of the scales used within the current dataset before running correlational tests between the personality traits and boundary management scores. These will also be tested against the demographic data and other items included as potential confounding variables.

The conference presentation will discuss the results of the data analysis, including:

- Important demographic findings from the dataset in relation to work-life boundary
- The correlation between the tested personality traits and work-life boundary management
- The influence of technology use on work-life boundary management

When the results of this research are fully known they will add to the body of knowledge in relation to personality in the workplace, specifically in homeworking where there is limited existing research. The results could inform psychometric testing in recruitment and selection in relation to home workers. The results highlight the strengths and weaknesses of certain traits in relation to boundary management, which could inform which employees may need extra support, guidance or training to ensure that they can maintain a work-life boundary that is sustainable and they are comfortable with while working at home.

Implications of the research

This research explores the influence of personality traits on work-life boundary management using the five factor model and also in a homeworking context, both of which are novel aspects in this area of research. The session will be of relevance to conference delegates from academia and practitioners in a variety of workplaces since it adds to the body of knowledge in personality research in the workplace. It is relevant to recruitment, selection and retention of employees that work from home (Rothbard, 2005). Employers that employ home workers or those wishing to introduce home working may find the results of interest. Electronic copies of slides will be available to delegates.

The number of people working from home is growing year upon year and more businesses are opening up opportunities for home working (CBI, 2011). Likewise, recent legislation gives all employees the right to request flexible working (Gov.UK, 2014) which may lead to a further increase in people spending some of their time working from home. This being the case, this research may be of interest to the general public and in particular people who are working from home or wishing to request further flexibility in their working patterns.

This short paper presentation could also be presented in the form of a poster.

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DOP10

What has Occupational Psychology contributed to the enablement of effective team working in the NHS and hence to improvements in patient care and staff wellbeing

Christine Hamilton, Hamilton Consulting

Theme **Work Design, Organisational Change and Development**

We provide a summary of some of the key occupational psychology research findings (35% of the presentation), over the last 25 years, into what improves team based working, using primarily the Healthcare context but with relevance to many sectors. We highlight some of the research undertaken in the field of Human Capital and recent research into impact of Positivity within teams.

The Occupational Psychology research evidence is pretty conclusive – organisations that structure work effectively around teams are far more successful than those which do not.

A large body of evidence also suggests that effective team working in healthcare is associated with:

For patients

- Increased patient safety (Firth-Cozens, 2001)
- Reduced patient mortality (West et al, 2001)
- More streamlined and cost-effective patient care (Ross et al, 2000)
- Reduced physician visit and hospitalisation rates (Sommers et al, 2000)
- More effective use of resources (West et al, 2011)
- Increased innovation (West and Anderson 1996)
- Increased patient satisfaction (Borrill et al, 2004)
- Reduced medical errors (Manser, 2009) and – conversely, one study reports that as many as 70% of medical errors can be attributed to poor teamwork (Studdert et al, 2002)
- Improved effectiveness of multi-professional Mental Health Teams (West et al 2012)

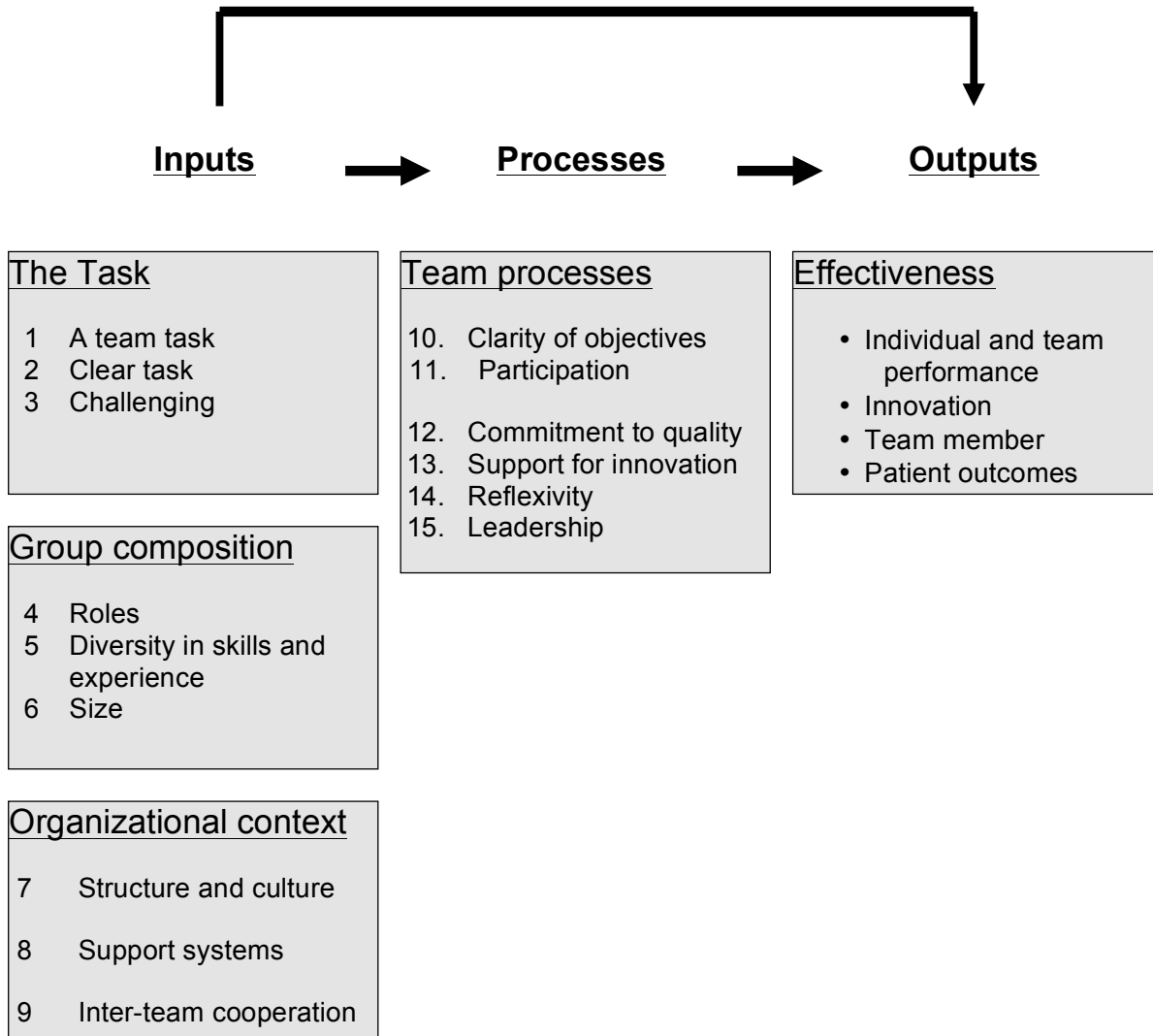
For staff

- Reduced stress (Carter and West, 1999)
- Intent to stay at work (Abualrub et al, 2012)
- Increased job satisfaction (Buttigieg et al, 2011)
- Lower absenteeism and turnover (West et al, 2011)
- Reduced harassment, bullying and violence from both patients and colleagues (NHS Staff Survey 2002 – 2012)

The West et al research provides clear guidance on what constitutes a “real team” which has enabled organisations to restructure their teams to increase the return for the organisation in terms of patient quality, cost reduction and staff satisfaction. This body of research has also shown that teams need to be groups of people who share responsibility for producing products or delivering services. They must share overall work objectives and ideally have the necessary authority, autonomy and resources to achieve these objectives. Team members are dependent on each other to achieve the objectives and therefore have to work closely, interdependently and supportively to achieve the team’s goals. The team members have distinct and clear roles. Teams are defined by their task not by the team members initially. Simply calling a group of people who work in the same area a team will not create team working. They have to work interdependently towards achieving team objectives. These in turn could not be achieved unless team members work interdependently. Team members should be selected because they have the mix of skills necessary for the task. As they work interdependently rather than in parallel, interaction patterns influence task performance and therefore team members should be skilled in interacting and working interdependently with other team members. (West 2004).

In addition to the configuration and structuring of groups of staff into teams many researchers have also regarded the organisational context within which teams need to function as core to understanding the factors which promote team/organisational effectiveness. The thinking of most researchers has been dominated by an input-process-output model, mainly because of its simplicity and utility (see figure 1). Inputs are the givens of the situation; processes are how the team works together and outputs are the consequences of the team's work for patients, organisation and team members.

Figure 1. An input-process-output model of team effectiveness.



Much of the delivery of healthcare is based around professionals working in teams. In the NHS, 96% of employees say that they work in a team (Picker Institute, 2013). However, studies have shown that over half of these “teams” lack clear objectives, do not meet regularly to discuss their performance, or have to work interdependently to achieve these objectives (West & Lyubovnikova, 2012), and thus lack some of the key attributes identified above which enable teams to perform as they should. The session will summarise this accumulation of team effectiveness research and provide the audience with some of the latest research undertaken by the Institute of Work Psychology, Sheffield University Management School. In particular the research undertaken by Lyubovnikova et al. which focuses on how positivity within teams can help effective functioning, building on existing work in positive psychology to develop a team positivity ratio. This is tested and validated on 41 healthcare teams, with initial results validating the measure suggesting a clear correlation between the ratio of positive to negative actions and the effectiveness of the teams.

Occupational psychologists have also undertaken research into the field of Human Capital. The term *human capital* has its origins in economic theory, but is now heavily used in the field of management. It is defined as ‘the knowledge, skills, and abilities (KSAs) employees possess that bring economic value to firms’ (Youndt, Subramaniam & Snell, 2004: 345). Only those attributes that satisfy customer/client demands and can produce value to the firm quantify as the firms human capital (Becker, 1993). Individual

employee productive capacities are aggregated to form a firm's human capital pool, which goes beyond KSAs, to include the interaction of human capital with organisational strategy, processes, and culture (Storey, 1995).

A sufficient human capital pool in itself is not sufficient to ensure desired performance, as individual employee performance is dependent on the employee's motivation (Franco, Bennett & Kanfer, 2002). Motivation is of essential importance in the health care sector, where service quality, efficiency, and equity are all directly mediated by workers' willingness to apply themselves. However complexities arise in the health sector as numerous layers influence health worker motivation, including the internal individual-level, organizational level, and broader societal determinants.

One model that has been widely used within healthcare is that by Michie & West (2004). This model brings in several elements of traditional human capital models but frames them within a specific healthcare context. Broadly, it describes how five different areas are related: organisational context helps define the HR practices employed by organisations. These have psychological consequences for employees, leading to changes in employee behaviours, and ultimately organisational performance, including patient care. This model was based on several decades of research in multiple sectors but in particular healthcare, and is used to underpin the NHS national staff survey.

Relatively little research has focussed on outcomes human capital specifically, or HR practices, within the NHS. One main exception is the research by West et al. (2002, 2006) demonstrated that there are links between HR practices and the key outcome of patient mortality in acute trusts. This found that practices such as appraisal, training, team working and job design show significant associations with hospital mortality rates. Other more recent research has demonstrated links between HR practices and both psychological consequences of staff (related to health and wellbeing), and organisational performance (e.g. Labriola et al, 2006; Lu et al, 2005; Arthur et al., 2003).

Research has identified some of the most critical HRM and organisational design factors which could be deployed by the NHS and other organisations to realise much more return from their human capital for the benefit of their patients and staff. In addition, the healthcare sector is the largest in the economy of most developed countries. The World Health Organisation (2010) reports that healthcare expenditure as a percentage of UK GDP in 2008 is 9.6%, making the potential savings for reinvestment enormous.

For Occupational Psychology research and applied practice to be able to impact upon the performance of core healthcare objectives is of tremendous consequence to our clients and to the profession. Our task is perhaps to continue to build the reputation and track record of Occupational Psychology in the application of this body of research. By working practically in team effectiveness practice we could help teams to objectively identify where they need to continue working exactly as they are, and where they need to focus their development attention.

We could enable organisations to identify where to focus investment in their human capital to ensure that it is an investment which recoups a return for the organisation rather than simply being a potentially wasted expense i.e. it leads to an economic return, e.g. labour productivity (Becker, 1993; Asefa & Huang, 1994).

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Notes on this submission. We would aim to run a session & poster presentation

1. The main psychological theories: Fredrickson, B. L. on Positive Affect and Human Flourishing; Hackman, J. R. (1990) on Groups and Teams and what makes them work; Michael West and Lynn Markiewicz et al on Team effectiveness and impact upon patient care & staff satisfaction

2. The session would be a distilled summary of team effectiveness research. We want to encourage sharing of knowledge and practice during the session; and ideally afterwards; and we will be discussing the current and potential impact that occupational psychology could have on human capital investment.

We would ensure at least 10 minutes for the audience to discuss what they think Occupational Psychologists have to offer the topic of team effectiveness/Human Capital

3. Work design, Organisational Change and development as the core content concerns the development of more effective teamwork

4. The most novel aspect will be an exploration of the Team Positivity Ratio, Lyubovnikova J; and the innovative aspect is engaging the occupational psychologist audience to share practice in the team working area

5. We hope the session will stimulate, and facilitate, discussions on how they might incorporate more team effectiveness work into their portfolio.

6. The public might be interested in the impact of team effectiveness on patient care and organisational outcomes and take some comfort in this work potentially being undertaken by members of a professional body i.e. psychologists

7. We would provide hand outs of the slides and references; and invite the audience to network with each other over communities of practice (1997 words)

DOP11

Worker relations, job satisfaction and social relations - impact turnover intentions?

Raj Hayer & Dr, David Biggs, University of Gloucestershire

Theme **Well Being and Work**

Abstract

This study investigated whether work relations, job satisfaction and social relations were associated with workers intention to quit. A questionnaire survey was conducted among employees recruited from a UK based company, a total of 101 employees responded whereby statistical analyses were conducted. The survey measured relations with co-workers, relations with supervisors, relations with organisation, job satisfaction and social relations. A mixed set of results was found. Although all variables were significantly correlated with intention to quit, the regression coefficient was non-significant except for job satisfaction. Interventions could be accessible to employers to discover how to reduce employee turnover intentions.

Introduction

Intending to quit one's job as well as the reasons behind this is a crucial area to explore in relation to Well Being at work as it could affect factors such as staff retention, morale and performance. Intention to quit is when an employee considers resigning from their job voluntarily. Research by de Jong, Schalk, and de Cuyper (2009) reviewed the comparison of temporary and permanent based workers in relation to psychological contracts. Findings highlight that the maintenance of an 'employee-employer exchange relationship' may reduce the likelihood of an employee's turnover intentions. Further research concentrating on employee attitudes and behaviours towards turnover intentions such as Organisational Citizenship Behaviour (OCB) would be beneficial. It has been suggested by Biswas and Varma (2012) that OCB is negatively associated with employee turnover intentions. However the sample obtained was built of managers and company executives in an Eastern country. Despite this the research helped to highlight the importance of recognising OCB and turnover intentions amongst their own employees. If employees have a positive attitude and feel engaged with the organisation they work in, this is likely to affect their performance, there likelihood of staying with the organisation and even seeking to progress internally. On the other hand there is no visible consideration of relations at work, which could also play a part.

Worker Relations

Worker relations is a key area when attempting to understand the workplace, regardless of occupation, industry or culture. According to Biggs, Swailes and Baker (In press) worker relations are described as the interactions between individuals and their co-workers, their supervisors and their organisation. Much research commonly reviews these three types of relations separately or only focuses on two areas such as relations with supervisors (LMX) or relations with co-workers (TMX) (Tumwesigye, 2010; Tuzun and Kalemci, 2012). Research findings by Lee, Huang and Zhao (2012) suggest that co-worker relations are one of the key variables in terms of predicting intention to quit amongst hotel workers in Taiwan. However this study focuses on one labour industry in a different culture to the UK. Perceptions are adaptable and can vary amongst individuals, therefore are likely to have a different effect on turnover attitudes. Tuzun and Kalemci (2012) explored perceived supervisory support (PSS) and perceived organisational support (POS) in relation to intention to quit amongst employees working in the Turkish insurance market and found PSS is the mediating variable concerning the association of POS and employees intention to quit. This research highlights the importance of worker relations and the impact supervisory relations and organisational relations can have on each other from an employee perspective.

Job Satisfaction

Job satisfaction is how content a worker is with their job and has been widely researched in relation to employee's intention to quit (Spector, 1997). Levy, Poertner and Lieberman (2012) investigated four variables in relation to intention to quit (job satisfaction, organisational commitment, work-family conflict and family-work conflict); results indicated that job satisfaction was the best predictor. Suggesting that it is important to measure, monitor and improve job satisfaction in order to retain staff and encourage them to progress within the organisation than loose them to other companies. However it does not consider emotional intelligence which is linked to social relations as it involves emotional management.

Social Relations

Social relations focus on employees association with their fellow colleagues (Due, Holstein, Lund, Modvig and Avlund, 1999). Pomaki, DeLongis, Frey, Short and Woehrle (2010) found that social support received from fellow colleagues amongst a sample of teachers was influential towards turnover attitude. Workload levels and job satisfaction were both explored individually, in relation to social support and turnover intentions. Turnover attitudes were less negative with high social support when faced with high workloads, whereas job satisfaction was identified as a mediator between the two (Pomaki, DeLongis, Frey, Short and Woehrle, 2010). Findings suggest social relations could be a coping mechanism for employees when faced with high workloads. This research supports the purpose of maintaining social relations at work.

Hypotheses

After conducting the literature review a conclusion was made; to investigate whether relations with co-workers, relations with supervisors, relations with organisation, job satisfaction and social relations can predict intention to quit. These would be measured with the data set which were due to be collected.

Method

An opportunistic sample was obtained from one UK based organisation, to control for organisational variables such as structure and culture. In total 175 questionnaires were distributed amongst full time employees, resulting in a 57.71% response rate. 85 males and 16 females responded. Five Independent Variables (IVs) were investigated - relations with co-workers, relations with supervisors, relations with organisation, job satisfaction and social relations. All IVs were made up of one level. The Dependent Variable (DV) was intention to quit. This was a cross-sectional study, using a within-subjects design. IVs 'relations with co-workers', 'relations with supervisors' and 'relations with organisation' were measured as sub-scales of the 'Worker Relations Scale'. The overall scale counterbalanced the three sub-scales. IVs job satisfaction and social relations were presented without amendments to the format. Counterbalancing was considered for the DV scale which was presented last. Presenting the 'intention to quit scale' first may have biased participant responses Two-tailed correlational analyses (Pearson r correlation) and multiple regression analyses would be conducted. Four scales were used, as well as two researcher-designed sections to form the overall questionnaire. The four scales used were: three pronged Worker Relations Measure (9-items - Biggs and Swailes, 2007), Job Satisfaction Measure (15-items - Warr, Cook and Wall, 1979), Social Relations Measure (5-items - Pritchard and Karasick, 1973) and the Intention to Leave Measure (4-items - Rosin & Korabik, 1991). All scales were found to have acceptable and reasonable levels of reliability and validity. Packs made up of a cover letter, questionnaire and debrief form were distributed across the organisation with permission. The cover letter contained key information such as the purpose of the study and participants rights for example choice of participation, confidentiality and data withdrawal. Completion of the questionnaire was highlighted and accepted as informed voluntary consent; participants would go on to complete the survey. The questionnaire was made up of all relevant scales which measure all IVs and the study's DV. The debrief form was supplied at the end of the survey which included the full aim of the study, reconfirmed their rights, provided links to independent support organisations. Self-seal addressed envelopes were provided to return the questionnaire. This was due to the various locations of different employees. A one month time period was used to allow the completion and return of as many questionnaire's as possible.

Results

After data integrity checks were completed. Table 1 presents the significant correlations between the variables measured. Intention to quit was significantly correlated with all predictor variables with the exception of 'relations with organisation'. All five predictor variables (relations with co-workers, relations with supervisors, relations with organisation, job satisfaction and social relations) were significantly correlated with the four remainder predictor variables. Coefficient alpha scores for the predictor variables were acceptable with exception of 'relations with co-workers and social relations'. Therefore it would be recommended to treat the data from these scales with caution.

TABLE 1: Correlation matrix, means standard deviations and alpha coefficients of the variables measured (n = 101) *p<.05

Variables	1	2	3	4	5	6
<i>Predictors</i>						
1. Relations with co-workers						
2. Relations with supervisors	0.32*					
3. Relations with organisation	0.28*	0.43*				
4. Job Satisfaction	0.31*	0.65*	0.63*			
5. Social Relations	0.28*	0.24*	0.28*	0.40*		
<i>Outcomes</i>						
6. Intention to quit	-0.26*	-0.33*	-0.17	-0.44*	-0.22*	
Means	10.15	14.60	11.30	61.66	18.65	4.51
SD	4.31	4.51	4.61	14.81	3.64	2.43
Alpha Coefficients	0.66	0.79	0.78	0.89	0.51	0.84

Regression analysis

The multiple regression analysis examined intention to quit as the dependent variable. Interestingly, only job satisfaction showed significant associations with intention to quit, ($t = -3.284$; $p < 0.01$).

Discussion

The current study investigated the relation between relations with co-workers, relations with supervisors, relations with organisation, job satisfaction and social relations in predicting intention to quit. The study found a mixed set of results as expected. Intention to quit was significantly correlated with all predictor variables with the exception of relations with organisation. All five predictor variables (relations with co-workers, relations with supervisors, relations with organisation, job satisfaction and social relations) were significantly correlated with the four remainder predictor variables. However the regression coefficient showed non-significant associations for all predictor variables with the exception of job satisfaction with intention to quit.

Healthy employee relations are important for individual well-being and are likely to contribute towards job satisfaction and other work outcomes, such as intention to quit. This paper showed like others that job satisfaction and intention to quit had the strongest relationship. However, the importance of worker relations split into three components is also a useful model supplementing previous research, with job satisfaction relating to all three relationships. The new scale provides a freely available and parsimonious alternative to existing measures of worker relations. A limitation of this study is the extent to which the full complexity of worker relations can be adequately measured by a scale. However this is a general problem facing quantitative studies of this type. Nevertheless, what it can be useful for is an initial quantitative study into an organisation. This can quickly see how relationships in an organisation are based. So if staff are incongruent to the organisations values but are ok between themselves. The Worker Relations scale would be able to ascertain this, in readiness for more in-depth analysis and investigation.

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Workplace Integration in The Context of The Immigration Process

Monica Hess, University of Chichester

Theme **Research Design, Analytical Techniques and Practical Applications**

Introduction:

The enlargement of European Union in 2004 and 2007 led to an intensification of the immigration process from Central and Eastern Europe to Western Europe, with different Western European countries, including UK, being affected by this trend. Therefore, it is not a surprise that two new research directions were developed: research that explored Central and Eastern European immigrants' integration in UK's culture (e.g., Spencer, Ruhs, Anderson & Rogaly, 2007; Rabikowska, 2011) and research that investigated Central and Eastern European immigrants' integration in UK's labour market (e.g., Markova & Black, 2008; Pemberton & Stevens, 2010). However, past research did not explore Central and Eastern immigrant workers' integration in UK's workplaces.

Therefore, the main purpose of the current study was to investigate Central and Eastern European migrant workers' perspectives on the concept of workplace integration and, based on these findings, to develop a comprehensive definition of the concept of workplace integration. Discovering what workplace integration represents could contribute to the improvement of diversity policies and relationships between immigrants and organisations, increasing organisational commitment, which in turn could lead to increased job satisfaction and productivity.

Although an established definition of workplace integration does not exist, some constructs are related to this. For instance, workplace inclusion has been defined as: "the degree to which individuals feel a part of critical organisational processes, including access to information and resources, connectedness to supervisor and co-workers, and ability to participate in and influence the decision-making process" (Mor-Barak & Cherin, 1998, p.48).

Workplace inclusion can be further linked to the theory of work adjustment which states that the work environment and the individual must meet each other's needs and requirements (Dawis, & Lofquit, 1984) and to person-organisation fit theory which represents the match between people and organisations (Kristof-Brown, Zimmerman & Johnson 2005).

Although workplace integration is related to work inclusion, adjustment and person-organisation fit theories, it is distinct. Individuals can try and adapt to various workplaces to satisfy their needs but they won't necessarily feel integrated.

The present research had as main aim to establish a comprehensive definition of workplace integration based on empirical evidence in relation to Central and Eastern European migrant workers' responses.

Methods

Participants

Sixteen (11 women and 5 men) Central and Eastern European immigrant workers with a mean age of 31.43 ($SD = 8.80$), working within service industry in London, were recruited for the purpose of this study, using mainly the snowball technique. Participants worked in different service industry sub-industries (e.g., hotel industry, retail industry), in different workplace departments (e.g., reception, housekeeping, food and beverage) and in different work positions (e.g., reception team leader, head housekeeper, room attendant, customer service assistant).

Data Collection Method

Semi-structured interviews (sample questions: What elements do you think might contribute to workplace integration? Have any changes in your workplace affected in any way your workplace integration?) were conducted with all participants, in neutral quiet public places. The time and place of each interview were established by common agreement with each participant. All the interviews were conducted, recorded and

transcribed verbatim in English. All participants were informed of this issue in the Information Sheet and asked to take part in the research only if comfortable with this situation. Moreover, all the participants were assured of their anonymity and of the confidentiality of their data.

Data Analysis Method

The interviews were analysed using a grounded theory approach, following the procedure recommended by Strauss & Corbin (1990). This method appeared to be the most suitable as the study investigated a concept which had not been previously explored. The analysis was based on three types of coding: open coding (interviews were analysed line by line and various concepts were assigned to different parts of the interviews and similar concepts were grouped together in categories and/or sub-categories); axial coding (connections between sub-categories and categories were made so that the data were structured in a more coherent way) and selective coding (a core category was selected and the other categories and sub-categories were related to this core category). Moreover, a Qualitative Data Analysis software (Data Miner) was used in order to analyse the content of the interviews.

Findings and Discussions

Several categories with their adjacent sub-categories were identified as describing the concept of workplace integration. The core category is represented by the concept of workplace integration, with other main categories such as *feelings*, *the importance of people*, *cultural diversity in the workplace*, *role clarity*, *finance* and *the business* related to it.

Main Categories	Quotes
1. Feelings	<i>"The way they behave with you, the way they smile to you, the way they talk to you. So, it's a feeling from inside."</i>
2. Work Relationships	<i>"If you feel that the people that doesn't accept you like you are, so you don't wanna come to your workplace because you're going to feel bad about this."</i>
3. The Importance of People	<i>"We do meet sometimes after work."</i>
4. Cultural Diversity in the Workplace	<i>"But here everyone accepts you because it's many people from different countries."</i>
5. Role Clarity	<i>"The most important thing when you have a new person coming in your team is to welcome them and you need to have the person induction."</i>
6. Finance	<i>"If you don't satisfy your needs you don't think about the company."</i>
7. The Business	<i>"You mean like to be looked as a human not just as a number?"</i>

Apart from the core category of workplace integration, the other core categories discovered as a result of the semi-structured interviews were the ones of: "reasons for coming to UK", "life in UK/London", "service industry", "work elements" and "personality traits".

Other core categories
Reasons for coming to UK
Life in UK/London
Service Industry
Work elements (work experience, level of English language)
Personality traits (adaptability, flexibility)

Based on these main findings, the concept of workplace integration was defined as *the degree to which individuals feel they are accepted in an organisation where they are perceived as valuable assets of the organisation and where they themselves accept the norms of the organisation*.

Acceptance in an organisation can occur at three levels: micro (acceptance in the work team); middle (acceptance in the workplace or organisation) and macro (acceptance in the big company; this is applicable in the cases where individuals work for a branch of a big company).

The dimensions that might contribute to the increase or decrease of the levels of workplace integration are: primary (organisational dimensions such as work relationships, role clarity); secondary (personality traits such as being open-minded, being flexible) and tertiary (elements such as work experience, level of English).

Conclusions

The current study investigated the concept of workplace integration as perceived by Central and Eastern European immigrant workers working within service industry in London. In this sense, sixteen semi-structured interviews were carried out with Central and Eastern European immigrant workers. The interviews were analysed using a grounded theory approach and a software for Qualitative Data Analysis. Findings indicated that the concept of workplace integration was perceived as a state of acceptance in the work team, in the workplace and in the big company, where individuals are perceived as valuable assets for the organisations and where they themselves accept organisational norms.

Main psychological theories, models and research underpinning the present study

As the main aim of the present study was to explore a concept (workplace integration) that had not been investigated in the past, the main theory used was related to methodology (grounded theory). The researcher considered also constructs related to the world of work (workplace inclusion, work adjustment and person-organisation fit theory) as they were related to the concept of workplace integration.

Workplace integration within the context of the immigration process and learning, sharing and impacting

Since the concept of workplace integration was explored based on participants' perceived attitudes and feelings regarding this concept, they shared their "expertise" with the researcher. The researcher learnt in this way about the dimensions related to the concept of workplace integration from workers themselves. Moreover, the researcher is sharing ideas regarding a concept that has not been explored in the past.

Workplace integration within the context of the immigration process and of research design, analytical techniques and practical applications (theoretical perspectives)

The main aim of the present study was to investigate the concept of workplace integration from Central and Eastern European immigrant workers' perspectives. Based on participants' responses, different categories related to the concept of workplace integration were discovered. Based on these categories, a comprehensive definition for the concept of workplace integration was established. Therefore, the present study offers new theoretical insights related to the concept of workplace integration and thus its connection to "theoretical perspectives" under the strand of "research design, analytical techniques and practical applications".

Innovative aspects regarding the present study

The current research was focused on the concept of workplace integration and on discovering the elements related to this concept in order to establish a comprehensive definition of workplace integration. Since this concept has not been explored in the past, this research is novel. Furthermore, the concept of workplace integration was explored from Central and Eastern European immigrant workers' perspectives. Therefore, the research is also innovative (semi-structured interviews were carried out with this group of participants in the past having as aim to investigate their experiences of living in UK but not of working in UK).

Conference delegates' engagement with the present study

From an academic perspective, delegates will be presented with new theoretical perspectives on the concept of workplace integration. From a practical point of view, understanding the dimensions related to the concept of workplace integration might lead to improve work relationships between employees and employers.

Public engagement with the present study

As a significant number of UK companies rely on Central and Eastern European immigrant labour, it is essential to understand immigrants' experiences of integration in the workplace. Immigrant workers who feel integrated in the workplace are more likely to stay longer or even permanently in the same organisation within UK, thus contributing to a decrease of staff turnover and a strengthening of the British economy. Therefore, the concept of workplace integration might be of interest for the public, especially if they hire immigrant workers from Central and Eastern Europe.

Materials available to attendees

Printed hand-outs containing the poster in PDF format will be handed out to attendees.

Key points to be covered within one minute 'pitch' for a poster based on the present study

The concept being investigated (workplace integration), the participants of the study (Central and Eastern European immigrant workers) and findings (dimensions related to the concept of workplace integration and the definition of the concept of workplace integration).

Elements to emphasise the poster display based on the present study

The printed hand-outs (PDF format of the poster) will contain additional elements regarding the present study (e.g., sub-categories of the main categories).

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DOP13

What are the advantages of CAT vs non-CAT in terms of time saving and measurement accuracy?

Sean Keeley & Jo Parkes, IBM

Theme **Psychological Assessment at Work**

CAT systems are often credited with major savings in test time as well as increased measurement accuracy. Few studies have been conducted to show the extent of these savings, and this study is intended to provide real-life estimates of the savings (or not) in high-stakes selection. We examine the time differences for CAT versus non-CAT (static, fixed time versions) for some cognitive ability tests, as well as comparing the reliability (internal consistency) of the tests taken in CAT and non-CAT forms.

Computerised-adaptive testing (or CAT) systems are often credited with major savings in test time over static tests as well as increased measurement accuracy. Few studies have been conducted to show the extent of these savings, and this study is intended to provide real-life findings of the actual savings (or not) in high-stakes selection. We will examine the time differences for CAT versus non-CAT (static, fixed time versions) for some cognitive ability tests, as well as comparing the reliability (internal consistency) of the tests taken in CAT and non-CAT forms.

CAT (or Computerised adaptive testing) is a sophisticated test delivery method that creates and delivers a customized test for each candidate using computers, aiming to measure various psychological constructs such as ability, achievement, attitude and personality traits in the most efficient and effective fashion. CAT successively selects questions so as to maximise the precision of the test based on what is known about the candidate from previous questions. From the candidate's perspective, the difficulty of the exam seems to tailor itself to his or her level of ability.

As early as 1984, Weiss & Kingsbury showed CAT required much fewer test items to arrive at equally accurate scores when compared to static tests. It was not evident whether there were major savings in completion time; it may have taken as long for the candidates to complete the tests although there may have been advantages in other areas. Nevertheless savings in time should be expected as the number of questions administered is generally reduced by more than 50%. This saving is always referred to in terms of a reduction in items administered and answered rather than the actual time savings. Two tests of equal length may have different inherent time requirements due to differences in item difficulty, as more difficulty may require more time to respond (Bridgeman, Laitusis & Cline, 2007).

A characteristic of CAT assessment is its ability to provide uniformly accurate test scorers for a wide range of candidates across the whole of latent trait (i.e. whatever characteristic is being measured). (Thiessen & Mislevy, 2000). Static, fixed-form tests tend to provide highly precise measurement for candidates scoring in the middle of a distribution, but increasingly poor precision for candidates scoring at the extreme ends of a distribution. This difference in measurement accuracy is rarely referred to but the increase in error is likely to have major impact when very high cut-off scores are set or where inappropriate norm groups have been applied.

Questions

There are two questions that are being addressed in this study:

- What are the differences in completion time between CAT versions and non-CAT versions of the same ability tests?
- What are the differences in measurement accuracy between CAT versions and non-CAT versions of the same ability tests?

Methods

The sample sizes are likely to be in the tens of thousands for both groups. The candidates are real-life applicants to high-stake roles, and will have taken either CAT or non-CAT versions of the same ability tests: a test of abstract reasoning, and up to two tests of deductive reasoning.

The CAT versions will be different for each candidate as they dynamically adapt to the answers given. The non-CAT versions include items in a static, fixed-form. All candidates receive the same questions in the same order. All of the items in both the CAT and the non-CAT versions have been calibrated on the same scale, and IRT (Item Response Theory) scoring is used for both versions (Lord, 1980). It is possible to calculate the SEM for each candidate for each test for each test instances (i.e. the actual test that a candidate takes), regardless of the versions, and it is this calculation which will allow us to compare the measurement accuracy for both versions.

Very accurate calculation of time tests are also possible for both versions of the tests. For candidates taking the CAT version, the test will automatically terminate once a threshold level of measurement accuracy is met. For the ability tests used in this study, this is a standard error of measurement of 0.45, equating to an internal consistency level of approximately 0.815. There are methodological problems relating to the completion times for the static tests which will be addressed in the analysis phase. For the non-CAT versions, candidates may not complete all of the items before the test terminates (this is likely in up to 50% of the test instances for one of the tests being used) whilst others may wait for the test to time out rather than press the 'finish' button on answering their final question. Strategies to deal with this will be

drawn up once the actual nature of the time data is known. The sophisticated administration and scoring system being used, can produce item level data with specific item latencies (i.e. the time taken to answer each question). Average times for actual completion can then be compared for both versions, for each of the tests.

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DOP14

Age and employee well-being: what factors make a difference?

Dr, Tina Kowalski & Dr, Kristina Potocnik, *University of Edinburgh Business School*
Theme **Well Being and Work**

Introduction:

During an economic downturn, organisational cutbacks in resources and manpower may be inevitable. At such times, the health of the workforce becomes even more important for the government and industry themselves if organisations are to remain viable. Indeed, the World Health Organization for example, reported that the economic recession was affecting mental health (WHO, 2010). As such, it is imperative that those of working age remain fit and healthy if productivity and performance rates are to be minimally affected (CIPD, 2012). With the abolition of default retirement age in April 2011 in the UK, the health and well-being of employees becomes even more important given that our workforce will be expected to work longer. This is the case at an individual level so that opportunities for continued employability can be maximised, but also at a national level to ensure the workforce is sustainable and the health-related costs are manageable. Considering these arguments, the main aim of this study was to explore how older employees experience their well-being and what occupational factors affect it. This is an important issue given that the ageing population in the UK and beyond presents a number of challenges, not just for individuals themselves but for workplaces keen to sustain a healthy and productive workforce.

In this context, an increasing number of studies has been exploring the age effects in occupational well-being (e.g., De Lange et al., 2006; Kooij, de Lange, Jansen, & Dijkers, 2013; Nuñez, 2010; Zacher, Jimmieson, & Bordia, 2014). Some studies have found that older employees report higher occupational well-being in terms of job satisfaction (Clark, Oswald, & Warr, 1996) and general mental well-being (e.g., Sui, Spector, Cooper, & Donald, 2001). However, past research has also found that both physical and mental resiliency of older employees are lower relative to their younger counterparts (Alkjaer, Pilegaard, Bakke, & Jensen, 2005). Finally, some studies have also documented an U-shaped relationship between age and occupational well-being with younger and older employees exhibiting the highest levels of occupational well-being in terms of outcomes such as job satisfaction or emotional exhaustion (e.g., Birdi, Warr, & Oswald, 1995; Zacher et al., 2014). What we may conclude from this brief review is that age and occupational well-being are related, but more research is needed to explore the underpinning mechanisms of this relationship to provide evidence regarding what factors may enhance or protect the occupational well-being of older employees. Based on activity theory (Havighurst, 1963), such protective factors could be different social and productive activities (e.g., Potočnik & Sonnentag, 2013). Furthermore, selection, optimization and compensation theory (SOC; Baltes & Baltes, 1990) suggests that older employees can employ a set of strategies to cope with age-related changes in their abilities to maintain their performance and well-being. Specifically, selection strategy refers to setting and prioritizing goals either in terms of personal preferences or due to perceived loss of resources. Optimization strategy is about obtaining and improving the means to fulfil the set goals, whereas the compensation strategy is about obtaining alternative means to reach the goals because the previous ones may no longer be appropriate due to loss of resources. Considering that aging involves the loss of various resources, we may expect that older employees who use these strategies may more successfully cope with such loss and sustain their well-being for longer.

Drawing on data from a mixed methods case study, the present study fits well with the strand of well-being and work as it addressed this issue and explored how occupational well-being is perceived by employees themselves across different age groups, and what factors may affect their well-being. Our findings may provide significant implications regarding employee well-being across the life course and how well-being of older workers can be enhanced and sustained for longer.

The case study and method:

The case study was a large public sector organisation in central Scotland. The online survey was sent out by the HR department to all employees. The online survey (n=156) consisted of two well-being measures: GHQ-12 which is a standardised measure of psychological ill-health and WEMWBS which is a standardised scale measuring positive mental well-being. Of the 156 respondents (see Table 1 for demographic data), 31 went on to complete a semi-structured interview. It is this interview data that will form the main part of the paper.

Table 1: Demographic profile of respondents for each research phase

Variable	Categories	Online survey sample n = 158 (%)	Phase 1 interview sample n= 31 (%)
Sex	Male	46 (29.1)	9 (29)
	Female	112 (70.9)	22 (71)
Age	16-34:	51 (32.3)	10 (32)
	35-44:	58 (36.7)	9 (29)
	45-59:	48 (30.4)	12 (39)
	Missing:	1 (0.6)	0
No. of Years Worked	0-7:	57 (36)	9 (29)
	8-15:	56 (35.4)	12 (39)
	16+ :	42 (26.6)	10 (32)
	Missing:	3 (1.9)	0
Job Grade	2-4:	25 (15.8)	5 (16)
	5-7:	77 (48.7)	16 (51)
	8-11 and SM:	45 (28.5)	9 (29) (8-11/SM)
	SM only:	2 (1.3)	0
	Don't Know	9 (5.7)	1 (4)

Note: Job grade: 2-4 = administrative positions, 5-7 middle level staff, 8-11 and SM = senior staff and Senior Management (SM).

Findings:

Online survey analysis indicated that no significant relationships were found between age and either of the well-being measures. Of note, however, was that whereas GHQ-12 scores were skewed towards poorer health scores, WEMWBS scores showed a normal distribution. This perhaps suggests that poor psychological health and positive mental health are not at opposite ends of the same spectrum rather that they may operate along different spectrums. Given that existing evidence shows mixed findings relating to age and well-being, the findings from this case study are not entirely unexpected.

The remainder of the analysis will focus on the interview phase specifically. Examining each age group in turn, key factors affecting well-being will be discussed and protective factors which serve to enhance well-being will be examined. In instances when these findings are present across different age groups, this will be acknowledged. In the presentation, findings will be discussed in relation to relevant theory and literature. Interview quotes will be used in the presentation as illustrative examples.

Factors affecting employee well-being

These could be divided into three categories; contextual, organisational and individual factors. The most prominent contextual factor raised by many respondents across all age groups was the role of the economic context at the time the study was being conducted, although it should be noted that this had different connotations for different individuals. The role of line managers was a key organisational factor that was strongly related to well-being across all three age groups. Individual issues related to opportunities for, and perceived quality of, periods of detachment from work, the importance of balance between work and home. Life cycle status and past work experience within the organisation were both mentioned frequently and will be discussed in the presentation in relation to the SOC theory.

What are protective factors for well-being?

Protective factors predominantly revolved around personal characteristics, such as being proactive in career decisions and in seeking guidance, taking control, personality factors, access to and availability of non-work support as well as work related support, exercise. Organisational factors also proved pertinent too, whereby line managers played an important role in having the potential to enhance well-being. Presence of a nurturing environment will be discussed more in the presentation, in line with relevant theory. Examples of this include feeling supported at work and, in particular for older workers, feeling encouraged to use skills and experience and also feeling valued for these attributes in a working environment or culture where youth can sometimes be perceived as a positive attribute in itself, even where skills and experience may be lacking.

Summary:

This short paper will be of interest to a range of delegates, not least because we are all in, or likely to be in, employment for most of our lives and, whether we like it or not, we are all ageing. It is therefore relevant to a wide audience to be aware of factors affecting our well-being across the life-course, and the range of protective factors or resources we need to put in place to help enhance and sustain our well-being not just for the short term but for the long term too. In this respect, findings from the paper link well to the theme of the conference in that we can all learn from the findings and relate these to our own working lives, by sharing our experiences with others around us, and with employers, working conditions can be tailored to promote employee well-being where possible. The findings can have a significant impact for HR professionals in terms of affecting policies put in place (e.g. training and development; age discrimination) and for occupational psychologists in terms of identifying areas of emphasis at both an individual and organisational level which may serve to enhance employee well-being in the immediate term but also, as we all face the prospect of having to work longer, to build on in the longer term if a healthy and productive workforce is to be sustained.

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DOP15

Relationships in the Workplace: A Study of the antecedents, processes and outcomes of sexual and romantic relationships at work

Dr, Lisa Matthewman, Westminster Business School

Theme **Well Being and Work**

This focused paper presents recent research that is currently on-going and in progress at the Westminster Business School, University of Westminster. The work that is currently being undertaken by Dr Lisa Matthewman offers a fresh perspective on emotional and sexual intimacy in the workplace. The paper will briefly review research on the distinction between sexual and romantic relationships in the workplace. Next popular psychology and business literature on office romances will be examined and the application of theories related to interpersonal attraction noted (Sternberg's Triangular theory of love (1986) and social exchange theory). Further conceptualisations underpinning the research will be highlighted. The author, will then discuss the multiple methodological approach of the research and initial research findings will be presented. Finally, the author will highlight the development of a process-orientated typology of sexual and romantic relationships and then conclude by highlighting the implications of the research for organisations. Through better understanding of emotional and sexual intimacy in the workplace, guidance for practitioners is offered to better prepare them to effectively address the difficulties of such sensitive encounters and still maintain positive employee relations, motivation and well-being.

Aims:

The primary aim of this paper is to explore the research which currently exists on sexuality in the workplace, indicate the current research agenda, posit research propositions, present initial research findings and highlight the value of the current research for practitioners engaged in employee relations, motivation and well-being. In achieving this aim, the paper will accomplish the following objectives: to research the perceived antecedents, processes and outcomes of sexual and romantic relationships at work, develop a relationship typology and indicate a framework to assist practitioners manage this issue and respond effectively.

- To explore the literature on sexuality in the workplace
- To research the perceived antecedents, processes and outcomes of sexual and romantic relationships in the workplace
- To explore the relationship dynamics of relationships at work in relation to sexuality, intimacy, power, commitment and conflicts of interest/exploitation/professional malpractice
- To explore occupational differences
- To develop a framework to assist employers manage this issue and respond effectively
- To develop a continuing research strategy to explore this issue

Background:

Since 1980, academic research has reported on sex at work with Weber highlighting sexual favours and exploitation in developmental mentoring relationships. Clawson and Kram (1984) further reported how romance in mentoring relationships could lead to negative consequences for the mentee and mentor, with consequential unproductive intimacy leading to a reduction in developmental focus. Similarly, the author's

doctoral research on mentoring relationships revealed how the mentoring relationship could change from a professional relationship to an intimate relationship leading to conflicts of interest.

In 1986, Sternberg provided a perspective on loving relationships in the form of the triangular theory of love and dynamics of the relationship that could relate to a degree of social exchange. Certainly sexual and romantic relationships at work may effect worker conduct and relationships (Mainiero, 1986), productivity of work (Croner Consulting (2003). However, there is research that suggests that the office romance can increase productivity, improve work climate and culture (Quinn, 1977); add excitement, enhance communication, stimulate creativity and lead to higher job satisfaction (Pierce et al, 1996).

Whatever the motives for engaging in sexual and romantic relationships, whether it be for a quick lustful sexual fling or longer term love and intimacy, the vast majority of workers are very unlikely to tell managers or the HR department about their relationship, or a colleague's relationship until it leads to negative outcomes. These negative outcomes can include jealousy and gossip, an abuse of power, poor team dynamics, reductions in productivity or breaches of confidentiality. In today's workplace, employers need to ensure that they have a clear policy to guard against the potential impact of sexual and romantic relationships at work and to ward off sexual harassment claims. Kakabadse and Kakabadse (2004) and Riach and Wilson (2007), Wilson (2013) comment on how organisations are found wanting in not having institutional policies and practices to equitably address this emerging phenomenon. But how far are employers required to take action so to prevent claims of favouritism, sexual harassment, injury to feelings, damage to reputations and in some cases forced career changes or dismissal.

In the USA, many organisations have generally chosen to condemn such activity and have introduced 'Love Contracts' which are clauses that either deter inter-office relationships or prohibit them entirely. Extensive policies have also been introduced to regulate or suppress sexual and romantic relationships. It is questionable as to whether expressions of sexuality in the workplace can be regulated and suppressed through moral legislation and such policies may be counter-productive as individuals are forced into a secrecy culture. It might be viewed that sexual and romantic relationships at work are the norm and so we should not discriminate against staff in such relationships just because they (the relationships) might create difficulties.

In contrast, a more positive approach has been taken in the UK, depending on the specific industry, condoning policy is implemented which is fair and accepts that workplace relationships will happen and encourages employees to be open about them. Issues that arise as a result of a sexual and romantic relationships can be dealt with professionally and legally, perhaps by allocating the individuals engaged in such relationships to different teams or departments. Often open and well communicated 'Conflicts of Interests' policies are utilised by organisations. But as employees may be secretive about their behaviour or work in a culture of secrecy, it is difficult for such policies to be implemented effectively. The IRS Employment Trends Research in 2000, noted that only 20% of organisations have formal codes of behaviour concerning such matters and so perhaps organisations need to continue to think about the implications and likely impact of sexual and romantic relationships in the workplace by undertaking risk assessment which aims to identify what areas of the business might need protecting.

Sexual and romantic relationships at work differ from other kinds of relationship in organisations that have received scholarly attention. The current study develops propositions in relation to the development of a typology of sexual and romantic relationships in the workplace.

Research Questions:

- To determine common issues and concerns and develop a model of the antecedents, dynamics and outcomes of sexual and romantic relationships in the workplace
- How are they formed, how do they evolve and what are the consequences of them?
- To explore the effect of sexual and romantic relationships on the individuals, colleagues and the organisation
- What professional and occupational differences exist?
- What are the implications for management and policy development

Design/methods:

Rationale:

Both a quantitative and qualitative methodological approach is being employed to understand the key questions being posed. This was decided by matching the strategy to the nature of the research project and the type of research questions being asked. The aim of the research questions is to conceptualise what participants in the study perceive to be the antecedents, processes, and outcomes of sexual and romantic relationship[s] at work. In response to this aim, the philosophical paradigm taken in relation to the present research is the 'phenomenological' approach, which also, includes the interpretivist, or qualitative paradigm.

Sampling:

Convenient, purposive, and accidental sampling methods were employed, whereby the researcher utilised the people closest at hand in relation to the phenomena under study. In addition, a snowball sampling method is being employed to include those people with the experience of the phenomena being studied. It could be argued that judgemental sampling methods are being utilised as the researcher-is inviting participants to partake in the research based on their experience of sexual and romantic relationships at work and is not inviting anyone else to take part in the research during the research process. Natural sampling methods were further utilized. The sample consists of employees working in various professions, including academia/education, media, retail, public sector, financial services, business consultancy and health services.

Data Collection:

The first stage of the research involved data collection through a random sample survey in 2005 with academics and non academics of the Westminster Business School. Respondents were then invited to take part in a confidential one to one interview. Two parallel survey instruments were designed and employed, one for men and one for women, such that data collected from the two instruments could be merged into one data set. There were five sections to the questionnaire: (1) demographics and screening questions; (2) questions about the workplace; (3) questions about the individual attitude to love and liking/attitudes to work; (4) questions about previous romantic and sexual relationships in the workplace; and (5) questions about current romantic and sexual relationships in the workplace.

Results:

Preliminary results will be presented based on the survey data. Data will take the form of descriptive statistics and qualitative data analysis, divided into antecedents, processes and outcomes. Tentative conclusions will be presented relating to the typology of sexual and romantic relationships in the workplace currently under development.

Conclusions:

Workplace relationships can result for varying reasons pertaining to individual motives, attraction, similar attitudes, physical attraction and proximity. These relationships can be positive, negative, temporary or permanent, exploitative or non exploitative and vary in form and longevity. Whatever the motives for engaging in sexual and romantic relationships, whether it be for a quick lustful sexual fling or longer term love and intimacy, the vast majority of workers are very unlikely to tell managers or the HR department about their relationship, or a colleague's relationship until it leads to negative outcomes. These negative outcomes can include jealousy and gossip, an abuse of power, poor team dynamics, reductions in productivity or breaches of confidentiality. In today's workplace, employers need to ensure that they have a clear policy to guard against the potential impact of sexual and romantic relationships at work and to ward off sexual harassment claims. But how far are employers required to take action so to prevent claims of favouritism, sexual harassment, injury to feelings, damage to reputations and in some cases forced career changes or dismissal.

The current research goes beyond previous research by employing contemporary theoretical frameworks, enhancing methodological development and employing a qualitative longitudinal focus.

DOP16

How does burnout cause risky decision making?

Evie Michailidis & Dr Adrian Banks, University of Surrey
Theme **Well Being and Work**

Introduction: The importance of burnout, lies in its link to crucial consequences both on the individual's well-being and job performance (Maslach, Schaufeli, & Leiter, 2001). There has been some theoretical speculation on the ways in which burnout may impair decision making and especially McGee (1989) found that burned-out child protection service workers coped with demanding cases by denying the need for involvement, i.e. avoidant decision making. However, there has been no research on the effect of burnout on risky decision making. Risky decision making may lead to detrimental consequences both for the employee and the organization. The present study therefore examined the effect of burnout on two angles of decision making: decision making style and risky decision making.

The execution of decision making process is key for the successful completion of work-related tasks. However, most of the studies have investigated the effect of acute stress on decision making (e.g. Young, Goodie, Hall, & Wu, 2012). It is therefore essential to understand how burnout influences decision making. Scott and Bruce (1995) defined five decision styles in behavioural terms; rational, intuitive, dependent, avoidant, and spontaneous. Individuals' profiles of decision making styles may differ with respect to their relationship with stress. In support to this, Allwood and Salo (2012) indicated that in particular avoidant and to some extent dependent style, were significantly associated with higher stress. Scholars have further conducted studies in order to address whether stress might lead decision makers to take more risks. Porcelli and Delgado (2009) for instance, examined the impact of acute stress on financial decision making and revealed that acute stress altered decision making by modulating risk taking. Interestingly, however, to date there has been no research on whether burned-out individuals make more risky decisions. Understanding burned-out individuals' risk taking behavior can help highlight how this population takes decisions, but also provide insights on how a person's environment might interfere with his or her ability to make decisions in the workplace.

The present research: Synopsizing therefore, the present study explored the effect of burnout on two angles of decision making: decision making style and risky decision making. Specifically, the study initially looked at whether burned-out individuals, exhibited avoidant decision making style. The current study also explored whether burned-out individuals, exhibited higher risky decision making and whether this was mediated by the effect of the likelihood (how likely they think it will go wrong) and seriousness (to what extent they think it matters if it goes wrong) of the consequences of the worst-case scenario occurring. This assumption is based on the Expected Utility Theory, which states that the decision maker chooses between risky prospects by comparing the utilities of outcomes and the probability of occurrence.

Method: A total of 262 employees from a wide range of occupations (119 males, 143 females) took part in the online study. The measures used in the study included Maslach Burnout Inventory-General Survey (Schaufeli, Leiter, Maslach, & Jackson, 1996). Decision making style was measured using the General Decision-Making Style (Scott & Bruce, 1995). Finally, risky decision making was measured through a 'Work Risk Inventory' instrument specially developed for the study, based on the format of Personal Risk Inventory used by Hockey et al. (2000). After conducting a pilot study the final Work Risk Inventory measure included five generic workplace scenarios where participants were asked to imagine themselves in the situations represented in the scenarios and choose on a 10-point scale (0 = 'definitely A', to 10 = 'definitely B') which of the two actions they would take - one option involved more risk and the other less risk. Then participants were asked to rate the likelihood as well as the seriousness of the consequences of the worst-case scenario occurring, on a 10-point scale. An example is presented below.

Your colleague with whom you are sharing an office takes home confidential information without permission. You notice this a couple of times and you are aware that this is a serious offence. If by any chance your boss realizes that the information is missing there is a possibility that you might be blamed as well.

You wonder what you should do?

- A. You don't tell anything to your boss and hope that your colleague will not do that again**
- B. You tell your boss that your colleague is taking confidential information at home**

Which option would you choose on a 0-10 scale (0=definitely A, 10=definitely B)? How likely is it that your boss notices that the confidential information is missing? (0=not likely at all, 10=extremely likely)

How serious would the consequences be for you if your boss notices that the confidential information is missing? (0= not serious at all, 10=extremely serious)

Findings: Correlational analysis revealed that burnout was positively and significantly correlated with spontaneous and avoidant decision making, $r = .22$, $p < .001$ and $r = .35$, $p < .001$, respectively. Burnout was also negatively and significantly correlated with rational decision making $r = -.310$, $p < .001$. No significant correlation was found with dependent and intuitive decision making, $r = .05$, $p = .21$ and $r = -.08$, $p = .11$, respectively. As hypothesized, burned-out individuals did exhibit avoidance decision making. Regarding the second hypothesis two mediational models were tested. As demonstrated in Figure 1 the effect of burnout on risky decision making was not mediated by the likelihood of the worst-case scenario occurring. However the effect of burnout on risky decision making was mediated by the seriousness of consequences from the worst-case scenario occurring.

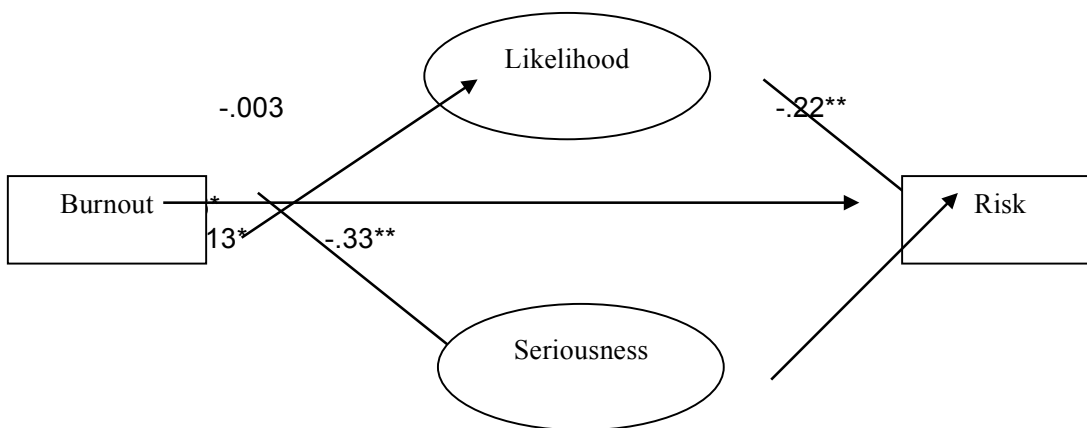


Figure 1. Standardised regression coefficients for the mediating effect of likelihood and seriousness in the relationship between burnout and risky decision making. * $p < .05$, ** $p < .001$.

Discussion – Conclusion

Summary of findings: Findings revealed that indeed burned-out employees not only exhibit avoidance decision making, but also spontaneous and irrational decisions. Considering riskiness, findings revealed that the effect of burnout on risky decision making was mediated by the seriousness of consequences from the worst-case scenario occurring. Burned-out individuals take the riskier option as they think that it does not really matter if the decision they take goes wrong - they do not realize the seriousness of the consequences. This may also be explained by the findings that burned-out employees take spontaneous and irrational decisions.

Contribution to science: This study fills in a crucial gap in the literature about the effect of burnout on two angles of decision making and indeed demonstrates that burnout does have an effect on employees' decision making, contributing therefore to this understudied area. The present findings suggest that burned-out employees do take risky decisions as they do not realize the seriousness of the consequences, explaining thus the findings that they take spontaneous and irrational decisions. This study is one of the first to investigate the relationship between burnout and decision making in the work context and is of particular interest and relevance to all employees and managers from a wide range of occupations, given the high-stressful work environment and the integral part decision making plays in employees' life.

Contribution to practice: The present findings further lead to additional insight into the nature of burnout and its behavioural manifestations, which potentially may lead to new ideas for diagnosis and treatment. In addition to the existing characteristics of burnout, the present study further suggests that burned-out individuals may avoid taking decisions and are characterized by irrational and spontaneous decision making style. Significantly, the present findings suggest that burned-out individuals do take risky decisions, and these are biased by the seriousness of the consequences of the worst-case scenario occurring. The investigation of the relation between burnout and decision making styles could enable managers to design work environments that provide more suitable support to employees who are responsible for decision making tasks.

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DOP17

How Do Resilient Attitudes and Behaviours Relate to Psychological Health?

Joanne Moncur, Dan Hughes, a&dc, Aiden Loe, University of Cambridge
Theme Well Being and Work

Introduction

Why Is Psychological Health Important at Work?

Maintaining psychological health at work is important for both the individual and companies. In 2013 alone, 15 million working days in the UK were lost due to sickness absences related to stress, anxiety and depression (Office for National Statistics, 2014). Psychological health is therefore a significant cause of absenteeism, and meta-analytic research has also shown that psychological health is moderately to strongly correlated with work performance, particularly task performance (Ford, Cerasoli, Higgins & Decesary, 2011).

What Is Resilience and Why Is It Important at Work?

Resilience has been defined as 'An individual's capacity to adapt positively to pressure, setbacks, challenge and change in order to achieve peak performance' (a&dc, 2010). It can be viewed as a multi-dimensional construct consisting of different attitudes and behaviours which can be developed and improved.

Research studies have found that resilience is related to a number of occupational outcomes:

- It can act as a potential buffer against experienced stress and 'burnout' (Kobasa, 1979).
- It can moderate the relationship between stress and job performance, with those who are higher in resilience being more likely to maintain their levels of performance better than those with lower levels of resilience (Westman, 1990).
- It has also been related to workplace happiness, job satisfaction and job performance (Youssef & Luthans, 2007), and also work engagement (Shalfrooshan, 2013).

Resilience is therefore an important construct to study in an occupational setting as it can help employees deal more effectively with stress and is also associated with more positive work attitudes and behaviour.

Research Question

The aim of this study was to investigate the link between resilience and psychological health, and more specifically which components of resilience relate most to psychological health. It was hypothesised that higher levels of reported resilient attitudes and behaviours would relate to fewer psychological health problems.

Methodology

Sample

The sample consisted of 297 working adults, obtained from an online research panel of volunteers. Of the sample, 49.8% were male and 50.2% were female. Over 25 industry sectors were represented.

Measures

The first measure was The Resilience Questionnaire (a&dc, 2010), which comprises eight key components of resilience. The eight dimensions were identified through a review of research literature and other existing models of resilience. The review incorporated Maddi and Kobasa's (1984) 3Cs model, Neenan's (2009)

strengths underpinning resilience, and Reivich and Shatte's (2002) skills for resilience, as well as a review of the constructs assessed in a number of different psychometric tools which measure resilience.

The Resilience Questionnaire has acceptable internal consistency reliability, with alpha coefficients ranging from .74 to .86 for the eight dimensions, and construct validity with other related psychometric instruments, including other measures of resilience, positive and negative affect, and work engagement (a&dc, 2010). All of the dimensions were designed to be intuitive and can be developed through training or coaching interventions.

The second measure used was the General Health Questionnaire (GHQ-28, Goldberg & Williams, 1988). The GHQ-28 has four constructs which were identified through extensive research and is frequently used as an indicator of the Individual's psychological well-being. The questionnaire has acceptable internal consistency reliability, with alpha coefficients ranging from .78 to .92.

Data Collection Procedure

Participants were invited to complete the questionnaires online. Participants completed the questionnaires sequentially in a single session.

Results

The relationship between the two measures was investigated using correlations and multiple regression. The results are shown in Table 1.

Resilience Questionnaire Dimension	General Health Questionnaire–28				Overall
	Somatic Symptoms	Anxiety and Insomnia	Social Dysfunction	Severe Depression	
Self Belief	-0.33**	-0.34**	-0.34**	-0.33**	-0.39**
Optimism	-0.34**	-0.39**	-0.36**	-0.44**	-0.45**
Purposeful Direction	-0.10	-0.06	-0.17**	-0.17**	-0.14*
Adaptability	-0.35**	-0.37**	-0.33**	-0.27**	-0.38**
Ingenuity	-0.09	-0.10	-0.15*	-0.09	-0.12*
Challenge Orientation	-0.14*	-0.20**	-0.25**	-0.16**	-0.21**
Emotion Regulation	-0.27**	-0.31**	-0.30**	-0.25**	-0.33**
Support Seeking	-0.03	-0.13*	-0.22**	-0.22**	-0.17*

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Correlations greater than 0.3 are highlighted in bold.

Table 1: Correlations between The Resilience Questionnaire and GHQ-28 (N=297)

26 out of 32 correlations were statistically significant. The overall score of the GHQ-28 correlated negatively with all eight of the dimensions measured in The Resilience Questionnaire. The strongest correlations with overall psychological health were observed for Optimism, Self Belief, Adaptability and Emotion Regulation.

A multiple regression analysis was also conducted to determine the overall extent to which the dimensions on The Resilience Questionnaire predicts variance in psychological health as measured by the GHQ-28. Four of The Resilience Questionnaire constructs were significant: Optimism, Adaptability, Ingenuity and Self Belief. The Multiple R was .55, explaining 30% of the variance in the GHQ-28.

Discussion and Implications

The results indicate that higher scores on the eight dimensions measured in The Resilience Questionnaire are associated with lower reported psychological health problems. Broadly, resilience has an equal effect on each of the four constructs measured in the GHQ-28. Overall, resilience accounted for almost a third of the variance in psychological health, based on these questionnaires.

This outcome is in line with expectations that resilience is related to psychological health. In particular, individuals reporting fewer psychological health problems tended to be:

- More optimistic about their life in general and that they will experience good outcomes (Optimism)
- More confident in their own ability to overcome problems and obstacles (Self Belief)
- More willing to adapt their behaviour in response to changing circumstances (Adaptability)
- Find it easier to remain calm and in control of their emotions in stressful situations (Emotion Regulation)

These findings support previous research. For example, Min, Yu, Lee and Chae (2013) found that adaptive cognitive emotion regulation strategies contributed to higher levels of resilience in people with depression and anxiety. Additionally a study looking at aging men found optimism predicted higher levels of perceived general health, higher levels of mental health and lower levels of somatic pain (Achat, Kawachi, Spiro, DeMolles & Sparrow, 2000).

Overall, these findings could have positive implications for the workplace as reduced psychological health problems could lead to reductions in absenteeism and increased productivity and performance. Based on this study, it would be valuable to explore in further research whether taking action to improve levels of individual resilience through an intervention (eg a resilience development programme and/or individual coaching) can reduce psychological and physical health problems

Specific Submission Questions

1. What are the main psychological theories, models and research underpinning your session?

The main psychological models relate to resilience and psychological health and are described in the main content of this submission.

2. How do you see your proposal linking with the main conference theme of Learning, Sharing, Impacting?

The submission shares a scientific research study which is very relevant for psychological practice. The study identifies an association between resilient attitudes and behaviours (which can be developed) and psychological health which could be explored through further research. Improving psychological health can make a real difference to individuals and the organisations they work for.

3. Why is the submission appropriate for the particular strand you have chosen?

This is a research study exploring specific aspects of well-being at work (psychological health) and how this relates to resilience, a construct focused on positive adaptation to challenge and change.

4. What do you consider to be the most novel or innovative aspects of the ideas being presented?

This study investigates which specific resilient attitudes and behaviours have the strongest relationship to psychological health rather than just the overall construct of resilience. It also uses a measure of resilience which has been specifically designed for use in work contexts.

5. Why do you think conference delegates will find the paper or session stimulating and useful?

The study provides useful data which could inform further research around resilience and psychological health, and could also inform practical interventions designed to improve psychological health.

6. What might the public find interesting about your paper or session?

Individuals who have a more resilient mindset tend to report fewer psychological health problems.

7. If any, what materials do you intend to make available to attendees and in what format (e.g., printed hand-outs, electronic copies of slides)?

We would provide A4 copies of the poster for conference delegates to take away with them.

8. *What key points would you put into a 60 second 'pitch' for your poster?*
This is provided in the summary at the beginning of this submission document.

9. *What proposals if any do you have to augment or enliven the basic poster display?*
We will display the relevant Resilience Questionnaire and GHQ-28 models in visual format on the poster so they are quick and easy to understand for readers.

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DOP18

Tick Tock: The Effects of The Changing Clock

Laura Neale & Mark Moss, Northumbria University
Theme **Well Being and Work**

Twice a year in the UK the clocks are adjusted forwards by one hour (losing an hour) on the last Sunday of March at 01.00 and are then adjusted backwards by one hour (gaining an hour) on the last Sunday of October at 02.00. This changing of the clocks is known as daylight saving time (DST) and to date there has been little research which has investigated the effects that the clock change has upon occupational health and well-being. The intention of this study therefore was to investigate the effects of a natural misalignment of biological and social timing (circadian misalignment or social jetlag, arising from the clock change in October 2012 and March 2013) upon self-reported measures of occupational well-being, anticipation of the next working day, sleep and health. The findings indicate that the clock change appears to have a limited effect upon occupational well-being and anticipation of the next working day which then disappear within a week of the change. The findings also suggest that the transitions can result in higher sleep quality and increased self-reported total sleep time, suggesting individuals may behaviourally compensate for the transitions by increasing their sleep duration and there may in fact be positive consequences of the clock change. Misalignment however appears to have a psychological effect that is independent of experience, and it could be argued is merely anticipatory. The methodology, findings and potential implications of this research will be outlined.

These findings suggest that the direction of the change is not important and it is the process of circadian misalignment that has potentially short term detrimental occupational effects. As many individuals may compensate for sleep debt accumulated during work days by increasing their sleep duration on free days (Roenneberg et al.,

The effect of the transition into and out of British Summer Time upon occupational well-being was investigated to determine the impact of acute misalignment between social and biological timing. A total of 158 volunteers participated in phase 1 of the study (autumn 2012) and 83 of these people also participated in phase 2 (spring 2013). There were a total of 8 online surveys for the study and 2 hard copy sleep diaries (4 surveys and 1 sleep diary per study phase). During data collection participants completed a number of measures in order to assess occupational well-being, anticipation of the next working day, sleep and health.

Data analysis showed that workaholism and negative anticipations of the next working day increased from the Monday before the clock change to the Monday after the change and then decreased again from the Monday after the change to the Monday 1 week after the transition. There was no effect of the clock change on any other measures of occupational well-being and no seasonal differences between autumn and spring on occupational well-being and anticipation of the next working day were found. These psychological effects appear to be short lived as they ameliorate one week post change and the variables are less affected by seasonal changes.

The findings also showed that the clock change resulted in better sleep that was self-reported from participants. Sleep quality was shown to increase therefore becoming more positive after the clock change and self-reported total sleep time also significantly increased. Interestingly total sleep time that was calculated from other variables from the sleep diary, as opposed to self-reported total sleep time, did not change after the transition. Also, total sleep time calculated increased from October (autumn) to March (spring) but a seasonal effect was not found for any of the other sleep variables. Effects of the clock change on indicators of health were not found.

Thus misalignment has contradictory effects in that the physiological effects upon sleep are more positive in nature whereas the psychological effects upon occupational-well-being and anticipation are more negative. From these findings it can therefore be concluded that the clock change appears to have a limited effect upon occupational well-being and anticipation of the next working day which then disappear within a week of the change. The findings also suggest that the transitions can result in higher sleep quality and increased total sleep time self-reported, suggesting individuals may behaviourally compensate for the transitions by increasing their sleep duration and there may in fact be positive consequences of the clock change. Misalignment however appears to have a psychological effect that is independent of experience, and it could be argued is merely anticipatory.

2012), many individuals could be experiencing circadian misalignment or more acute social jetlag potentially on a weekly basis. Consequently, additional research needs conducting to further clarify these relationships and to investigate whether the transitions impact upon other more objective indicators such as work performance. This study adds to the conflicting, controversial evidence base regarding the effects of the DST transitions and provides support for maintaining the transitions.

DOP19

Nature of Russian professionals' psychological contract in the UK organisation

Lucy Williams, Brunel University

Theme **Leadership, Engagement and Motivation**

Focus of the research

Organisational change and loss of traditional basic certainties of organisational life put the concept of psychological contract at the centre of attention for many organisational researchers and managers. The rise of multinational firms and global migration has made quite common the situation when two parties to a psychological contract – employee and organisational agents - represent different cultures. The role of societal and cultural factors in psychological contract formation and the necessity and value of the study on cross-cultural issues in psychological contract formation have been emphasised by respected experts in the area (Rousseau and Schalk, 2000, Thomas, *et al.*, 2003, Thomas, *et al.*, 2010). Nevertheless, there are

very few studies analysing the differences in psychological contract across different cultures and, moreover, on cross-cultural psychological contract formation (Ravlin, *et al.*, 2012).

Psychological contract formation is determined by two factors: messages of promises of obligations, sent by the organisation and the individual perception of these messages by the employee (Morrison and Robinson, 1997). Both these factors are exposed to cultural influences. Promises made by the organisation are affected by the organisational culture creating a context for psychological contract formation. However, the same signals can be interpreted differently by employees belonging to different cultures (Rousseau, 1995). In our study we use a theoretical framework that draws on one of the most important cultural characteristics effecting psychological contract formation – individualism versus collectivism (Triandis, 1995). If the parties to psychological contract – employee and organisation – belong to different cultures, one of which is individualist and another is collectivist, the situation becomes very complex since individualism and collectivism tend to be consistent with different types of psychological contract (Thomas, *et al.*, 2003, Thomas, *et al.*, 2010, Ravlin *et al.*, 2012). In our research we focus on Russian employees working in the UK as an illustrative example of such a situation.

The British societal environment has been found to be individualistic (Hofstede, 2001), which creates a more calculating, opportunistic and individualist workplace as a context for the psychological contract formation. Psychological contracts formed in this context are predominantly transactional (Thomas, *et al.*, 2003).

The Russians are moderate collectivists, with an individualism index score of 39 (Hofstede, 2001). Relational psychological contracts are expected to be a more common form of the relationship between an individual and employer in Russia (Thomas, *et al.*, 2003). However, it was not clear what type of psychological contract Russian employees would form in the culturally different, individualist environment of the UK organisation.

The first objective of the research is to examine how intercultural issues affect the type of psychological contract. The second objective is to investigate how intercultural issues affect the formation of psychological contract.

Methodological considerations and methods of data collection and analysis

For our research objectives, where we seek to capture the unfiltered perspective of individuals – Russian professionals – in the changing employment environment of the UK organisation, the idiosyncratic assessment offered by qualitative methods is more appropriate.

In-depth semi-structured interviews are conducted among Russian professionals working for a UK organisation. Critical incident technique is used to generate qualitative data, where respondents are asked to recall a recent event where they felt their expectations were violated or exceeded. At this preliminary stage of the research a pilot study - 8 interviews are conducted in respondents' native (Russian) language. For our in-depth study we use non-probability sampling of a small number of specially selected cases. Four of our respondents are male, four female, between 31 and 61 years old, working in banking, higher education and public sector for 4-13 years. Interpretive phenomenological analysis is used to analyse the data collected.

Findings

Our findings demonstrate that psychological contracts formed by our respondents include mostly relational terms such as: long term open-end, commitment and loyalty, integration and identification, continuous development, mutual support. However, other terms could be classified as transactional: unambiguous job responsibilities and lack of security.

Using Rousseau's 2x2 model of contemporary contracts (time frame versus performance management) this type of contract could be described as *balanced* contract: 'open-ended and relationship-oriented employment with well-specified performance terms subject to change over time' (1995, p.98). Balanced contract, which has many relational and some transactional features, is formed when deep and involving relationships are desirable but the organisation is able to specify performance demands as a condition of membership. Its main characteristics are high member commitment, high integration and identification, ongoing development, mutual support and dynamic (Rousseau, 1995). We identified the type of

psychological contract formed by Russian professionals in the UK organisation as *balanced with many relational features*.

Our respondents form their psychological contracts in the *individualistic context* of UK organisation which tends to determine more transactional rather than relational relationships between employer and employee. How can the presence of many *relational terms* in their psychological contract be explained? We argue that there is a mechanism of cultural influences on the process of formation of psychological contract between two parties belonging to cultures differently positioned on the individualism-collectivism continuum.

Individuals, living in the social world that they create and structure, and giving meanings to social phenomena, are capable of affecting the social reality considerably. Individuals create a social world which they then experience as something other than a result of their own making (Berger and Luckmann, 1966). This is true particularly in relation to the phenomenon of psychological contract which an individual forms with the organisation, since the individual is a rightful party to the process of establishing such a contract. As a result, our respondents, being representatives of a moderately collectivist culture acting in a predominantly individualistic environment, form psychological contracts with many relational terms.

A further finding of our investigation is the importance of the role played by other employees in forming psychological contracts. It was found that the respondents assess the obligations of psychological contract they form with the organisation by comparing them to the content of contracts made by other employees they can identify with (according to position, time in service or age). The socially derived nature of employee obligations was not provoked by the questions asked, as they focused on respondent versus organisation interaction. In spite of this, such comparisons, which were made by different respondents and refer to the different categories of employee and organisational obligations (for instance, working hours or employer's property), manifest themselves in a consistent manner.

Why do other employees appear in the picture at all, when psychological contracts are presumed to reflect a bilateral relationship? The above results demonstrate that our respondents paid great attention to justice, understood as equality. Russian professionals reported that the state of psychological contract relative to their peers mattered more than their absolute treatment by the organisation.

Collectivism refers to the tendency to view one's self as interdependent with selected others. It is more natural for a collectivist to think 'we', instead of 'I' and to see himself or herself as a member of his or her in-group (Triandis, 1995). Our respondents strongly identify themselves with the organisation and other employees and, therefore, feeling a member of a particular in-group, assess the terms of their psychological contracts in relation to other employees' contracts. The principle of equality within in-groups, typical for collectivist culture, is that 'the basis for differentiation is not what a person does, but who the person is' (Erez and Early, 1993, p. 223).

Our respondents, being representatives of a collectivist culture, are greatly concerned with equality within their in-group. Being treated worse than other members is seen as a threat to their in-group status, while being treated better means the improvement of status. The principle of equality fulfils collectivists' feeling of in-group harmony, which is an important element of the collectivist system of values. For collectivists, the relationship between employer and employee is seen in terms of how the individual's treatment ranks with the collective, rather than a more dyadic model. Implementation of equity rule within the in-group could hinder the development of harmony and would be seen as highly undesirable.

We suggest that our respondents probably perceived their contracts as *normative*. Normative contracts are established when a number of people agree on the terms of their individual psychological contracts (Rousseau, 1995). Some employees identify others as having the same deal. If individuals share a common psychological contract, they reinforce each other's perceptions of contract terms and would experience violation of the contract if the organisation they work for does not fulfil its obligations. Collectivists are more likely to share a normative psychological contract than individualists (Thomas and Kevin 2000).

Taking into account the idiosyncratic nature of psychological contract, our respondents, being collectivists in a more individualistic environment, perceived their contract with the organisation as normative, even if their British co-workers did not share this perception. Russian professionals assessed the organisational behaviour towards themselves and their co-workers, and vice versa, as if all employees they identified

themselves with had the same terms of psychological contract. Perceiving their contract as normative made our respondents assess the fulfilment of their psychological contracts in relative rather than absolute terms: the equality of both the treatment by organisation and obligations towards the organisation becomes a very important term of the contract in its own right, if not the most important one.

Conclusion

Russian professionals in the UK form psychological contracts of balanced type, which includes many relational terms. This type of psychological contract is determined by the collectivist culture of our respondents, the effects of which are explained using a model of psychological contract formation.

Another important feature of the psychological contract formed by Russian professionals in the UK is its normative character, which is consistent with their collectivist culture. The normative nature of the psychological contract formed by our respondents determined the phenomenon of benchmarking their own contracts against other employee's contracts.

The directions for further theoretical development can be recommended. Quantitative comparative research, conducted among both Russian and British employees could explore further the nature of psychological contract formed within a modern UK organisation. Mapping the terms of their psychological contract on the relational versus transactional continuum and comparing the results could throw additional light on the extent to which culturally different employees are able to form psychological contracts different from relationships typical for their working environment

The findings of the proposed paper also have practical implications for both Russian professionals working in UK organisations such as how to reduce the probability of the psychological contract violation, which can occur as the result of cultural misunderstanding. Finding the right balance between organisational and employee interests will help managers to get the best of the human capital represented by professionals from a different cultural background.

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The Impact of Age and Unmet Expectations on Career Plateau

Wei Ning Yang, Dr Sheena Johnson & Dr Karen Niven, Manchester Business School
Theme **Well Being and Work**

Section 1. Overview of Research Paper

Due to the competitive working environment and the aging workforce across the globe, employees are expected to stay just as productive, regardless of their age and career status (Greenhaus, 2002). Inevitably, many employees will experience career plateau. Career plateau is initially defined by Ference, Stoner and Warren (1977) as "the point in a career where the likelihood of additional promotion is very low." (p.602). It was further categorised into hierarchical plateau and job content plateau. While hierarchical plateau is similar to Ference et al.'s original concept of career plateau (Heilmann, Holt, & Rilovick, 2008), which refers to a point in career where individuals seemed to have come to the 'end of promotion' in their organisations, job content plateau occurs when individuals have come to know their jobs too well that their job responsibilities feel repetitive and unchallenging. (Bardwick, 1986).

Previous studies have mostly indicated that career plateaued individuals have more unfavourable work attitudes, such as lower job satisfaction, lower organisational commitment, higher intention to turnover, and lower job performances (Allen, Poteet, & Russell, 1998; Lemire, Saba, & Gagnon, 1999; Lentz & Allen, 2009; McCleese & Eby, 2006). Despite the findings, there are at least three research gaps that merit further investigation. To begin with, little is known about the mechanisms through which these negative outcomes are produced. One potential mediator may be employees' unmet expectations of receiving promotions and challenges from their organisations. Another element that has not been particularly examined in the field is the age factor. Although several researchers have proposed that younger workers may respond more negatively to career plateau than older workers, empirical studies that confirm this relationship remain scarce. Lastly, a major theoretical issue that has dominated the field for many years concerns how the relationship between career plateau and the job outcomes changes over time, including the direction of causality between them. Specifically, several researchers argued that it could be negative work attitudes and performances in the first place that lead employees to reaching a career plateau (Tremblay, Roger, & Toulouse, 1995; Veiga, 1981). These propositions need to be confirmed through longitudinal studies.

This study is seeking to remedy the above-mentioned research problems. First, based on early literature of psychological contract (i.e., works by Kotter, 1973; Levinson, Price, Munden, Mandl, & Solley, 1962; Schein, 1970), Social Exchange Theory (Blau, 1964), findings from studies of unmet expectations (Wanous, Poland, Premack, & Davis, 1992), and existing evidence on expectations of career plateaued individuals, it proposes that employees' unmet expectation of receiving promotion is a mediator between hierarchical plateau and the job outcomes (i.e., individuals' job satisfaction, affective organisational commitment, intention to turnover, and self-assessed job performance). Similarly, unmet expectation of receiving challenging tasks may be a mediator between job content plateau and the investigated job outcomes.

With regards to age, according to Super's (1957) career stage model, psychological contract breach literature (Bal, 2009), and studies that implied differences in promotion aspiration and Growth Need Strength between younger and older workers (Kooij, Lange, Jansen, Kanfer, & Dikkers, 2011; Lashbrook, 1996), the present study hypothesises that employee's age may be a significant moderator. This means when younger workers reach hierarchical or job content plateau, they will have higher unmet expectations than older workers, such that they will have more negative job attitudes and performances.

Finally, longitudinal data will be collected at three time points across an 8-month period. The data will provide evidence of how perceptions of career plateau and job outcomes change over time; it will also assist in understanding the causal relationship between the two variables. Additionally, it will eliminate bias in examining mediating effects (Maxwell & Cole, 2007), which would provide a more reliable finding that is free from previous limitations. Figure 1 illustrates the research framework of the present study.

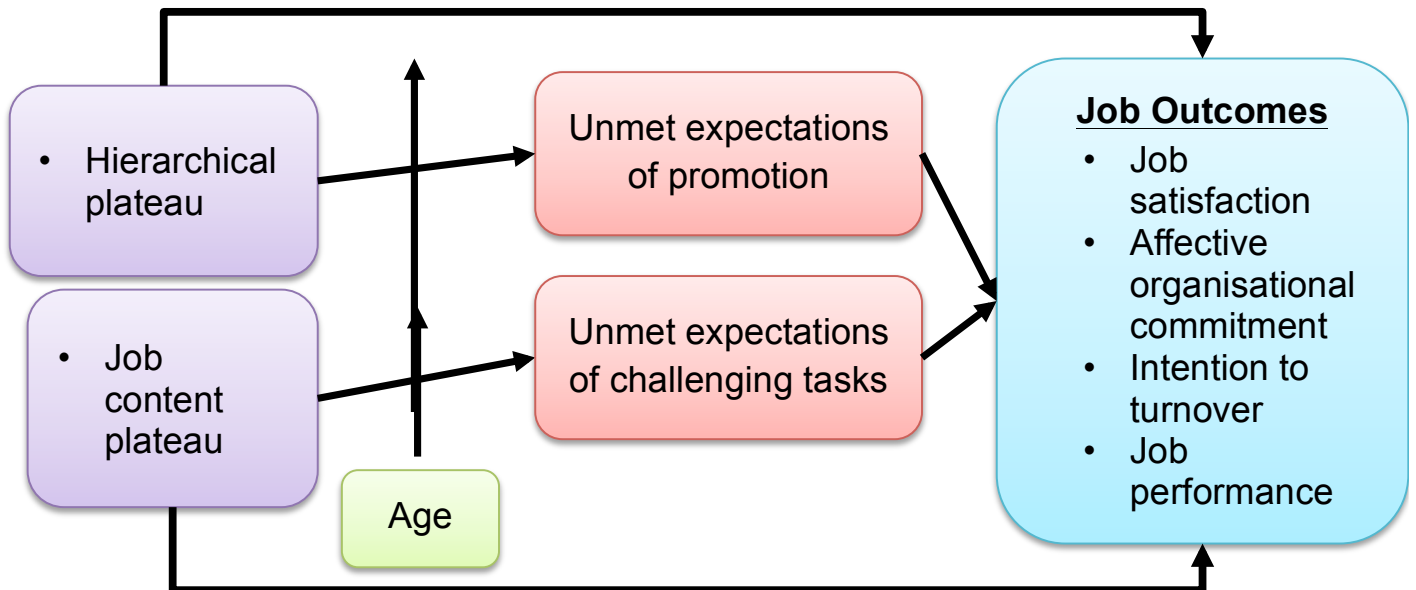


Figure 1. Research Framework

At present stage, the first wave of data is being collected with an online questionnaire, which is being distributed to the general working population. The questionnaire includes measurement items of both types of plateau (Milliman, 1992), job satisfaction (Cammann, Fichman, Jenkins, & Klesh, 1983), affective organisation commitment (Meyer & Allen, 1991), turnover intentions (Lentz & Allen, 2009), and job performance (Griffin, Neal, & Parker, 2007). Unmet expectations of receiving promotions and challenging tasks have been developed based on existing scales (including scales by Lait & Wallace, 2002; Schaubroeck & Lam, 2004; Zeitz, Johannesson, & Ritchie, 1997), and have been piloted tested to ensure their reliability and validity. It is expected that, by the end of this year, collection of second wave data will be completed, and initial findings of the study can be shared with the audience at the conference via electronic slides.

Section 2. Relevance to Conference Theme

This study has a strong link with the main conference theme 'Learning, Sharing, Impacting' as well as the selected strand 'Well-being and Work'. Specifically, the public will find the session stimulating and useful in four aspects. First, they will have the opportunity to learn what a career plateau is, and understand how it affects employees in general. Secondly, from the findings that will be shared with them, they will know whether unmet employee expectations help explain the negative work attitudes and performances. If such relationship is confirmed, a new explanation can be given to why career plateau is often related to negative job outcomes. One can perhaps even suggest that career plateau itself is not a bad situation, but is deemed to be harmful to organisations and employees only if plateaued individuals feel that their expectations of either career progression or challenging tasks are unmet.

This study will also contribute to theoretical development in career plateau by investigating the important but commonly neglected age factor. In the session, the public will understand whether younger and older workers would experience and respond to career plateau differently, which will be of great practical value to organisations. For example, if differences do exist between them, and younger workers respond more negatively to career plateau than older workers due to different degrees of unmet expectations, organisations can adopt interventions to prevent younger workers from reaching a career plateau. On the contrary, companies can be less worried about older plateaued workers because being plateaued may not be regarded as a harm or a threat to them. In addition, if younger and older workers have different expectations in terms of promotion and challenging jobs (leading to different degrees of unmet expectations), it will also provide practical implications for employers. Organisations cannot alter the age of their plateaued employees, but they can make interventions to keep employees' expectations at a realistic level, hence preventing unfavourable attitudes and performances. An important message can be sent across in the session even if the findings show that age does not make a difference, as many often tend to think that there will be a difference in expecting promotion and challenging between younger and older workers.

Lastly, longitudinal data collected in this study will enhance the public's understanding of the direction of causality between career plateau and job outcomes. The findings may either serve as a foundation for a innovative area of study (if career plateau were actually a consequence of perceiving certain job attitudes and performance), or they will provide solid evidence that career plateau is indeed a source of unwanted job attitudes.

The present study also fits well with the selected strand 'Well-being and Work'. As mentioned in the previous section, many research evidence has shown the negative consequences of being career plateaued. Plateaued employees are less satisfied at work, less committed to their organisations, and considered more often about leaving their companies (Allen, et al., 1998; Lentz & Allen, 2009). These outcomes may all affect employees' well-being at work.

In sum, the session will introduce the audience to career plateau, a career stage that is receiving more attention in the working environment, and will provide great insights into how age and employees' unmet expectations would impact the attitudes and performances of career plateaued individuals.

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Wednesday 7 January

W01

Keynote Session

How Does the World Work? The Internationalization of Organizational Psychology

Dr Richard Griffith, Executive Director, Institute for Cross-Cultural Management, Florida Institute of Technology

International business has existed for thousands of years. The first global business strategies emerged more than 3000 years ago, and the first multinational corporations started in the 17th century. However, Organizational Psychology has been slow to adopt an international focus. This lack of cross-cultural understanding has limited the ability of Organizational Psychologists to shape the forces of globalization. If Organizational Psychology is to remain relevant and contribute to the success of modern business, we must adopt and integrate a broad global perspective. To effectively integrate global concepts into our science and practice, Organizational Psychology must build these lessons into our current training models. This keynote presentation will present current thinking on the internationalization of the curriculum of training centres in Organizational and Work Psychology. Dr. Richard Griffith will share thoughts on the knowledge and skills that students must master in the 21st century, his experiences in developing the first international organizational psychology program in the U.S., as well as thoughts on how we can develop the next generation of organizational psychologists to be globally perceptive, culturally-competent working professionals.

W02

Panel Discussion

Three Greatest Challenges to the Profession in the next 10 years

Dr Richard Griffith, *Florida Institute of Technology*

Professor Rob Briner, *University of Bath* & **Nanette Fairley**, *Emirates Group*

Theme **Leadership, Engagement and Motivation**

W03

Short Paper

A Narrative Account of the Career Journey of Occupational Psychologists

Vicki Elsey, *Northumbria University*

Theme **Learning, Training and Development**

Introduction

Brief background to narratives and career choice

Narratives are typically stories which people tell to articulate their own career journey, making sense of the past, the present moment and defining the future, they are not 'fact' per se, but rather an individual's perception of reality. Careers are complex and not simply about matching an individual to a job (e.g. trait approach) but rather about individuals constructing their own story through social interaction and experiences, identifying what is important through understanding their own values (Savickas, 2005). Using this approach careers choice therefore is based upon an individual's own meaning and perception of reality which they construct and develop in a social context. Within a career narrative an individual's goals and motives can be understood more readily. Career narratives can be useful to not only help an individual understand their own "occupational value" but also to define how valued they are by others. Fugate et al (2005) describes how important this is to employability and is also a useful way to understand career identities.

Murray (2008) and Savickas (1997, 2006) describe how narrative would normally include a beginning, middle and end and serves the purpose of making sense of information by "bringing order to disorder". Murray (2008) explains how "humans are action centres that strive within bounds to create their own worlds". Narratives can enable the researcher to learn about how an individual makes sense of the world and of themselves (Murray, 2008). There are also potential positive outcomes for participants too as narratives can help individuals define their own sense of 'self', understanding why they have made decisions. In a career context, defining the 'work self' may be interesting to an individual in also understanding more about why they have made certain career decisions and how other versions of 'self' impact upon this.

Research by Amundson et al (2010) looking at career decisions from the perspective of individuals in a range of professions identified three main themes in career decision making: decisions centred on relational life (e.g. personal relationships and home life, feeling part of something, the importance of other people in making career decisions), decisions centred on personal meaning (e.g. feeling fulfilled and challenged, making a difference, developing self-awareness and resilience) and decisions centred on economic realities (e.g. negotiating the career that an individual might want with what the external environment offers and uncertainty in the job market). Conclusions drawn from this research indicate that in making career decisions individuals consider the 'whole self', not just the 'work self' and also emphasised the importance of social interaction at work and at home. Furthermore, the researchers concluded that career counsellor's roles should adapt to be more of a facilitator than an individual who looks at "matching" job to individual.

Careers of Occupational Psychologists

Much anecdotal information exists explaining the career journey of Occupational Psychologists, for example there are more opportunities in the south of the UK or abroad and roles rarely exist with the Occupational Psychology title. However little evidence is available to back up claims made, particularly by MSc programme providers who often find it difficult to explain what careers are available to an individual with an MSc in Occupational Psychology. The researcher is interested in what has driven the decisions of individuals with an MSc in Occupational Psychology, linking to the research by Amundson et al (2010) who used a range of jobs and education levels.

MSc Occupational Psychology curriculum changes in recent months have focussed upon creating a more coherent and marketable provision. The five (plus two) areas of Occupational Psychology can be viewed as an improvement (particularly from a marketing perspective), whilst still retaining the important aspects of Occupational Psychology knowledge. However, much work is still necessary to improve the external image and impact of Occupational Psychology. There are many unanswered questions, for example are OPs in demand? Do employers know what the value of OP is to work? As such, this research aims to address this gap by making the link between a core MSc knowledge underpinning and the real life experiences of Occupational Psychologists. What challenges do they face along the way? What supports their career? What makes things difficult? The overall aim is to further understand the career journey, and to also then make recommendations for what individuals, education providers and the like can do to maximise employability potential of OPs.

Method

A narrative approach was taken to the interviews enabling participants to describe their career from "their very first decision to pursue Occupational Psychology" to the current day. The researcher was interested in the career from the individuals' perspectives and a narrative approach allowed individuals to express this in their own words. Following the approach recommended by Jovchelovitch and Bauer (2000) the researcher allowed individuals to tell their story before asking any questions and then taking the individual back to certain career points to clarify understanding and explore in more depth. 20 individuals were interviewed in total lasting between 50 and 70 minutes each. Participants ranged in age, geographic location, university studied, job role and whether they were in an OP role or not. However, all participants were required to have completed a BPS accredited MSc Occupational Psychology (or equivalent) and had all also participated in an online survey on OP employability between September 2013 and April 2014 (partial results of this survey were presented at the DOP 2014 conference).

The interview transcripts were analysed using thematic analysis and a general structure of beginning, middle and end (or future) in order to identify important career choices and decisions at various stages in OPs careers.

Results and Discussion

Initial, indicative findings from the career narrative interviews have been structured into three career stages of *beginning* (e.g. the initial decision to pursue Occupational Psychology and first career steps; *middle* (what the reality is for individuals currently) and the *future* (how do individuals feel about their career going forward). Using these three headings, some of the findings are presented below:

- **Beginning:** at the start of OPs career and in particular when deciding to pursue OP participants talked about the importance of the MSc programme in preparing them for the real world. Furthermore, role models and enthusiastic individuals were mentioned. Participants also talked about pursuing OP as other options were not appealing to them, many having taken other career paths first (such as forensic or clinical psychology, human resources, management, teaching etc.).

Ultimately this stage in OPs careers was filled with excitement and anticipation. Many participants talked about luck or “lucky breaks” and this being the start of their career.

- **Middle:** availability of jobs and often having to choose between a small selection of unattractive options which were based upon factors such as geographic location were discussed. Participants clearly always reflected on their own career and were constantly wondering whether they were in the right role, whether they were making a difference, whether they should consider moving on. OPs appeared to be future focused. There was mixed opinion as to whether chartership was important to career success. Many participants talked about this being a gold standard and whilst it didn't lead to a different role, or higher salary it led to a career identity and professionalism which was important for an individuals own values. There were also some differences in how male and female participants described their careers. For example females talked about a struggle with work-life balance and often working part time following having children which they perceived led to a reduction in the opportunities available to them. However, being an OP in this context was also viewed in a positive light as it meant that there were flexible working arrangements available to them. Mentors/role models/coaches were also seen as important in this stage, often in supporting OPs in developing and making the most of their career options. The economic environment was also discussed by many candidates and this appears to have been a formative (and sometimes limiting) aspect in many participants' careers.
- **The future:** participants had all considered the future, talking about a potential range of options, but by far the most noticeable aspect was that while the perception was that there may not be many opportunities, participants felt that they would always be able to “find something”. Participants also talked about the need to market OP further to organisations in order to educate and raise the profile of the profession and to see the value that they could add. The majority of participants were optimistic and positive in the language used to describe the future. Participants also discussed that decisions to move on in the future would be made where they had the opportunity to make a difference and where they could still be (or become) an Occupational Psychologist (as this appears to be where career identity is formed).

Overall, the picture seemed to be positive for those individuals who had made the decision to pursue Occupational Psychology. Their knowledge and skills could be applied in a range of contexts and they were skilled in matching their experiences to roles (which potentially links to the training received). However, individuals who were just embarking in their career as an OP (or those who made the decision not to pursue OP) talked about lack of opportunities, often having to begin their careers again (i.e. prior experience not being valued), or demotivation following negative attitudes while studying MSc programmes for example explaining that opportunities were few and far between and that not everyone who studies the degree will become an OP.

Conclusions

There were more similarities between participants than the researcher had anticipated; this was regardless of role, age or career stage. The researcher was interested in how easy/difficult it had been for individuals with an MSc in OP to develop an enjoyable and fulfilling career. Initial findings suggest that participants had managed to create a career which was interesting and challenging and that this had been in spite of some difficulties in terms of awareness of OP, lack of opportunity etc. Further analysis is required to identify the root causes of this ability to apply OP knowledge, however initial indications suggest that the MSc knowledge base while interesting is also practically useful for OPs in developing their career. OPs also seem to share a set of values which are about making a difference and using evidence to drive decisions. While this research is interesting in understanding further the lived experiences of Occupational Psychologists, what they do and how, the technique could also be applied in a range of career contexts, most noticeably in career guidance or counselling where practitioners could utilise a narrative approach alongside a trait/factor or 'job fit' approach by trying to understand further the values which may drive an individual and the options that this may lead to.

Link to the conference theme

Linking to the conference theme of 'learning, sharing and impacting' this research aims to share findings from a Professional Doctorate in Occupational Psychology which is about the careers of Occupational Psychologists. Delegates may be interested in the career experiences of their professional colleagues, the approach taken (which can be applied in career guidance contexts) and/or the recommendations which will be made around employability of OPs and how we can enhance the potential impact of OP through the development of individuals' careers. The paper links to the strand of 'learning, training and development'

as its focus is around careers and employability. Copies of the slides and any materials used will be made available upon request.

W04

Short Paper

Prosocial Job crafting

Anna Viragos, Leeds University Business School

Theme **Leadership, Engagement and Motivation**

1. Introduction

My session would be based on my ongoing MSc dissertation research regarding job crafting driven by prosocial motivation. The focus of my research is on relevant job-design models such as Clegg and Spencer's (2007) circular and dynamic model, the job-crafting theories of Wrzesniewski, Dutton and Berg (2010), Grant's (2007) research on prosocial motivation, relational job-design and prosocial crafting, and a paper by McClelland et al. (2014) on collaborative crafting in call centers. In the frame of my research a call center type of organization is examined with the focus on individual crafting in relation to clients and colleagues, with special interest in crafting led by prosocial motivation. The objective of my study is to explore the relationship between job crafting and prosocial behaviour in addition to why and how employees engage in these behaviours by examining the possible predictors of the process.

2. Theoretical framework

Traditionally the approach to job design was generally top-down in nature, and employees were seen as being under the control of managers and engaging in behaviours only as a direct response to the stimuli in their work environment (Locke & Latham, 2002). However, as Grant and Ashford (2008, p.4) noted: "employees do not just let life happen to them. Rather, they try to affect, shape, curtail, expand, and temper what happens in their lives".

There has been an all-around shift from manufacturing economy to a knowledge and service economy and this change requires the organizations to meet the needs of their customers in order to survive and succeed. In many contemporary organizations, the managers rely on employees to introduce and adapt to changes in the nature of work and the methods used to carry it out (Frese & Fay, 2001; Wrzesniewski & Dutton, 2001). Therefore employees are expected more and more to engage in proactive behaviours in order to promote change, innovation and creativity (Campbell, 2000; Crant, 2000; Frese & Fay, 2001; Howell, 2005).

2.1. Job crafting

Job crafting is part of the employees' proactive aspirations. Job crafting focuses on the processes through which employees proactively change elements of their job, and relationships with others at work in order to improve the meaningfulness and social environment of their work (Berg et al., 2010). Wrzesniewski and Dutton (2001) identified three main forms of job crafting. The first form involves altering task boundaries and properties (task crafting). Employees can accomplish this by changing the number, scope, or type of tasks completed at work. The second form of job crafting involves changing the relational boundaries of the job (relational crafting). This technique means altering the quality and/or amount of interaction at work with others. Finally, the third technique of job crafting occurs when employees alter their jobs' cognitive task boundaries (cognitive crafting). Changing their view of their job can result in fundamental changes regarding the employees' approach towards their job.

2.2. Prosocial motivation

As it was outlined in the introduction, the aim of this research is to examine the predictors of prosocial crafting behaviour. Prosocial motivation can be defined as the desire to benefit other people or groups. It is a timely research topic due to the global growth of the service sector and the expanding use of teams in organizations. Both of these trends resulted in growing number of new work relationships in which the job holders can express and experience prosocial motivation (Grant 2007; Kanfer, 2009).

2.3. Prosocial job crafting

Prosocial crafting can be explained as job crafting behaviours driven by prosocial motivation. Findings show that employees in a variety of service occupations (dentists, hairstylists, personal fitness trainers) actively craft their interactions with their customers so they can feel like their work is making a meaningful positive impact (Grant et al., 2007). The researchers described a variety of techniques used by employees to accomplish this (Grant et al., 2007; Berg et al., 2008):

- employees tailor their duties to fit the specific preferences of customers
- employees take on additional tasks or change the existing tasks to have a positive impact on the customers
- employees develop and modify relationship to make a positive difference for customers
- employees cognitively reframe their jobs in order to see it as a tool to make a positive difference for customers

However, the study by Grant et al. (2007) has some limitations. The focus is only on individuals working in occupations where people work on their own and closely with clients.

As far as I know, there has been no research conducted regarding prosocial job crafting in a more controlled environment such as call centers. In addition, prosocial job crafting (task, relational, cognitive) in relation to colleagues -as well as customers- needs to be examined.

3. Predictors

The aim and objective of this study is to get a deeper understanding regarding the under-explored area of prosocial job crafting and the predictors behind this process. A variety of variables was considered and based on the rationale in the literature the following **predictors** (independent variables) will be examined:

- Autonomy
- Social Support
- Leadership Style
- Prosocial Values
- Prosocial Job Characteristics

The two **outcome variables** measured are job crafting and prosocial job crafting.

4. Hypotheses:

Hypothesis 1: Employees in highly controlled environments do engage in prosocial job crafting towards colleagues and customers.

Hypothesis 2: Autonomy is positively associated with job crafting and prosocial job crafting behaviour.

Hypothesis 2a: The relationship between autonomy and prosocial job crafting will be moderated by social support.

Hypothesis 3: Social support will positively predict job crafting and prosocial job crafting behaviour.

Hypothesis 4: Leadership style is positively associated with job crafting and prosocial job crafting behaviours.

Hypothesis 4a: The relationship between leadership style and prosocial job crafting will be moderated by prosocial values.

Hypothesis 5: Strong prosocial positively predicts job crafting and prosocial job crafting behaviour.

Hypothesis 6: Prosocial job characteristics are positively associated with job crafting and prosocial job crafting behaviour.

5. Methodology

The hypotheses were investigated with the help of mixed methods (MM): online questionnaire and semi structured interviews. MM research involves collecting, analysing and interpreting data (quantitative and qualitative) within the same study, investigating the same phenomenon (Johnson et al., 2007).

A total of **111** (male=42, female=69) participants for the questionnaire and **8** participants (male=4, female=4) for interviews were recruited from one call-center type of organization based in Hungary.

To improve validity and reliability, wherever possible, the questionnaire was constructed from validated and existing scales and fixed response formats from published psychological literature (Table 1). All scales have satisfactory reliability level at the ≥ 0.70 level (Nunnally, 1978).

The interview schedule in this study was designed based on the items of the prosocial job crafting scale used in the questionnaire (Grant et al., 2007; Berg et al., 2008) in order to cover all three aspects of job crafting (task, relational, cognitive) in relation to colleagues and customers as well. The aim was to get a deeper understanding how and why employees engage in prosocial job crafting (if they do so).

Table 1: Means, standard deviations and reliability levels for all scales

	Mean	Standard Deviation	Reliability (α)
Autonomy	3.72	8.30	0.93
Social Support	3.94	3.22	0.82
Leadership Style	3.77	13.01	0.96
Prosocial Values	5.86	6.99	0.86
Prosocial Job Characteristics	4.49	5.79	0.82
Job Crafting	3.81	12.00	0.93
Prosocial Job Crafting	3.93	10.25	0.97

5. Results

Due to the latter deadline (4th of September 2014) of my dissertation, the analysis of results are not yet available. However, the correlation analysis shows promising outcomes (Table 2).

Table 2: Pearson correlation coefficients for all variables ($n=111$)

	Gender	Age	Tenure	Position	Autonomy	Social Support	Leadership style	Prosocial Values	Prosocial Job Char.	Job Crafting	Prosocial Job Crafting
Gender	-										
Age	.02	-									
Tenure	-.01	.40**	-								
Position	.17	.30**	.11	-							
Autonomy	.09	.20*	.22*	.41**	-						
Social Support	.07	.06	.07	-.01	.45**	-					
Leadership Style	-.06	.13	-.06	.11	.39**	.50**	-				
Prosocial Values	.25**	.02	.06	.02	.21*	.39**	.39**	-			
Prosocial Job Characteristics	.03	.13	.13	.21*	.39**	.48**	.36**	.18	-		
Job Crafting	.03	.10	.10	.23*	.46**	.53**	.33**	.17	.56**	-	
Prosocial Job Crafting	.07	.09	.16	.20*	.56**	.51**	.42**	.36**	.42**	.71**	-

*significant at < 0.05 level, ** significant at <0.01 level

7. Addressing outstanding questions

My proposal links with the main conference theme of 'Learning, Sharing, Impacting' in more ways. On the one hand, prosocial job crafting concerns having a positive impact on, and making a positive difference for colleagues and customers. On the other hand, the opportunity to acquire new knowledge and experience may also be an important motivator and consequence of job crafting (Clegg & Spencer, 2007; Leach et al., 2003). Adding social features to the work can also contribute to the learning of new skills and interaction with colleagues and with clients/customers can provide new information to the jobholder.

I choose the strand 'Leadership, Engagement and Motivation' because one of the main focuses of my study is leadership style and the role of supervisors in the crafting process. In addition, prosocial crafting is driven by prosocial motivation, therefore it satisfies the 'Motivation' part of the strand as well.

The most innovative aspect of my ideas presented is the phenomenon of 'Prosocial Job crafting'. This is an under-explored area, with only one known unpublished paper examining the topic (Grant et al., 2007). My research approaches the subject from a new perspective and explores prosocial crafting towards both colleagues and customers in a call center type organization.

Conference delegates could find my paper stimulating and useful due to the current nature and practical implications of the topic.

- Call centers

Call centers are today's most extended operational design of service delivery (Holman, Batt, & Holtgrewe, 2007) with employing millions of call center agents across the world. Call centers can be characterized by work designs that disempower the workforce, and many employees are experiencing intense levels of stress. Therefore, there has been a growing body of research on the methods by which call centers are operated and employees are managed (Deery & Kinnie, 2002).

- Job Crafting

Job crafting is a somewhat new, intuitive concept, which seems to occur rather frequently. A study conducted by Lyons (2008) involving 105 salesmen showed that 78% engaged in at least one job crafting behaviour. Job crafting research is still at its infancy and has received relatively moderate research attention. Even the founders of JCM (a dominant model in job design) themselves point out that more research attention is needed regarding the processes, predictors and outcomes of job crafting (Oldham & Hackman, 2010).

- Prosocial Motivation

Prosocial motivation has a significant influence on job performance and the employees' work behaviour. Research indicates that prosocial motivation can help to channel employees' efforts toward becoming better organizational citizens (Grant & Mayer, 2009), direct employees toward improved performance, productivity and task persistence (Grant, 2008a).

- Cultural aspects

The target of this research is a multinational telecommunication company based in Hungary, and there are exciting cultural aspects involved. The majority of the job crafting research has been conducted in Western countries, therefore the East-Central European culture could have unforeseen impacts.

The public might find the impact of the predictors, the practical implications and recommendations the most interesting. As the analysis of my research data is ongoing, the results are not yet available. But based on the interviews, practical recommendations can be produced (so far at least 5). Just to provide one example: In a highly stressful work environment conflicts between colleagues can occur quite frequently and this can be very detrimental for prosocial motivation, and therefore prosocial job crafting. Since there are a number of positive individual, team and organizational outcomes of the crafting process, these conflicts need to be dealt with by the management. Therefore it is recommended that the line managers take part in conflict resolution trainings.

I will provide a number of printed copies of my presentation slides and I can send them electronically via email to all interested attendees.

W05

Short Paper

What women want: Perceptions of effectiveness of organisations' development and retention activities

Dr Ruth Sealy, City University London

Theme **Leadership, Engagement and Motivation**

Introduction

Women make up 47% of the UK workforce and in some professions have made up the majority of graduates for more than twenty years (Deech, 2003). However, the percentages of women at the top leadership positions of organisations are still small (just 6% of Executive Board Directors and 17% all Board Directors of FTSE 100 companies are female – Sealy, Turner & Vinnicombe, 2013). In a bid to address this, government and HR directors have implemented numerous policies over the past decade, but are confounded as to why still many fewer women than men reach those executive levels. The usual arguments focus either on structural issues such as childcare (Tomlinson, 2006) or on 'personal choice' (Hakim, 2000). A number of small single sector qualitative studies have revealed serious flaws in the 'personal choice' explanations (Stone & Lovejoy, 2004), stating that the organisational context must be credited with much greater influence. Non-parent women are also leaving careers and neither explanation is relevant to them. In the UK, 28 is the average age of women giving birth to their first child. Until the age of 29 women and men's salaries are reasonably equal. In the age bracket 30-44, however, this shifts significantly (ONS 2013) in men's favour. This age bracket is the 'critical period' for career development. However, it is also the age when many women find their careers stalling and/or leave the workplace – hence popular terms such as "the leaky pipeline" and "the opt-out revolution" (Belkin, 2003).

Blustein (2001) suggested that career decisions are not always made in ways that reflect more traditional models of career development (Amundson, et al, 2010). Traditional trait-factor approaches in career decision-making are based on person-fit models and the belief that satisfaction is derived mainly from congruence. Amundson et al (2010) suggests that career decisions tend to be taken in the context of the many roles of an individual's life (Hall, 2004). They call for research based on the individual's subjective experience that can reveal "more relational, contextual and meaning-based career development theory and practice".

Whilst recent research pitches the responsibility for individuals careers onto the employee (Briscoe & Hall, 2006), Clarke (2013) maintains that the organisational career is not dead, but has evolved, particularly in terms of the employees' expectations of training, support and development opportunities. She calls for more research into the developmental needs and interests of individuals across a range of different firms.

Social Cognitive Career Theory (SCCT; Lent, Brown & Hackett, 1994) is a more dynamic careers theory as it considers both personal and contextual factors. It has been used in research focusing specifically on the non-normative careers of women and ethnic minorities (Scheuermann et al, 2014). It considers the core constructs of self-efficacy beliefs, outcome expectations and personal goals in how they influence individuals' career choices and 20 years of research has demonstrated a positive feedback loop between occupational self-efficacy and career success (Singh et al, 2013). Singh et al (2013) also confirm that developmental opportunities at work are clear sources of self-efficacy and lead to reduced turnover intentions. However, as stated by Lent & Brown in a recent (2014) article, SCCT tends to focus more on content (i.e. which domains individuals will gravitate towards) rather than process aspects (i.e. the dynamic ways that individuals make decisions, pursue goals and respond to setbacks). This is particularly topical at more senior levels and those in the professions, with contemporary career challenges such as globalisation, excessive hours, and job insecurity, where adaptability and resilience are required for career success (Savickas, 2013). The majority of research considering SCCT is quantitative and much of it is conducted on student populations. This paper shares the learning from a research programme using a large recent UK dataset of survey and open text data considering both organisational and individual factors influencing career decisions.

Research Objectives

In November 2013 Opportunity Now, a UK public body focused on promoting gender equality in the workplace, launched a nationwide survey seeking to learn about the experience of work from women and men of all ages but particularly for women aged 28-40. In a period of just six weeks they collected in excess of 25,000 responses, across many sectors and organisation sizes, approximately half of which were the target group of women aged 28-40. In addition to questionnaire items, the survey included some open-text questions on a few specific themes.

Having negotiated unique access to this data, the main objective of the paper is to investigate what are perceived by women to be the most effective development and retention activities for their organisational careers? The paper investigates two main areas:

- a) **Career development opportunities:** males and females experience of career development to date and women's perceptions of what their organisations can do to improve career development opportunities; and
- b) **Retention:** for a subsection of the sample who indicated they are considering leaving or have already decided to leave, what could their organisation do/have done to persuade them to stay.

In terms of impacting and contributing to current practice, the aim is to ascertain which, if any, organisational activities make a difference for women and how organisational policies and practices could potentially help retain more women to more senior levels. The data include responses for parents and non-parents so may help us learn more about similarities and differences in motivations and organisational practices of development and retention impacting the choice to stay or leave.

This paper aims to contribute to theories of career decision-making and turnover, that research has shown are not yet sufficiently sophisticated to explain why at most organisational levels, but particularly more senior levels, proportionately more women leave organisations than men. Using the survey data and answers from the open text questions, data considering the development wishes and retention intentions of working women will be analysed and the learnings shared.

Findings from the analysis of these data are highly relevant as organisations are desperate to know what policies and practices could potentially help them to develop and retain more women to senior management levels. Although the sample may not be representative of the entire UK working population, research shows us that many of the challenges women face in their organisational careers are generalizable across industry sectors. This dataset is unprecedented in scale of the free text responses of predominantly women in professional roles.

For this paper the following questions will be asked:

1. What do women want from their employer in terms of career development opportunities?
2. How does this vary by age, role, sector and other variables?
3. What can organisations do to help retain women in the workplace?
4. How do the responses vary by age, role, sector and other variables?

Methodology

This mixed-method paper involved quantitative and qualitative analysis of secondary data – a subset of the Opportunity Now Project 28-40 survey. This online survey is unprecedented in the number of responses in the UK, designed to elicit the actual experiences of women at work. The survey was launched on November 15th 2013, with substantial media coverage and closed on December 17th 2014. A total of 25,199 individuals responded from a variety of organisations and sectors. The total number of women was 22,576, of which 13,388 were in the target age group of 28-40. The male respondents numbered 2,166, of whom 910 were aged 28-40.

The survey had 24 sections and took, on average, 23 minutes to complete.

Demographic variables including, but not limited to sex, race, age, sexuality, disability and parental status were collected along with employment data on status, role, level, organisation size and sector. The survey had 'smart' elements; in other words, not all questions were available to all participants, depending on prior answers. For example, different questions were available to those who already were parents than to those who were not, or who stated a preference to become parents at a later date. All the data was completely anonymous for individuals and organisations.

A subsection of the data (survey and open-text questions) is analysed in this project to ascertain what are perceived to be the most effective development and retention activities for the careers of women in these organisations.

The data analysed for this project include:

- eight questions answered by all 25,000 men and women on their experience of career development opportunities and support to date;
- circa 2,500 open-text responses from all women on what they would like their employer to do to improve career development opportunities;
- one question answered by all men and women regarding intentions to leave;
- two questions answered by all women who indicated they are considering leaving and their reasons; and
- circa 2,500 open-text responses from all women considering leaving regarding what their organisation could do/have done to help retain them within the workplace.

The survey response data will be analysed using SPSS. Responses to the open text questions vary in length from one sentence to a number of paragraphs. There are between 2,500 and 2,600 responses to each of the two open text questions. These will be entered into NVivo software. Qualitative template analysis will be utilised, with the opening template based on initial readings of the data and expectations from literature on developmental opportunities, turnover intentions and Social Cognitive Career Theory. With detailed analysis of the data, themes will be inductively added and the template expanded. The template will then be reworked into conceptually meaningful themes – an iterative approach moving between the coded data and existing theory. Queries, using attributes such as age, parental status, role, sex, ethnicity, will be run from the data. The analysed data will be presented in the tabular format proposed and demonstrated by others such as Corley & Gioia (2004) and Ladge et al (2012).

The two open text questions were:

- *The one thing I would like to see (have seen) my organisation introduce to improve career development opportunities is:*
- *I feel that the one thing my organisation could do/have done to help me stay was:*

The dataset have been compared with employment statistics from official sources (Office National Statistics), including comparing the distribution across sectors. The sample is not representative of the general population. This is part of the uniqueness of this dataset as it is skewed towards those at professional levels and occupations and to those working in large organisations (48% of all respondents work in organisations with more than 5,000 employees).

It is also unrepresentative in terms of organisational seniority as seen in the table below.

Organisational Seniority Levels	
Business owner/Partner	3%
Board Level	1%
Director Level	4%
Senior Management/Professional/Technical	37%
Mid-level Management/Professional/Technical	31%
Junior level Management/Professional/Technical	31%
Supervisor of manual workers	1%
Skilled manual worker	2%
Semi-skilled or Unskilled manual worker	1%
Other	6%

Table 1: Percentage of respondents at organisational seniority levels

Data analyses will be completed by November 2014.

Practical Implications: The project will be of substantial interest to both government and corporate industries, particularly those whose employees participated in the research. The issue of development and retention of talented female workers is a significant challenge for both policy makers and those in corporations charged with managing the talent of their workforce. Thus far the answers to the question of how best to develop and retain women have been elusive.

Limitations: We acknowledge that the dataset is not representative of the population as a whole, with a skew towards professional workers and women. However, it is unprecedented in its size and scope and will produce unique findings as prior research into professionals has used much smaller sample sizes (particularly the qualitative work) and tends to be single sector.

References available on request.

W06

Short Paper

Workability and mental well-being among Prison Officers

Emma Walker, Birmingham City University

Theme **Well-being and Work**

Introduction

Workability (WA) can be defined as a worker's capacity to manage job demands in relation to their health and mental resources [1]. It accounts for all of the factors that may influence that capacity and make jobs more or less manageable [2]. A Spanish study considered workability and mental well-being in prisons, and found that emotional demands had a negative significant association with workability [3]. No studies have yet used the Work Ability Index (WAI), in UK prison officers. Prisons are not only concerned with security and custody, but also more increasingly with therapeutic rehabilitation. This is especially true of Therapeutic Community Prisons (TCPs), where prison officers undertake therapeutic work alongside offenders. Few studies have investigated the working lives of prison officers in the UK [4, 5]. Results have shown that psychological engagement with offenders and mental demands of the job can lead to vicarious trauma and high levels of workplace stress. Therefore monitoring the workability of prison officers in a TCP is essential for maintaining their ability to perform their roles and to preserve the goals of the establishment.

The aim of the study was to explore the self-reported workability and mental well-being of officers in a UK TCP.

Design

The study was cross-sectional, and designed to explore workability and mental well-being of prison officers working in a secure therapeutic environment. Ethical approval was obtained from the academic ethics committee at Birmingham City University (May 2012). The WAI [6], assessed physical and mental demands of work; the presence of diagnosed diseases; work-limitations due to illness; sick days; WA prognosis; and mental resources. Mental well-being was measured using the General Health Questionnaire 28-item version (GHQ-28) [7]. Scoring was based on the binary method in order to provide identification of caseness if individuals scored above a threshold of 3. [8]. Correlation and regression analysis was used in order to explain the relationship between workability and mental well-being.

Results

Questionnaires were completed by 57 prison officers, ranging in age from 21 – 69 years ($M = 44.8$, $SD = 10.9$); 38 (67%) were male. WAI scores ranged from 26 – 48 ($M = 40.1$, $SD = 5.8$), and total GHQ scores ranged from 4 - 60 ($M = 28.1$, $SD = 12.1$). Based on the binary scores of the GHQ-28, 95% of the sample possessed caseness.

Pearson's correlations showed moderate and significant negative associations between overall mental well-being and three workability items: mental demands ($r = -.62$; $P < 0.001$), mental resources ($r = -.64$; $P < 0.001$) and impairment due to disease ($r = -.55$, $P < 0.001$). Mental well-being (as an outcome variable) was regressed with mental demands, mental resources and impairment due to disease as predictor variables; a highly significant model emerged ($F = 23.10$, $P < 0.001$). This explained 57% of the variance in overall mental well-being. Mental demands ($\beta = -.45$, $t = -3.93$, $P < 0.001$) was the most influential predictor, followed by mental resources ($\beta = -.31$, $t = -2.45$, $P < 0.05$). Impairment due to disease was not significant. Correlations between mental demands, mental resources and GHQ sub-scales showed somatic and anxiety symptoms correlated at the $P < 0.001$ level. Table 1 shows the linear regression analysis between mental demands and mental resources as predictor variables and somatic symptoms and anxiety as separate outcome variables. Mental demands and mental resources explained 43% of the variance in GHQ somatic symptoms ($F = 20.58$, $P < 0.001$) and 48% of the variance in GHQ anxiety ($F = 25.73$, $P < 0.001$). Mental resources had significant associations with somatic symptoms, especially "feeling run down and out of sorts" ($r = -.56$, $P < 0.001$). Mental demands had significant associations with anxiety, particularly "sleep loss" ($r = -.66$, $P < 0.001$).

ANOVA (Table 2) revealed there was a significant difference in mean GHQ scores ($F = 22.54$, $P < 0.01$) and own prognosis of WA two years from now ($F = 17.16$, $P < 0.001$) among Workability groups. Poor Workability was associated with the highest GHQ scores and lower prognosis of future workability. The mean number of sick days taken in previous 12 months was 2 ($SD = 3.9$) with twenty-five officers (44 %) reporting having taken at least one or more sick days, and ranged from 0 – 20 days. Pearson's correlation showed a significant positive association between illness (being a hindrance to current Workability) and overall GHQ scores ($r = .55$, $P < 0.001$).

Discussion

In a sample of prison officers working in a Therapeutic Community Prison, extremely high levels of (self-reported) psychological symptoms were found. Poorly perceived workability due to excessive mental demands was associated with poorer mental well-being (particularly somatic symptoms and anxiety). There were significant differences in GHQ scores between the excellent and poor workability groups. Mental demands and resources were found to collectively account for over half of the variance in overall mental well-being. Findings were similar to previous research [9, 3] showing clear links between health and demanding psychosocial risk factors.

This unique study is the first to explore workability in a UK Therapeutic Community Prison and in comparison with other prison working population studies [10, 3], the response rate (59%) was above that usually encountered. A limitation of the study was its cross-sectional design, precluding any definitive conclusions on the nature of the aetiology between workability and mental well-being. The results highlight the importance of mental demands and mental well-being among officers in all prison environments. These results can inform the design of improved training and health surveillance for officers who work closely with offenders. Longitudinal studies are needed to understand the aetiology of psychological difficulties in this unusual occupational group.

Table 1. Multiple linear regression analysis of mental demands and mental resources with somatic symptoms and anxiety as outcome variables.

	GHQ Somatics				GHQ Anxiety			
	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>B</i>	<i>SE B</i>	β	<i>t</i>
Mental Demands	-1.40	.666	-.265	-2.11	-3.09	.631	-.585***	-4.90
Mental Resources	-3.34	.872	-.483***	-3.84	-1.31	.826	-.189	-1.59

*** $P < 0.001$

Table 2. Global GHQ and Own Prognosis of WA scores among workability groups.

	WAI groups				<i>P</i>
	Excellent <i>n</i> = 12	Good <i>n</i> = 20	Moderate-Poor <i>n</i> = 9		
Global GHQ <i>M (SD)</i>	18.08 (5.8)	28.10 (12.1)	36.33 (7.4)		< 0.01
Own Prognosis of WA <i>M (SD)</i>	7.00 (0.0)	6.86 (0.7)	4.67 (2.0)		< 0.001

The main theoretical model underlying this session will be the biopsychosocial model of health. Working environments have the potential to affect both, positively and negatively, our physical and psychological health and well-being. This model brings together a consideration of the physical, psychological and social aspects of ill health, and this is useful when applied to workplace hazards. Health as we experience it in the workplace is produced by two forces; what the employee brings to the workplace and what the workplace does to the employee, in terms of organisation of work (Shain & Kramer, 2004). When work is poorly organised, and when risks in the workplace are not properly addressed, work can have a negative effect on mental health and well-being (Cox, Griffiths, Barlowe, Randall, & Rial-Gonzalez, 2000).

This proposal links in with sharing, learning and impacting in three ways: sharing – as this research revealed an extremely high proportion of GHQ caseness from a very unique working population, it is important to share these findings and better understand a poorly researched occupational group; learning – by better understanding the relationship between workability and mental well-being we can begin to ameliorate the effects of psychosocial hazards for therapeutic prison officers; impacting – although this research was carried out on a unique sample, other mainstream prisons are adopting therapeutic wings and the findings from this study can help to impact upon training programmes for future prison officers.

This submission ultimately centres upon occupational health in a forensic setting and was deemed appropriate to be included under well-being and work. It includes elements of employee mental well-being, occupational stress and workplace psychosocial stressors. There are two novel features of this research; a) the prison officers that made up the study sample were all working in the only dedicated therapeutic community prison in the UK; b) the extremely high proportion (95%) of GHQ caseness is, to the author's knowledge, one of the highest percentages of caseness seen in a study of occupational health.

It is hoped delegates will be interested that 95% of officers sampled in this category B prison reported high levels of mental health symptoms. Moreover as there was a strong and significant association between mental well-being and workability, delegates might like to discuss the assessment of workability and its application to more high-demand workplaces throughout the UK. In a time where prisons are overcrowded and there are a lack of staff, the public can often perceive prisons as physically rough and violent environments, where most risk is associated with physical health and injury. It may be of interest to the public that prison officers can also be exposed to other hazards, which affect mental health and well-being.

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W07

Discussion

Talking about evidence-based practice: the practitioner perspective

Janet Fraser, Open Perspectives Consulting Limited

Theme **Research Design, Analytical Techniques and Practical Applications**

Where have we got to with evidence-based practice and where do we want to be? Interestingly, there is a gap in the evidence-base when it comes to knowing how occupational psychology practitioners actually use evidence-based approaches. This important topic awaits systematic study giving all the more reason to open up a discussion that focuses on the practitioner perspective. This town hall meeting aims to do exactly that by providing a relaxed and informal setting in which to explore and discuss key issues in applying an evidence-based approach in real-world practice.

Topics and major questions :

Thinking of your work as a practitioner, what does 'evidence-based' mean to you ?

1. What does it look like? What's going on ?How do you feel about it? (Importance? Relevance?)

What are your hopes for evidence-based practice? How do you see it developing?
(State of play in 3 years time?)

As you see it, what are challenges faced by you and by practitioners generally in doing evidence-practice in occupational psychology?

What are the opportunities?

What are the solutions?

What would you like to see happen?

How and by whom the discussion will be facilitated:

The session will be facilitated by the author who made this submission.

The author is a practitioner and a trained mediator who is also experienced in the moderation of focus groups in settings where sensitive issues and strong emotions come into play. In addition, the author has experience of supporting others in adopting evidence-based approaches and has delivered training on this topic.

As a facilitator, the author will maintain a non-judgemental stance in relation to the issues and views expressed, using their skills to promote balanced participation by different attendees. It may be that this will bring forth a range of perspectives, some of which could be oppositional.

A schedule of topic questions will be used to move the discussion forward, however, this will be followed flexibly in light of the way that themes, including any unforeseen concerns, emerge.

Capturing emerging themes and issues:

Key ideas will be noted on a flip chart and written up following the conference, and shared at a later date with the participants and the Division of Occupational Psychology Committee.

Main discussants and their experience and general perspective on the topic:

This discussion is aimed at practitioners who wish to discuss the current state of evidence-based practice, to share ideas about the challenges faced in implementing evidence-based approaches in occupational psychology practice, and to find solutions to these challenges. It is expected that the perspectives brought to such a discussion will be grounded in real-world experience and that this will shed light on the values, attitudes, resources and methods used by practitioners when implementing an evidence-based approach, as well as their needs.

Materials

There will be no printed handouts

Relevance to conference theme: Learning, Sharing, Impacting

The Townhall meeting is relevant to the three keywords of the conference theme:

- **Learning** because it will provide an opportunity to learn directly from practitioners about their experiences and reflections upon experience in relation to evidence-based practice, and to begin to develop a map of what is currently happening that goes beyond the anecdotal.
- **Sharing** because practitioners will share their perspectives with one another and can learn from one another in the course of the discussion about a topic that is relevant and important to them professionally and about which they may have concerns.
- **Impacting** because this is about engagement with practitioners around a topic that is central to being a scientist practitioner. The session has the potential to build a clearer idea of current practice so that practitioner needs in relation to evidence-based practice can be supported and developed. This in turn, can impact upon the effectiveness and visibility of occupational psychology practice.

Chosen strand:

The Townhall Meeting is about evidence-based practice and therefore clearly fits into the strand: *Research Design, Analytical Techniques and Practical Applications*

Novel or innovative aspects:

It will be an opportunity for delegates to have their say and for all sides of the discussion to air their view on a equal basis.

Delegate perspective:

Delegates will find the session stimulating and useful because of its relevance to the current needs of practitioners, and because of the opportunity to speak about matters that affect them. Evidence-based practice is mentioned in the HCPC standards of proficiency and yet robust evidence about what practitioners do in practice is lacking.

Public perspective:

The public may find it interesting that the profession is committed to developing ways to improve the quality and effectiveness of its practice in support of the services it delivers.

W08

Short Paper

Measuring the Immeasurable: the Perceived Coaching Effectiveness Scale

Rebecca Jones, University of Worcester

Theme **Learning, Training and Development**

Introduction

The importance of the reliability and validity of measurement tools for evaluating outcomes is a fundamental principle of research design. Outcome measures should be theoretically and empirically driven, however they also need to be practical and accessible for practitioners. If an outcome measure is cost prohibitive then regardless of its accuracy it is unlikely that it will be adopted by organisations. For this reason, self-report questionnaires are a popular method of evaluating interventions. A review of the literature has identified that there is no established questionnaire which has consistently been used to measure perceived coaching effectiveness. Studies which have measured this outcome have each formulated a new scale and have not adhered to best practice guidelines in the development process (e.g. Feggetter, 2007; Tooth et al., 2013). In addition to this, these questionnaires often inadvertently confound coaching effectiveness with reactions to the coaching process. For these reasons, to fill this gap in the research literature, this paper describes the development of a new measure. This measure is theoretically driven, and follows a rigorous scale development procedure, as outlined by Hinkin (1998) and DeVillis (2012). Consequently, a highly reliable and valid measure has been created, the first of its type, which can be used by other researchers in the field. The focus of this scale is on measuring the coaches perceptions of the impact of the coaching they received on outcomes. As the scale examines outcomes only and is not concerned with the process of the coaching intervention itself, the scale can be used to evaluate all types of coaching (i.e. cognitive-behavioural, psychodynamic etc.) and can also be used in all business contexts.

Method

Item generation & development. Using a deductive approach, themes of perceived coaching effectiveness were identified based on the extant coaching and training and development literature. This resulted in five themes of coaching outcomes: affective; skill-based; individual results; team results and organisational results. Twelve in-depth, structured interviews were conducted with subject matter experts in order to confirm the content validity and develop indicators for each theme. There was 100 per cent agreement with the five themes/outcomes. Once the indicators generated were collated and duplicate items were removed, a list of 147 indicators remained: 46 affective, 51 skill-based, 18 individual results, 14 team results and 18 organisational results.

Content validity. Next, a further check of the content validity of the items generated was completed. The technique utilised by Mackenzie et al. (1991) was used in which a group of naive participants ($n = 7$) were provided with the scale themes and asked to match the scale items to the corresponding definition. In order for an item to be retained, a minimum of 75% of the participants had to agree on its corresponding construct. Once the results of the content validity check were collated, 37 of the 147 items did not meet the minimum correct item classification of 75%, therefore these items were removed leaving a 110 item scale.

Questionnaire administration. Next, the remaining items were tested for confirmation of the expectations of the constructs being measured. The scale was distributed to a sample of 201 coaches, which is an adequate sample size for factor analysis (Hinkin, 1998). It is also recommended several independent samples should be used to test the scale (Hinkin, 1998). Participants were drawn from a range of sources with no more than 20% of the sample working for the same organisation. All participants completed the 110-item scale online with responses recorded on a five-point Likert scale.

Results

Exploratory Factor Analysis. Before factor analysis was completed, the univariate statistics for the sample were examined to confirm suitability for factor analysis and outliers were removed. To explore the construct validity, a principal component analysis with Varimax rotation was conducted. The number of factors to be retrieved was determined by using the eigenvalue greater than one principle, examining the

scree plot and the rotated component matrix. The data suggested that the first five factors were worthy of further examination. After forcing a five factor solution, 12 items were removed from the scale as these all had communality values of less than .5. Removal of these 12 items increased the total variance explained by the five factor model from 59.94% to 62.17%. Next low loading items were removed (leaving 48 items), this increased the total variance explained to 66.67%. To refine the scale further, the Cronbach's alpha was calculated for each of the scales to identify any items which could be removed. For all factors, the corrected item correlations were good (above the .3 level) suggesting that no individual items were measuring something different to the scale as a whole. Also no 'alpha if item deleted' value was higher than the original alpha obtained. Therefore decisions on which items should be removed were made on the theoretical basis of the factor. Also, if two very similar items were present then the item with the highest 'alpha if item removed' value was deleted to reduce the overall number of items in the scale.

Scale Refinement

Factor 1. The majority of the 12 items in Factor 1 loaded onto the *team results* category. A sample item is 'my team collaborates more'. To refine the scale, the items not belonging to the team results category were removed. This resulted in a 9 item scale with an alpha coefficient of .94.

Factor 2. The items loading onto factor 2 all fell within the affective category. On reviewing the wording of the items, these items could be described as relating to attitudes towards *self-awareness*. A sample item is 'coaching has made me more focussed on my intentions'. Refinement resulted in a 9 item scale with an alpha of .94.

Factor 3. The majority of items in factor 3 were from the skill-based category. A sample item is 'I am more flexible in the way I work to meet organisational objectives'. The items within this factor could be described as measuring *interpersonal effectiveness*. To refine the scale, one item was deleted as this item fell within a different category. This resulted in a 6 item scale with an alpha of .89.

Factor 4. The theme for factor 4 had less of a clear pattern; the items were fairly evenly split with three items belonging in the skill-based outcome category and four in the individual results category. However, on reviewing the wording of the items a clear theme was evident; the majority of the items were focussed on skills, behaviours or results regarding *personal administration*. A sample item is 'I am able to plan more effectively'. Refinement resulted in a 6 item scale with an alpha of .92.

Factor 5. All items in factor 5 were from the affective outcome category. A sample item is 'I feel happier at work'. This factor could be described as measuring *work well-being*. Refinement resulted in a 6 item scale with a coefficient of .91.

The internal consistency analysis of the rotated solution resulted in a five factor model with 36 items.

Convergent and Divergent Validity. The convergent and divergent validity of the final scale was confirmed by calculating the mean scale scores for each of the five scales and correlating these total scores with the individual items in the scale.

Confirmatory Factor Analysis. In order to examine the factor structure of the PCE scale, confirmatory factor analysis was conducted. The fit indices for the 36 items suggest that overall the model provides a good fit to the data: $\chi^2(584) = 1105.84$, $p < .00$. The χ^2/df ratio = 1.89 which is below the 2.0 threshold that is suggested to indicate a reasonable fit. Interpretation of the other fit indices supports this. RMSEA meets the .06 cut-off for a good fit (.07), NFI is close to .9 (.82) and CFI and TLI are both close to .95 (.90; .89) (Hu & Bentler, 1999).

Discussion

The solution proposed by the factor analysis did not match the original categories of outcomes generated from the deductive approach. Particularly noteworthy was the absence of the organisational results category. This outcome was identified from the literature and confirmed in the interviews with experts. Although changes in organisational results are likely to be an outcome of coaching that organisation leaders are interested in, it is also the most challenging outcome to measure in relation to the unique contribution of coaching. Penney et al. (2011) discuss the challenges of measuring an individual's contribution to broad outcomes as they argue that these outcomes are frequently contaminated by factors outside of that individual's control. In this instance, perhaps the difficulty in generalising changes as a result of coaching to changes at the organisational level is too fraught with potential confounding variables. Therefore, coachees completing the PCE scale could not confidently agree with items loading onto the organisational results factor.

The data analysis also resulted in a number of other notable changes, particularly the creation of more specific categories of perceived coaching outcomes compared to the general outcomes that the deductive approach had originally generated. For example, a personal administrative effectiveness factor was identified. This factor contained a combination of skill-based and individual results items that all described elements of organising and managing your own work. Secondly, the analysis generated a self-awareness factor. These items had all originally belonged to the affective category, however when reviewing the item wording they seemed to form a distinct group. The items within this self-awareness category focus on the coachees ability to think reflectively and be self-aware. Thirdly, the labels interpersonal effectiveness and work well-being seemed to describe the items that fell into factors 3 and 5 more appropriately than the more general category names originally created with the deductive approach. The analysis suggests that these are outcomes of coaching that coachees perceive coaching to impact on.

Conclusion

To summarise, following a deductive approach and a multi-stage development process a 36 item PCE scale was created with five factors: **team results; self-awareness; interpersonal effectiveness; personal administrative effectiveness and work well-being**. *The key contribution of this scale is the creation of a theoretically driven measure that has been empirically tested, and can be used to effectively evaluate the coachees' perceived outcomes of coaching.*

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W09

Standard Paper

Measuring social capital through Real Time Sociomapping

Dr Josephine Palermo, Telstra Corporation & **Pauline Willis**, Lauriate Ltd

Theme **Work Design, Organisational Change and Development**

In the midst of the global financial crisis in 2009, Henry Mintzberg encouraged us to think about rebuilding corporations as communities; "*Beneath the current economic crisis lies another, crisis of far greater proportions: the depreciation in companies of community—people's sense of belonging to and caring for something larger than themselves*" (Mintzberg, 2009, p.1).

Social capital, the building block of communities, is one the most under-utilised resource in large complex organisations. Whilst managers are focussed on optimising human and physical assets to meet their organisations' strategic aims, they rarely identify nor optimise the social assets at their disposal. Robert Putnam, in his seminal work "Bowling Alone" (Putnam, R. 1995), surmised that the quality of public life and

the performance of social institutions were influenced by the norms and networks of civic engagement. At the time, social scientists were utilising a framework resting on the concept of social capital to describe the impact of social connections on public institutions. This framework is equally applicable to private corporations. Social capital refers to the features of social organising such as networks, norms and social trust that facilitates cooperation for mutual benefit. Researchers have demonstrated the 'organisational advantage' of social capital in its ability to generate new intellectual capital and innovation, building greater reciprocity and social trust within an organisation (Nahapiet & Ghoshal, 1998; Gubbins & Dooley, 2014.)

This paper describes a case study of the application of Sociomapping in a large multi-national telecommunications organisation that faced challenges of functional silos and hierarchical leadership. Sociomapping allows for the measurement of social capital via the collection of data about mutual relationships between individuals or groups, whereby group dynamics are inferred from information gathered about the personal characteristics of each individual team member or unit. The Sociomapping intervention was part of a larger *Silo Busting Program* that aimed to firstly raise awareness of the criticality of collaboration and then build this capability right across the organisation. The program also aimed to develop a culture characteristic of more collective leadership. This was particularly important for the implementation of the organisation's customer advocacy strategy and a new performance management system that required a greater focus on the end to end experience for customers.

The paper will describe environmental, process and people factors that led to the case for change for the large telco. It will describe, and show the results of, the Sociomapping interventions conducted and their impacts on engagement and motivation. As well as practical implications, the authors will discuss implications for theories of engagement and motivation, such as self determination theory. Self determination theory posits that one of the three basic psychological needs inherent in humans is relatedness (with the other two being autonomy and competence. Relatedness refers to a sense of connection and belonging with others. Ryan and Deci (2012) suggest two levels of relatedness. The first involves caring relationships with other individuals. The second involves identifying oneself in relation to a community. These connections with others are proposed as essential and will be discussed in light of our findings.

As part of the interactive aspect of the session, participants will discuss the essentiality of relatedness in their own occupational practice. They will participate in a real time socio mapping exercise, and will be able to see their social map forming on the screen as their data is being collected in real time. They will then be invited to discuss the implications of this kind of feedback on their sense of self as connected to others, that is, on their own sense of relatedness.

The following materials are required to conduct the real time socio mapping exercise with participants:

- Data show with internet connection,
- Participants will need to bring a internet connected device into the room (such as a smart phone or tablet).

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W10 Standard Paper

Five Areas – Stage 2 Update. Where are we now and what is next?

Almuth McDowall, past Chair, DOP, chair PES strategy group Representations from the Board for the Qualification in Occupational Psychology, **Vicki Elsey**, DOPTC Training Commitee, **David Lurie**, PwC Theme **Learning, Training and Development**

In this session, we will share and debate the recommendations from the consultation on future revisions to the qualification in Occupational Psychology using an interactive format. All conference delegates with an

interest in pursuing a professional career including current MSc students, as well as those currently involved in the qualification, whether as trainees, or supervisors, are warmly invited to attend the sessions. In order to ensure informed debate, the past chair of the DOP will co-facilitate the session, together with representatives from the OP Qualifications board, the co-chair of the DOP training committee which oversees stage 1 (training at MSc level) and also an experienced practitioner as an 'impartial but critical voice' to ensure open debate. The outputs will be shared via a brief report published in OP matters and on the DOP web-site, we will also consider a podcast as appropriate.

Our objectives

The DOP has been making great efforts, and put a considerable amount of funding into revising and reshaping our training path. In order to ensure that any revisions are fit for purpose, it is crucial that stakeholders are widely consulted. Outputs to date, including the executive summary of the independent consultation on the Stage 2 qualification have all been made available widely to the membership. Fewer individuals than we had expected engaged with the web-based consultation in 2014 however, so we will very much use this session to solicit input directly, but also get attendees to get involved more directly in future activities.

How will the session be structured (provide an agenda or outline timetable where appropriate)?

00-10: Explaining the background of the Stage 1 and 2 qualification processes

10-20: Sharing of consultation data on Stage 2 more specifically

20-40: Interactive exercises in groups to provide feedback directly to the division and qualifications board on specific questions arising from the consultation

40-50: plenary discussion and close

W11

Standard Paper

Leading change through emotional intelligence – A Practitioner Case Study

Rich Cook, JCA Occupational Psychologists Ltd

Theme **Leadership, Engagement and Motivation**

Sustaining change, Measuring impact (ROI) and creating effective leaders are all key facets in business and people development scenarios. This practitioner case study illustrates the efficacy of an emotional intelligence based leadership programme supported by tools and measures, and will include key insights from the consultant psychologists and the customer organization along with powerful data that underpins a deep analysis of what worked and why.

Overview of the session

Introduction – 3 minutes

The session leaders will introduce themselves, give an overview of the session, the purpose and objectives, and set expectations

Case study presentation – 25 minutes

A structured session using PowerPoint will include background, solution, results and impact. This will include input from the client company who will talk about the business impact and benefits from their perspective. The study will cover the design and delivery aspects including examples of practical inputs as well as addressing how the results were gathered and analysed and how these tie in with the business benefits.

Activity – 5 minutes

Delegates will take part in a high energy exercise where they will experience and better understand the impact of defensive behaviours in leadership.

Q&A – 10 minutes

Delegates will have the opportunity to ask questions of the presenters based in the input and data presented.

Close – 2 minutes

The session will conclude with some closing words of summary

Relative proportions:

5% Theory; 60% research; 35% practical application

Key messages and insights

- The link between EI and leadership – powerful evidence
- The design principles underpinning the approach
- Linking business needs to EI and leadership dimensions
- How impact was measured and results gathered
- Client views on the design, implementation and business impact
- Sustaining impact – how this was achieved and measured
- Key learning points and future considerations

What are the main psychological theories, models and research underpinning the session?

- The case study relates to the application of tools designed on the basis of attitudes driving sustainable behavior change. This links to a long history of psychological research: LaPierre, Festinger, Eagly, Huczynski and Makin
- Theoretical underpinning is eclectic and draws upon FIRO Theory, Gestalt, The Human Givens, the neuroscience of emotions, Personality Trait theory, Psychometric theory, Psychological Type theory and Transactional Analysis
- The EI model for the study was developed by the presenting psychologists and comprises
 - A unique six part framework
 - Personal and Interpersonal forms of intelligence
 - Three levels of EI; behavior, feeling and attitude
- Research was further undertaken as part of a process of measuring ROI using objective EI measures together with client testimony and 360 feedback data

How we see the proposal linking with the main conference theme of **Learning, sharing and impact**

- This study provides strong evidence of the link between the theory and implementation of EI, particularly in leadership
- In particular this practitioner case study illustrates
 - The impact of a programme in moving technical/operational experts to strategic people leaders
 - Findings on the efficacy of Emotional Intelligence in leadership development and effectiveness
 - Measures of sustained impact in a cohort of around 400 managers over a 2 year period
- The study demonstrates evidence to support sustained change and thereby the important link between attitudes and behaviours
- The session will include the client and participants will benefit significantly from hearing a client view and how this innovative approach was taken on board and supported
- The session will include an activity to share in real time an exercise that demonstrates a core aspect of |EI and leadership – the impact of defensiveness
- Delegates will learn what implementing high impact EI based solutions comprises and how this is different from other approaches

Why is this proposal appropriate for the Leadership, Engagement and Motivation strand?

- Leadership is a major area of interest for businesses and a highly researched area too. This proposal provides an opportunity to delegates to hear about the efficacy of EI based solutions in particular
- Engagement is addressed at various levels: The engagement with the clients (consultancy, design and implementation); engagement with the delegates through a powerful and high impact programme; and the intended impact on the organization through developing its leaders
- The link between attitudes and behavior change is demonstrated and is a key link to motivation

What do we consider the most novel or innovative aspects of the ideas being presented?

Why we think conference delegates will find the session stimulating and useful?

What might the public find interesting about the session?

- Measuring change to demonstrate sustainability and positive business impact is complex and can be difficult. The session will share methodologies and the learning from the implementation
- Creating tools and methods that translate to business impact and make the link between theory and implementation takes creativity and business acumen. The session will bring this process to life and clearly show how this is achieved
- The key vehicle for change is an emotionally challenging programme; this drives impact but needs emotional intelligence itself to manage. Managing emotions in business is challenging and delivering a course that brings emotions to the fore requires skill and dexterity. Delegates will get a deeper understanding of this and the importance of this to our profession.
- The fact that a business is willing to commit significant resources and take personal risk to deliver this depth of course reveals an insight into how important the business world regards developing its leaders and how the case for emotionally intelligent leadership is gaining ground. The session will deliver an honest,warts and all, client view.

SUPPORTING CASE STUDY MATERIAL

Background

The client is the leading public body for protecting and improving the environment in England and Wales.

The client commissioned business psychologists to support them in harnessing and developing the talent of their operational and technical experts (e.g. specialists in river flooding, ecosystems, nuclear science and other high-profile areas that provoke emotional responses in the public arena) into more effective leaders, to be able to think more strategically, engage a broad range of stakeholders and motivate and inspire their teams.

The challenge:

1. Transforming operational and technical managers into strategic, people leaders able to lead themselves and others to deliver more for less and during a period of significant change and increasing demand on its service
2. To build a talent pool of high performing, collaborative, authentic and inspirational leaders of the future.

Solution

An Emotional Intelligence based leadership development programme supported by individual coaching and further elective modules.

Consultants tailored its flagship applied Emotional Intelligence leadership development programme 'Leading Through Emotional Intelligence' (LTEI).

Key to its success was the use of two diagnostics: Emotional Intelligence Profile (EIP) – used to identify those attitudes and habits that both enabled or blocked delegates' leadership capability; Leadership Climate 360 – used to establish the leadership climate created by each delegate within the business. Completion of these tools before the initial three-day experiential programme and at the two-day follow-up three to four months later enabled a clear measure of learning outcomes to be established.

Results

The typical leader BEFORE LTEI: is defensive, lacks confidence, finds it hard to be proactive, blames others, has average levels of resilience and has average to low levels of people skills (e.g. avoids conflict or is too heavy handed).

The typical leader AFTER LTEI: is more able to manage their defences, more confident, looks to enable proactive change, more resilient than most and better equipped than the average leader to enable and collaborate with others.

Business Impact measures indicate that since participating in the Leadership Development Programme, 95% of raters agree/strongly agree that participants had made a significant difference to the engagement

and motivation of their team, and 71% reported that Participants had made a significant difference to the success of the organisation.

Recent research on the Leadership Climate Indicator (LCI) has shown that creating a positive working climate leads to higher individual Performance, Engagement and Well-being(Impact). Based on a sample of 2109 individual's from the organisation there was an overall correlation between LCI data and Impact of $r=0.47(P<0.01)$, suggesting that organisational climate accounted for 22% of variance in overall individual Performance, Engagement and Well-being (Impact). This is a significant result and highlights the importance of leadership behaviour in determining the emotional climate of an organisation and the impact this has on individual output.

Evidence of 'sticky' change

Analysis confirms significant improvements from low levels of EI to high levels of EI across all scales, up to 9 months after the programme and can be linked to the enhanced engagement and motivation of their teams. Qualitative analyses suggest emotionally intelligent leadership is still in place up to 2 years after the programme!*

75% increase in engagement and self confidence

60% increase in regard for others

50% increase in goal focused behaviour

40% increase in personal resilience

40% increase in awareness of others and ability to connect with them

40% increase in proactivity and 'can do' attitude

Participant evaluation:

'The building block was EI and it was this foundation that set free the potential that I didn't realise I had... I now think differently. The programme was challenging, time consuming, thought provoking, emotionally draining, liberating and I wouldn't have changed a single thing!'

* Research note: Performance differences are expressed as percentile changes on the EIP. All related findings are supported by EIP raw score differences significant at $p<0.05$.

Example participant quotes:

'Well I've had a kind of interesting week since we were together – locked into the national response to the biggest tidal surge in a generation! I have to say I think some of the stuff we did really helped me (very, very pressured – lots of emotion, both hidden and expressed) but I stayed calm and cool throughout – around 800 000 houses protected' 'across England'

"Productivity has increased, we are quicker. The main benefit has been the coherence of what we do, all moving in the same direction"

"I am more effective, my team is better led and I am more strategic"

"The combination of coaching and EI has dovetailed together really well"

"I can more swiftly get over barriers and keep people engaged"

"Exactly right, the level of challenge was uncomfortable at times but it was necessary, and I developed as a result"

W12

Standard Paper

Work-related wellbeing in the prison service: a national study

Prof Gail Kinman, Dr Andrew Clements & Dr Jacqui Hart, University of Bedfordshire

Theme **Well-being and Work**

Introduction

Research findings from several countries suggest that prison service employees experience extremely challenging working conditions. A UK survey that compared key stressors and strains across different

occupational groups found that prison officers reported poorer than average scores for physical and psychological health and job satisfaction (Johnson et al., 2005). The findings of smaller scale studies also indicate that job stress may be high in the sector with serious implications for health, sickness absence and retention (Bevan et al. 2013). A report published by HM Prison Service in 2008 (HMPS, 2008) indicated that staff sickness accounted almost 600K lost working days in prisons in England and Wales during the previous year, with almost one-quarter of this absence due to mental health problems (including job-related stress, anxiety and depression).

The job characteristics and working conditions in the UK prison sector that are considered most stressful have also been examined. A study conducted in one prison by Rutter and Fielding in 1988 found that low staffing levels and resources, poor morale and confrontations with prisoners were the most stressful aspects of the job. The number of serious attacks on prison officers by inmates is rising; the Prison Officer Association recently reported that such attacks have increased by 45% in two years (POA, 2014). Research by Holmes and MacInnes (2003) found that lack of appropriate training reduced the confidence of prison officers in dealing with the traumatic situations that they encountered and this made a strong contribution to work-related stress. Poor management practices, combined with a lack of support, were also considered stressful, but interpersonal relationships were an important source of support during crises.

More recent research conducted by Bevan et al. (2010) found that perceptions of psychosocial working conditions by staff working in several prisons in London were generally poor. Satisfaction with job control, manager support and role clarity was low, and concerns were raised at the extent of bullying behaviour. Employees who perceived their psychosocial work environment to be poor were three times more likely to report psychological distress than those who perceived a more positive psychosocial work environment.

Aims of study

In summary, there is some evidence that the work-related wellbeing of prison service employees may be poor. Extensive changes have recently been made to the structure and governance of the prison service. Little is known at a national level about the current working conditions that are considered most challenging and the implications for personal and organisational functioning. This study adopts a benchmarking approach to diagnose the job-related stressors and strains experienced by prison service employees in the UK. It utilises the Health and Safety Executive Management Standards approach to examine the extent to which the UK prison service is meeting the recommended standards for the management of work-related wellbeing and identifies priorities for intervention. Also examined are levels of psychological health, job satisfaction, absence and turnover intentions of prison employees, through the utilisation of measures with published normative scores across a range of working populations. Experiences of violence and intimidation and perceptions of procedural justice in the sector are assessed along with the implications for wellbeing. The availability of support services and attitudes towards stress and stress-related absence in the prison service is also explored.

Method

An online survey was utilised.

Sample

There were 1,682 respondents to this survey. A considerable majority (85%) of the sample was male and ages ranged from 20 to 67 years with a mean of 47.3 (SD = 8.25). Respondents have worked for the prison service for an average of 18 years (SD = 7.9). Most respondents work in the public sector (97%) with 1% (n = 18) working in the private sector and 0.3% (n = 5) within the National Health Service.

A range of well-validated measures was used in the survey. The HSE Management Standards Tool was utilised to assess levels of psychosocial hazards at work (Mackay et al, 2004). The elements of work activity included in this measure are demands, control, role, change, support from colleagues and managers and relationships. Other variables such as violence and aggression at work, procedural justice (Niehoff & Moorman, 1993) were assessed. The outcome measures comprised the General Health Questionnaire: 28 (Goldberg & Williams, 2000), the Maslach Burnout Inventory (Maslach et al. 1996), job satisfaction (Warr et al, 1979) and turnover intentions (Camman et al. 1979). Interviews with a representative group of prison service employees were subjected to thematic content analysis to further explore their job-related experiences and perceptions.

Results

None of the benchmarks set by the HSE for the management of work-related wellbeing was met. Levels of satisfaction in relation to job demands, job control, manager support, relationships and the management of change were particularly low. Scores on each of the seven sub-scales were also found to be considerably poorer than those found in surveys of other safety-critical occupations such as the police and fire and rescue personnel (Houdmont et al. 2012). Experiences of intimidation and aggression from prisoners were commonly reported. The most common forms of aggressive behaviours were verbal abuse and verbal threats, closely followed by intimidation. Almost one respondent in three (30%) reported that they had been physically assaulted. The majority of staff who had been assaulted by prisoners indicated that organisational support to help them recover was seriously lacking.

The GHQ-28 measures four dimensions of psychological distress: social dysfunction, depression, anxiety and somatic symptoms. The level of “caseness” (where some intervention is recommended) was high in this sample in comparison to other occupational and community groups. Almost three quarters of the sample (72%) scored above the recommended cut-off point. Overall levels of burnout, particularly emotional exhaustion and depersonalisation, were also high compared to other studies and the extent of job satisfaction poor.

Significant relationships were found between each of the psychosocial hazard categories and all strain outcomes. The models, controlling for gender, age and job tenure, explained 22% of the variance in leaving intentions, 44% in burnout, 38% in psychological distress and 67% in job satisfaction. Demands and control made particularly strong contributions to all types of strain. Moreover, respondents who reported experiencing more abuse, threats and intimidation at work and who perceived less procedural justice tended to be more psychologically distressed, more emotionally exhausted and more likely to depersonalise the prisoners in their charge. They also tended to report lower levels of job satisfaction and stronger leaving intentions. Perceptions of support structures to help prison officers manage wellbeing were generally poor with many participants being unaware that any services were actually available. Moreover, there was evidence that disclosing work-related stress was subject to considerable stigma.

Implications

The findings of this study indicate that wellbeing in the prison sector in the UK is generally poor with serious implications for employees and organisational effectiveness. The level and impact of violence and intimidation and a lack of support to manage the impact of such incidents, as well as job-related stress more generally, is a particular cause for concern. The study highlights several priority areas for interventions to help enhance wellbeing in the sector.

Further information

The presentation has clear links with the main conference theme and the chosen strand. It advocates an evidence-based benchmarking approach to diagnosing key work-related hazards in a little studied occupational group and identifies priority areas to enhance wellbeing in the sector. It is anticipated, therefore, that the presentation will be of interest to academics and practitioners with a general interest in work-related wellbeing. Of particular interest is likely to be extracts from interviews that highlight the personal experiences of respondents (which will be presented by actors via videotape). The audience will be invited to discuss the following issues: a) the challenges inherent in academics and practitioners gaining insight and developing practical and acceptable interventions for occupational groups (such as the current study population) whose working conditions are beyond the realms of their personal experience and b) the ethical obligation presented to academics and practitioners when we discover such intensely threatening working conditions.

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W13

Standard Paper

ROI and Organizational Aggregate Personality

Prof Dave Bartram & Prof Benjamin Schneider, CEB

Theme **Psychological Assessment at Work**

Introduction

This presentation concerns the effects of aggregate individual personality attributes on organizational performance. We propose that the study of aggregate individual differences in organizations is a necessary step in substantiating the importance of personnel selection practice. Personnel selection practice is one of the clearest demonstrations of the validity of I/O psychology and human resources management in the world of practice. For essentially 100 years the use of individually based measures of knowledge, skills, abilities and other individual attributes (KSAOs) to predict individual performance at work has proved valid and effective. However, there have been recent suggestions in the literature that resting on these laurels for predicting individual performance at work is not sufficient for the future of personnel selection practice (Ployhart, 2004; Ployhart, Nyberg, Reilly, & Maltfrich, 2013). The argument made is that it is important for personnel selection practitioners to demonstrate that use of these procedures for making hiring decisions that yield individual job performance also yields relative competitive advantage from such use; that aggregate individual KSAOs in a firm yield superior performance for the firm compared to other organizations (Ployhart et al., 2013).

Schneider's (1987) attraction-selection-attrition (ASA) cycle provides one way to conceptualize why there should be within firm homogeneity and between firm differences in aggregates of individual differences measures. In brief, the theory says that organizations, due to the unique attributes (values, climate, and culture) they present to the public, attract specific kinds of people based on those people's perceptions that they fit the firm. Firms then further narrow the range of types by selecting from that pool people they feel best fit the company and, finally, those who do not fit leave. The result of this cycle is said to be homogeneity.

Existing literature for the validity of the Big 5 against (individual) performance outcomes (Barrick & Mount, 1991, 2012; Hough & Dilchert, 2010) suggests quite consistent significant relationships between Conscientiousness and individual performance and moderately consistent relationships for Emotional Stability. If these generalize to firm-level performance we can hypothesize:

Hypothesis 1: Conscientiousness and Emotional Stability will be significantly related to organizational performance.

The same literature reveals quite inconsistent or even rare significant relationship for Openness to Experience as well as Extraversion with (individual) performance yielding the third and fourth hypotheses: Hypothesis 2: Extraversion and Openness to Experience will not be significantly related to organizational performance.

Our third hypothesis concerns Agreeableness. There are two reasons to propose it might play a significant role in understanding organizational performance. First, Bartram (2013) in research on national differences in personality has demonstrated that country level aggregated Agreeableness is the strongest significant predictor of national economic performance indicators. Second, this hypothesis also follows from writings by Hogan and his colleagues (Hogan, 2007, Hogan et al, 2014) that the focus for delivering a collective benefit and competitive advantage would be on attributes that support team contributions: Getting Along rather than Getting Ahead behaviours. Thus,

Hypothesis 3: Agreeableness will be a significant correlate of organizational performance.

The concept of climate and culture strength refers to the relative agreement across employees in perceptions within organizations, the emphasis now being on *relative* agreement. The research on strength shows that the standard deviation (SD) itself may be a useful correlate of criteria. In the present case, lower SDs would indicate that an aggregate personality indicator is more representative of an organization than a larger SD. Formally, we hypothesized the following:

Hypothesis 4: Adding the SD to predictions based on the mean would significantly improve the predictability of ROI and ROA.

Method

Sample

The sample contained 92,385 people from 484 different firms covering 35 different countries and nested within 22 industry sectors. The average sample size per firm was 191 (SD =327) with a maximum sample size of 4,244. The majority of organizations (61.02%) had multinational samples. The average number of cases per country within organizations was 83.1 (SD=102.8). Ninety percent of the organizations had people drawn from between one and eight countries in their samples, with half of the remaining 10 percent having 12 or more countries in their samples. The maximum number of countries covered by a single organization was 31 of the possible 35.

Measures

Personality data and related scales. The instrument used in the study was the OPQ32r (SHL, 2013). It has a forced-choice item format and consists of 104 item triplets. OPQ32r uses a multi-dimensional IRT model to produce 32 normative scale scores (SHL, 2013). Standard equations are used to compute Big 5 scores from the 32 OPQ scales. All scales were standardized on the full OPQ32r international norm data set (SHL, 2012) as sten scores (mean of 5.5 and SD of 2.00).

Firm-level performance data. Data were extracted from Compustat for 2011 and 2012 for 157 firms matching those with SHL OPQ32r data (484 firms, N=42,860 people). Attention was focused on Return on Investment (ROI) and Return on Assets (ROA) measures reported as ratios multiplied by 100. The ROI and ROA measures are highly correlated (0.84 for 2011 and 0.97 for 2012). Furthermore, measures for 2011 and 2012 are stable over time (0.61 for ROI and 0.77 for ROA). A combined ROI and ROA index covering the two years was thus also produced (Cronbach's alpha of 0.87). Because ROI and ROA have different variances, they were converted to z scores before averaging to produce the combined index.

Results

We tested firm-level homogeneity of personality on the sub sample (N=42,860) used for testing the effects of aggregate personality on firm-level performance. The average ICC(1) for the Big 5 is 0.099 for the validity sample, and ICC(2) is 0.965. Of course, since ICC(2) is a function of sample size within companies, these results indicate that the aggregate personality data for a company will be quite reliable.

Examination of the correlations between the Big 5 and the firm performance criterion measures reveals that only Agreeableness, as proposed in Hypothesis 3, correlates significantly with ROI and ROA. This indicates that Hypothesis 1, concerning the relationships between Conscientiousness and Emotional Stability with the outcomes was not supported. Hypothesis 2 was supported in that there was not a significant relationship between either Extraversion or Openness to Experience and the ROI and ROA criteria of organizational performance.

To explore these findings in more detail, an analysis of the OPQ32r scales that are combined to make up Agreeableness were explored. Five scales are combined for Agreeableness: Caring, Democratic, Co-operative (i.e., negative Competitive), Trusting and (negatively weighted) Independent-minded. Three of the five (Caring, Democratic, and Cooperative) are significantly related to either or both of the ROI and ROA criteria.

The only SDs that revealed statistical significance were, once again, for those related to Agreeableness and three of its OPQ32r scales (Democratic, Caring and Competitive). Analyses of the five OPQ32r scales used to index Agreeableness shows no relationship with the criterion for Trusting and for Independent-minded. Caring and Democratic show significant increases in R squared with addition of the scale SDs; the R for Competitive is not significantly increased by adding the SDs. In no case is the interaction term

significant. These findings indicate that Hypothesis 4 was supported, with the SDs adding significantly to the prediction of organizational performance.

The practical significance of these effects can be judged by considering the differences in mean ROI and mean ROA for the lower and upper quartile firms based on a predictor combining Agreeableness means and SDs. The regression equations for Agreeableness means and SD predicting ROI and ROA were used to compute predicted values for each criterion. The average ROIs and ROAs associated with the bottom and top quartiles of the predictors were computed. The average two year ROI for the 39 firms in the lower Agreeableness quartile was 4.23, while for those 39 in the upper Agreeableness quartile average ROI was 11.73. For ROA the 2 year mean figures were 1.68 for the lower quartile and 6.14 for the upper quartile. The mean ROI for the top quartile is nearly three times the bottom quartile mean and for ROA the top quartile ROA is over three times that of the bottom quartile.

The validity of the three scales Caring, Democratic and Competitive (negative weight) was further explored. For the combined ROI & ROA index, the three means and SDs produced a significant $R=0.377$ ($p<.001$). Similar results were obtained for the same models applied to the two year average ROI ($R=0.348$ for means and SDs of the three scales) and the two year average ROA ($R=0.389$ for means and SDs together). Using these two ROI and ROA equations with six predictors each (the firm means and SDs for each of the three scales - Caring, Democratic and Competitive), the average ROI and ROA for the top and bottom quartiles were computed. The mean ROI for the top quartile is now four times the value of that for the bottom quartile. For ROA the top quartile is five times the value of the bottom quartile.

Discussion

We have shown validity for the long-held presumption that aggregate KSAOs in companies are related to competitive advantage for those firms. The results are not in keeping with the superiority of Conscientiousness or Emotional Stability for prediction of individual performance (Barrick & Mount, 2012) but rather reveal that Agreeableness is the significant correlate of firm financial performance. This finding opens up new ways to think about (1) individual differences in KSAOs as correlates of individual performance versus the needs of organizations to have, in the aggregate, people who get along (Hogan, 2007; Hogan et al, 2014); (2) the impact of aggregate personality on organizational climate/culture/values; and (3) organizational competitive advantage as being at least partially based on the aggregate personality of the firm.

Research on leadership and organizational climate/culture are almost never mentioned at the same time as individual personality no matter how much Hogan (2007) has written about the necessity for such integration. Clearly we need theory and research on the kinds of climates and cultures that might be associated with higher levels of Agreeableness (and other facets of personality) so that the links between personality and the kinds of organizational performance assessed here will have assessments of the likely mediating variables to specify what links organizational personality to organizational performance.

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W14

Keynote Session

Why isn't organizational psychology more evidence-based? Why does it matter and what can we do about it?

Professor Rob Briner, University of Bath, School of Management

The idea of evidence-based practice is now very well-known in many areas of professional practice including medicine, policing, policy-making, and clinical/health psychology but *not* so much in organizational psychology. Evidence-based practice involves making decisions through a combination of critical thinking and the use of more evidence (or information) of more diverse types and from more sources. First, I will consider barriers to evidence-based practice from our clients, academic practices, evidence-based practice myths, market forces, and the training of organizational psychologists. Second, some of the ethical and professional reasons why we *should* be more evidence-based will be discussed. Third, I will suggest several ways in which organizational psychology can perhaps become more evidence-based. These suggestions including reducing the number practicing organizational psychologists, making ourselves quite distinct from other organizational consultants, increasing the level of qualification required to practice, and sticking to our ethical codes of practice.

W15

Discussion

The Division of Occupational Psychology Training Committee (DOPTC): Balancing academic and practitioner input into the education of Occupational Psychologists

Dr Michal Tombs-Katz, University of South Wales; **Dr Gail Steptoe-Warren**, Coventry University

Theme **Learning, Training and Development**

The Division of Occupational Psychology Training Committee's (DOPTC) primary role and remit are as follows:

- Assurance and enhancement of standards of training in occupational psychology;
- Identification and promotion of creativity within occupational psychology training;
- Playing a lead role in facilitating discussion between trainers and employers in driving occupational psychology training, and the discipline as a whole, forward; and
- Reflection of issues back to the Division of Occupational Psychology for wider discussion and/or consultation.

Members voluntarily contribute their time and expertise to support a wide range of activities and their contributions are very much valued by all who benefit from them (i.e., course providers, students and employers). In recruiting members, DOPTC is mindful of obtaining an overall balance of skills, expertise, and academic/practice perspectives across its membership and in theory the committee should consist of a good balance of academics and practitioners. Academics bring with them a wealth of knowledge and understanding of Higher Education, whilst practitioners are particularly valued for their understanding of what employers expect from graduates and of trends and changes in the employability of occupational psychologists. With an overwhelming majority of the current members being academics; the committee is now keen to recruit more practitioner members and also to improve its links with employers of Occupational Psychologists.

This roundtable discussion will be hosted by two academic members of the committee. The discussion will be highly interactive and will start with a brief introduction of the role of DOPTC and the work of its members. Trends in terms of course closures and course openings will also be presented, with a brief overview of the educational setting and the process of course development, from conception to accreditation.

The majority of the discussion will be devoted to raising questions and opening up discussion and will consist of three main themes:

1. Q & A on the work of DOPTC and the benefits of becoming a member
2. Why practitioners and employers should join DOPTC
3. Future directions for the committee to consider.

The discussion will also consider the Unique Selling Points of different courses and the motivations and choices applicants make when applying and accepting an offer from a University.

W16

Career Case Study

Breaking into Occupational Psychology

Michael Towl, Ministry of Defence & **Patti Turfrey**

Theme **Learning, Training and Development**

A career in Occupational Psychology can seem like a tough nut to crack. In this session two people will present their personal story as a case study of how to break into the profession. They will also give any top tips that can be taken away. At the end of the session a Q&A will be held for any delegates who wish to ask further questions. The session is aimed at either people thinking of going into Occupational Psychology, currently doing their MSc, finishing their MSc or currently looking at how to start their career.

W17

Short Paper

Increasing Demands, Decreasing Resources: Conflict and Enhancement in UK Academics

Siobhan Wray, Sheffield Hallam University, **Prof Gail Kinman**, University of Bedfordshire & **Prof Mark Shelvin**, University of Ulster

Theme **Well-being and Work**

There is evidence that work-related demands are increasing in the UK higher education sector and resources diminishing. Employees commonly report difficulties managing the work-home interface, which is a considerable source of strain. Using a sample of 12,635 academics, this study utilises structural equation modelling techniques to test key assumptions of the job demands-resources model in predicting perceived stress, work-life conflict and work-life enhancement. The findings suggest that job demands are more heavily implicated in perceptions of perceived stress and work-life conflict, whereas resources are more strongly related to enhancement. The implications of the findings for employees and institutions are discussed.

There is a body of research, both nationally and internationally, that suggests that levels of perceived stress and work-life conflict in the higher education (HE) sector are high. Studies undertaken over the last decade highlight a significant shift in the nature of academic work brought about by increased student numbers, reductions in the level and source of funding, increased pressure to undertake and publish research, more rigorous teaching and learning policies, increased focus on commercialisation and commercial activity and increased working hours (Kinman; 2001; Tytherleigh et al., 2005; CHERI, 2007, Bucholdt & Miller, 2009). Research that has tracked the stressors and strains in the HE sector over the last decade or so demonstrates an increasing trend towards higher job demands, reduced job resources and higher levels of reported stress in academic staff (Kinman, 1991, Kinman & Court, 2010, Kinman & Wray, 2012, Wray & Kinman, 2014). Levels of work-life conflict in the sector have also remained high over this period and are a key source of strain (Kinman & Jones, 2008; Wray & Kinman, 2014).

The job demands-resources model (Bakker, Demerouti, De Boer & Schaufeli, 2003) hypothesises a dual process that accounts for the impact of job demands on wellbeing. Demands are conceptualised as aspects of the job role that require physical, psychological, organisational or social effort, resulting in physical or psychological strain, whereas job resources are seen as aspects of the job that help the individual to meet work goals, buffer the impact of job demands and/or support personal development and learning. Job demands and resources are hypothesised to feed in to a dual mechanism of health impairment and enhancement; Bakker et al (2007) have suggested that these mechanisms may sit on a continuum with burnout at one end and enhancement at the other.

There is strong evidence that work demands have the potential to conflict with obligations in personal life, which can impair the wellbeing and functioning of employees in each domain (Michel, Clark & Beiler, 2013).

Nonetheless, researchers are beginning to consider the potential positive impact of work on the non-work domain (Fisher, Bulger & Smith, 2009). Evidence is accumulating that the acquisition of skills, resources and positive experiences in one role can improve the quality of life in other domains. Work-life facilitation is where resources provided in one domain contribute to enhanced functioning in another, whereas work can also enrich other life domains by engendering feelings of fulfilment and satisfaction (Wayne, Grzywacz, Carlson & Kacmar, 2007).

Aims

The current study aims to examine the links between the job demands-resources model and work-life conflict and enhancement in academic employees. Specifically, it aims to:

Examine the efficacy of the job demands-resources models to predict perceived stress, work enhancement of personal life and work interference with personal life.

Explore the dual-process hypothesis (Bakker & Demerouti, 2007) to examine the impact of demands and resources on perceived stress, work interference with personal life and work enhancement of personal life.

Method:

A cross-sectional correlational design was utilised. An online questionnaire was distributed electronically to all active members of the University and College Union (UCU) in 2012 and 12,635 (55% female) full-time academic staff fully completed the survey.

The HSE Management Standards Indicator Tool (Mackay et al, 2004) was utilised in order to assess job-related psychosocial hazards: i.e. demands, control, role, change, support from colleagues and managers, and relationships. Higher scores on each of these subscales represent higher levels of wellbeing/lower levels of stress.

Perceived stress was measured using an index of three questions relating to perceptions of stress at work. Participants were asked to indicate the extent to which they felt each statement described their experience. Low scores indicate a low level of perceived stress.

Scales developed by Fisher et al. (2009) were used to measure work-life interference and work-life enhancement. Both are scored on a 5 point Likert scale where high scores represent higher levels of interference and enhancement.

Results:

Structural equation modelling (SEM) using the AMOS software package (Arbuckle, 1997) was used to examine the predictive effects of job demands and resources on perceived stress, work-life interference and work-life enhancement. Two latent variables were developed using items from the HSE Management Standards Tool: a) job demands (represented by 8 items measuring job demands) and b) job resources comprising control (6 items), peer support (4 items), manager support (5 items), relationships (4 items), role (5 items) and change (3 items). Both a) and b) were treated as exogenous variables. Perceived stress (3 items), work-life interference (5 items) and work-life enhancement (3 items) were treated as endogenous items in the model. Measurement error was calculated for each item and measure (Kline, 2011)

The measurement model was a reasonable fit to the data, $\chi^2(223) = 44.82$ ($p > .0001$), TLI = 0.937, CFI = 0.949, RMSEA = 0.59 (CI = 0.58 and 0.60). All factors loaded on to latent variables and are significant at $p > .001$, and relationships are in the expected direction. As hypothesised by the JDR model, perceived stress was predicted by job demands and resources (explaining 41% and 12% of the variance in perceived stress respectively, $p < .001$), with job demands explaining a higher proportion of the variance. Work-life enhancement was predicted by job demands and resources. Job demands explain 6% of WLE variance ($p < .001$), with job resources accounting for a further 32% ($p < .001$). Although both elements of the model explain significant variance in the outcome variable, job resources account for a greater percentage of the overall variance. Work related conflict is predicted by both demands and resources, demands explaining 46% ($p < .001$) of the variance and resources 4% ($p < .001$).

These results suggest that job demands are more heavily implicated in work-related interference, whilst resources are more strongly related to work-life enhancement, adding support to the dual-process hypothesis (Bakker & Demerouti, 2007).

Discussion:

The results demonstrate that the job demand-resources model can be utilised to predict perceived stress, work-related conflict and work-life enhancement in a large sample of academic staff. The model fits reasonably well with the data and explains a significant proportion of variance for each of the latent variables. The results further support the dual-hypothesis theory (Demerouti & Bakker, 2007) which

postulates that the job-demand resources model works through two mechanisms, with job demands working through a health impairment mechanism (where high job demands have a detrimental impact on individual wellbeing and job resources working on a motivational mechanism, supporting employee wellbeing).

This is further supported when relationships between work and personal life are examined. Job demands explain greater proportions of the variance for both perceived stress and work interference with personal life, whilst job resources explain a greater proportion of the variance for work-life enhancement of personal life. This suggests that whilst high job demands can have a negative effect on the individual, job resources can have an enhancing, positive effect.

Implications:

Academic working life is becoming increasingly pressured. Many of the changes that have occurred in the sector over the past two decades are unlikely to be reversed. Indeed in the UK, the removal of the cap on student numbers (HM Treasury, 2013) may lead to an increase in student numbers and greater competition within the sector, both of which may lead to an increase in job demands. The results of this study suggest that further increases in job demands will lead to higher levels of stress and work interference in home life, both of which are implicated in poor physical and psychological health outcomes (Leineweber et al, 2013). Furthermore, academics have reported a reduction in control and other job resources over time (Wray & Kinman, 2014). This suggests that as job demands are rising, job resources are eroding, reducing the opportunities for work to enhance rather than conflict with personal life. The combination of increasing job demands and decreasing job resources has potential negative effects for the individual in form of poor psychological and physical wellbeing and increased levels of stress. There are also potentially damaging outcomes for institutions as increased demands and reductions in resources have been linked to turnover intentions and high sickness absence (Estryn-Behar et al, 2011; Neidhammer et al, 2013;) rates.

Implications for practice:

The strategy and direction of academic institutions, like many other public sector bodies, is partially affected by governmental policy. Accordingly, the power of individual institutions to make organisational changes that reduce job demands can be limited by the external environment. This paper demonstrates how the different elements of the JD-R model relate to different mechanisms of work-life conflict and enhancement, thereby offering the opportunity to develop organisational interventions that are effective in a complex environment. For example, developing interventions that increase access and use of job resources may improve enhancement, and thus job satisfaction through the motivational pathway in the JD-R model.

Limitations:

Although the sample for this study is large (n=12,958), the design is cross-sectional. Further work is needed to examine the impact of job demands and resources on conflict and enhancement over time.

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W18

Short Paper

Box-ticking exercises: Why occupational psychologists need to talk more freely about the challenges and limitations associated with survey or questionnaire research

Dr Thomas Calvard, University of Edinburgh Business School; **Prof Rob Briner**, University of Bath School of Management

Theme **Research Design, Analytical Techniques and Practical Applications**

Overview

In relation to occupational psychology (OP), what does a reliance (or over-reliance) on questionnaires and survey methodologies mean for the progression of the discipline and its contributions to understanding and practice? Which important questions can surveys provide useful, meaningful answers to, and which questions are only partially answerable or totally unanswerable by survey techniques? If we rarely question our use of surveys in research and practice, how can our methods substantially improve over time? Whether we use surveys or not, how can we strive to explicitly model and improve our processes of investigation to produce knowledge that is rigorous, actionable, relevant, legitimate, valid, and generally a source of high-quality evidence?

In this paper I seek to ask and answer these bold questions about surveys that often go undiscussed in OP and indeed across the social sciences more generally, with researchers working independently within their own communities and methodological traditions, and articles on surveys generally confining themselves to discussing narrower technical issues of formatting, response, or analysis.

To my mind, surveys or questionnaires (I use the two terms interchangeably here) dominate, relatively speaking, much of OP or organisational behaviour (OB) research and practice. Furthermore, qualitative or critical organisational research notwithstanding, survey-based research practices could be argued to constitute something of a mainstream or status quo in shaping our ways of investigating and addressing issues across time, topics, and top journals. If this general state of affairs is accepted to be true, it is somewhat surprising that surveys remain unchallenged in this prevailing status, and although there may be many varied reasons for it, over-reliance on Likert scales and samples of weary box-ticking, often self-reporting respondents constitutes something of a methodological 'elephant in the room' – that is, something we might wish to talk about, but feel almost too embarrassed or unprepared to do so.

This paper therefore seeks to capitalise on the exciting prospect of opening up this difficult but potentially rewarding conversation. By reflecting on our use of surveys more explicitly as a community, those working

in the field of OP stand to: *learn* more about diverse methodological techniques, *share* arguments or innovations concerning survey practices more openly, and consider whether survey research is as *impacting* as it might be, or could be improved by modifying existing survey practices, or granting greater acceptance to alternative and/or more mixed methodological approaches and processes.

Background

First of all, a fairly substantial body of literature exists on many scattered topics relating to survey issues and practices, including: self-report common method bias or variance as measurement error (Podsakoff, Mackenzie, & Podsakoff, 2012), faking responses (Goffin & Christiannsen, 2003), impression management or socially desirable responding (Zerbe & Paulhus, 1987), response rates (Anseel, Lievens, Schollaert, & Choragwicka, 2010; Baruch & Holtom, 2008), scale development (Hinkin, 1995, 1998), nonresponse and missing data (Rogelberg & Stanton, 2007; Roth, 1994; Tomaskovic-Devey, Leiter, & Thompson, 1994), over-surveying leading to survey fatigue (Porter, Whitcomb, & Weitzer, 2004), measurement stability or change (Vandenberg & Lance, 2000), and the use of postal vs. email vs. telephone vs. internet surveys (e.g. Dillman, 1991; Dillman et al., 2009; Jones & Pitt, 1999; Simsek & Veiga, 2001). Beyond this, the literature relevant to surveys starts to become harder to contain, but can cover occasional general reviews of survey features (Krosnick, 1999), theories of survey response (Zaller & Feldman, 1992), and articles on a range of analytical techniques (factor analysis, regression, moderation, mediation, meta-analysis, structural equation modelling, multilevel modelling) that typically begin with survey data as their input (e.g. Dawson, 2014; Klein & Kozlowski, 2000; MacCallum & Austin, 2000). Finally, and perhaps most interestingly, there are broader evidence-based discussions of how survey processes change alongside societal changes, such as long-running growth in survey usage, changing technological media for administering surveys, widespread declines in response rates, and historical eras driving searches for alternative methodologies (Groves, 2011; Presser & McCulloch, 2011; Tourangeau, 2004).

Much of this literature is specific to organisational research, and much is also more general to the social sciences. In the field of OP, many graduates and practitioners will continue to arm themselves with an understanding of factor analytics, reliability, validity, adverse impact, and item response theory concepts to deliver lucrative 'psychometric' workforce services, often focusing on selection, assessment, and development. Meanwhile, on the academic side, a handful of disciplinary methods journals (e.g. *Organizational Research Methods*, *Psychological Methods*), more dedicated technical journals on general statistics, methods, or public opinion (e.g. *Public Opinion Quarterly*, *Journal of Survey Statistics and Methodology*), and recurring method articles in general OP journals (e.g. *Journal of Applied Psychology*, *Journal of Business Psychology*, *Personnel Psychology*) will all continue to produce knowledge of direct relevance to survey practice. Some recommendations will catch on and get adopted, whereas other articles may only be read by specialists and retain more of a curiosity value for the impassioned statistical mind.

Many OP scholars and practitioners would likely claim that surveys are one of our best means to many valuable ends. Whilst that should not be totally disputed, there is a potential risk that surveys are becoming an end in themselves; over-institutionalised, an exercise in conformity that at times holds back disciplines like OP by: creating an excessive proliferation of constructs, reinforcing a regimented process of meeting quantitative analytical standards at all costs to achieve legitimacy, shaping contributions only in very small path-dependent steps, distorting perspectives on theories, evidence, and questions, and neglecting context to the extent that questionnaires impose a heavily pre-figured research design on participants and other stakeholders, denying them any real voice beyond Likert ratings and a small comment box. Put another way, questionnaires or surveys risk derailing the work of OP away from a desirable pragmatic status (high in rigour and practical relevance) towards less desirable states where: the practical relevance is lost (pedantic science), surveys are thrown crudely at all kinds of problem or question at the expense of rigour (populist science), or in some extreme cases, both statistical-scientific and practical quality lapse (puerile science) (Anderson, Heriot, & Hodgkinson, 2001).

Nevertheless, it is both unfair and misguided to apportion excessive blame to surveys or advise disregarding them – they will inevitably remain a useful, efficient, and well-developed tool for sampling organisations. Rather a better aim, and the one espoused here, is to critically examine survey processes and practices as embedded within and connected to the flaws of a wider system of practitioner relationships, journals, publishing conventions, theoretical development (building and testing), methodological choices, statistical training, professional development, incentives, logistical constraints, evidence or knowledge production, and other technological and/or societal changes regarding research method. In part, this means taking a 'meta' view, analysing and commenting upon the occupational

psychology of OP and management itself. A growing amount of journal editorials, reviews, and commentaries are existing examples of this. Doing so offers up points of change, reconfigurations, and ideally potential improvements to the practices and aspirations of the OP discipline.

Key Concepts and Recommendations for Developing Improved Survey Research Processes

For a discipline that is supposedly liberal (as well as scientific) in some of its identifying values (supporting diversity, equality, well-being, and autonomy across employees), OP (and OB in the U.S.) is remarkably conservative in its general popular use and evaluation of survey research processes and practices. Summarised here are the four main avenues by which this paper seeks to develop improved survey research processes:

1. Surveys are only as good as the theories and designs that go into them and the analyses that flow out of them. By considering theory development, testing, and study design more creatively at the front end of research, and the analytical techniques to be used after data collection, processes can be improved. For example, simply changing the type of analysis we do on survey data (regression, ANOVA, structural equation modelling, multilevel modelling, latent class analysis) profoundly affects our mindset in how we look at the world (Allen et al., 2014; Zyphur, 2009). Comparing these mindsets, and even switching between them, can multiply the value of the survey research conducted within OP.
2. Survey processes can be further enhanced by more fully embracing mixed methods. Mixed or multiple methods are surprisingly under-discussed and under-valued in organisational science. Yet triangulation of multiple sources of evidence can clearly add value to the knowledge produced within OP (Bazely, 2008; Briner, Denyer, & Rousseau, 2009; Jick, 1979). Relying on surveys alone runs the risk of downplaying key aspects of context, the participative agency of the respondents, the ongoing impact of the research, and the capacity for positive change in organisational settings (e.g. via action research; Cassell & Johnson, 2006). Whether they necessitate harder work or not, these complementarities surely bear more discussion and exploration than they currently receive. The fact that *Organizational Research Methods* journal has put out a call for a Special Issue on mixed methods in 2014 provides further indication of this currently neglected state of affairs.
3. Abandoning surveys need not mean abandoning the rigour of quantitative analysis, but we need to face up to the fact that many surveys can only measure or quantify to any depth a relatively narrow range of attitudes and behaviours that we are consciously aware of at any given time. Much of everyday and organisational life is widely argued to be automatic, non-conscious, and not necessarily the product of free will (Bargh & Williams, 2006; George, 2009). We also typically make sense of our actions ('sensemaking') in routine ongoing cycles as they are occurring *in situ* and revise meaning with the benefit of hindsight and further actions (Weick, 1995). Many organisationally relevant opinions and contexts are inherently diverse, biased, paradoxical and dynamically unstable at junctures of interest or importance. Consequently, not everything has to be measured by static self-report indices to be meaningful. Work on 'big data', social media, networks, observation, analytics or metrics, and operationalisation (e.g. Dawson, 2011; DeRue et al., 2010) can refine OP research by continually guiding us beyond self-report.
4. Drawing more explicitly on alternative, plural paradigms and perspectives can help clarify decisions to use surveys or not, and in what ways and for what reasons, and to make stronger, more thoughtful, transparent contributions with each and every paper. Rather than simply gap-spotting or developing scales for yet another slightly differentiated concept, our research should be justified more strongly in terms of the questions it is initially seeking to answer, the ideas it is testing, dilemmas it is facing, and the changes it would like to bring about (or prevent) in the world. The 'so what?' problem remains highly prevalent in trying to produce original, valued research. Paradigms and perspectives, however, are often only discussed as philosophical commentary at the margins (Burrell & Morgan, 1979; Deetz, 1996; Shepherd & Challenger, 2013; Symon & Cassell, 2006; Willmott, 1993).

Conclusion: Implications for Research and Practice

This paper concludes with some more provocative, specific implications and recommendations for OP stakeholders, including: people working together in larger coalitions of co-authors on improved research designs; the DOP/BPS incorporating more methodological-statistical training into its professional development processes (e.g. aligned with the Royal Statistical Society (RSS)); producing more meta-, critically reflexive OP research that points out the systemic flaws, biases, and limitations of our own bodies of (survey) work (not just meta-analyses); emphasising process and evaluation more heavily in

methodological accounts; more diversity in journal formats to include null findings, surveys gone wrong, mixed methods etc.; and using software like Qualtrics to innovate more with survey features.

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W19

Assessment Centre Standard Working Group Session

Raising standards of assessment centres

Convenor: Helen Baron, Independent Practitioner

Theme **Psychological Assessment at Work**

The working group on Assessment Centre Standards has been working for two years on a standard or practice that will support best practice in the use of Assessment Centre methodology. The overriding aim was to provide a document that could help raise the standard of assessment centre practice and in particular enable poor practice to be identified and improved. Among other ways, the standard can be used to assist the design and implementation of centres, support resource demands and as a framework for evaluating practice.

With the launch of the standard, this session will provide an overview of the standard and how it might be used to promote good practice. Those involved in developing the standard will be available to answer questions

W20

Short Paper

A Grounded Theory of Coaching Supervision in Organisations

Melissa Murray, Northumbria University

Theme **Learning, Training and Development**

The coaching industry has vastly grown in the last ten years and is making important contributions to learning and development in organisations (CIPD, 2006a; CIPD, 2006b). As investment in coaching has grown, so has the need to ensure that the quality of practice remains at a high standard. Coaching supervision can have a pivotal role in the continuing professional development of coaches. However, it is an area that remains largely unexplored in the literature. This study aimed to produce a grounded theory of coaching supervision in organisations to discover what coaching supervisors consider to be effective supervision. This was then validated through interviews with coaches.

Introduction/ Background

Coaching Supervision has been defined as 'the process by which a coach, with the help of a supervisor, can attend to understanding better the client system and themselves as part of the client-coach system, transforming their work and developing their craft' (Hawkins & Smith, 2006). It is acknowledged that coaches should receive some supervisory body whilst practicing to bring perspective and distance to their coaching relationships (Passmore, 2011); a relationship that can become emotionally intense for both the coach and the client. However, it is an area that has remained largely unexplored in the literature. Hawkins and Schwenk (2006) undertook research for the CIPD looking into the lack of development of coaching supervision. It was found that coaching supervision was advocated but poorly practiced. They found that 86% of coaches believed that they should have regular, on-going supervision, however, only 44% reported that they engaged in regular supervision and only 23% of organisations provided regular coaching supervision. Passmore and McGoldrick (2009) explored coaching supervision deeper and interviewed four coaching supervisors and two coach to gain their perspectives on the benefits of coaching supervision. Using grounded theory they found six main categories, which included raised awareness, coaching confidence, perseverance, sense of belonging, increased professionalism and the development of an internal supervisor. However, more research is needed to fully understand coaching supervision.

Cox, Bachkirova and Clutterbuck (2011) highlighted that in the absence of theory, many coaches have turned to counsellors, psychologists and psychotherapists for supervision or models of supervision. This supports Hawkins and Schwenk (2006) who found that many of those who were receiving supervision were consulting with supervisors of counselling or psychotherapy, and some peers with supervisory training. Current literature and suggested approaches to coaching supervision originate from counselling and psychotherapy models (Passmore, 2011). For example Hawkins and Shohet (1989) developed the Seven-eyed Model of Supervision originally developed for use with psychotherapists and counsellors, is now widely used to provide a framework for coaching and mentoring supervision. However, there have been no studies which has explored the usefulness of this model. One of the key challenges of coaching supervision is for it to develop its own approach and methodology based on research (Hawkins & Schwenk, 2006). Theeboom, Beersma and Van Vianen (2014) highlighted that the coaching literature needs to start exploring 'how it works'. Qualitative research is particularly useful when exploring not well researched issues (Bitsch, 2005). Passmore and Fillery-Travis (2011) emphasised the valuable role Grounded Theory could have in helping to understand coaching at a deeper level. The fact that research into coaching supervision is limited is an advantage of taking a grounded theory approach, as there are few preconceptions in the literature to obstruct the researchers critical thinking and discovery (Bitsch, 2005).

Aims and Objectives

1. To discover what coaching supervisors consider to be effective supervision and how it works.
 - 1) To validate this grounded theory through interviews with coaches.

Method

Semi-structured interviews were conducted with coaching supervisors who were actively practising. Coaching supervisors were a mixture of internal and external practitioners. The interviews lasted between 30-60 minutes and were coded anonymously. A Grounded Theory analysis (Strauss & Cobin, 1990; Glaser & Strauss, 1967) was used to look for similarities and differences across all interviews to produce an emerging theory of coaching supervision. A semi-structured interview with coaches was then conducted to gain their perspectives on this theory, and gain any additional insights that may have been missed. These interviews lasted between 20-30 minutes.

Findings

Key categories have been identified within the data relating to how effective coaching supervision works and a number of these will be presented.

Conclusions

Due to the growing coaching industry within organisations, the need to ensure the quality of practice has increased. Therefore, understanding how this process can work in organisations is important.

Originality/ Value

Coaching supervision is growing in popularity but there is still a lack of understanding about how it should look in organisations, and a lack of understanding about the value it can bring. A literature search of the topic also reveals a clear need for more published papers on the topic. This study is original as it examines coaching supervisor and coach experiences of coaching supervision to develop an understanding of supervision in organisations. For the audience, the most stimulating element will be gaining insight into an area that has yet to be explored in this way and understanding the value coaching supervision can bring to coaching in organisations. Coaching interventions are becoming more common in the learning and development of employees and has become an area of interest for Occupational Psychology; exploring how to maximise the benefits of coaching and increase understanding offers great potential as a future direction of work for our profession. This has a clear benefit to any employees receiving coaching. Therefore this paper links well with the conference theme of Learning, Sharing, Impacting.

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W21

Short Paper

From Baby Boomers to Generation Y: Motivation across the Ages

Tatiana Gulko, Sofia Lundahl & Philippa Davis, OPP Ltd.

Theme **Leadership, Engagement and Motivation**

Increased life expectancy, abolition of mandatory retirement age and a trend for more flexible career paths creates an increasingly age-diverse workforce. With this comes the challenge of motivating such a group, comprising people from as many as five different generations, working alongside one another.

So where do we look for clues on how to motivate different age groups? One theory which can help is *socioemotional selectivity theory* (SST; Carstensen, 1991, cited in Zaniboni et al, 2013), which argues that motivation in younger adults stems from future-oriented goals, such as gaining experience, whereas older adults are motivated by self-fulfilment. We hypothesised that younger age cohorts will be more motivated by future-oriented goals.

Furthermore, we extend this theory by adding personality as a dimension. Research shows that personality changes are associated with age (e.g. Soto et al, 2011). It has been argued that an individual's continuous engagement in societal roles and expectations shapes their personality (Aldwin & Levenson, 1994, cited in Roberts et al, 2003). This is the tenet of the *sociogenic model*, which proposes that our social environment influences our personality (Inkeles & Levenson, 1963, cited in Roberts et al, 2003). This paper proposes that SST, in combination with personality, can help to explain motivational drivers in different age groups. Research suggests that Neuroticism and Anxiety decrease with age, while Conscientiousness and Agreeableness increase (Soto et al, 2011). We hypothesised that those facets of the 16PF which measure Anxiety (Emotional Stability, Vigilance, Apprehension, and Tension), as well as facets of

Conscientiousness, or Self-Control, as defined by the 16PF (Liveliness, Rule-Consciousness, Abstractedness, and Perfectionism) will vary as a function of age group.

This paper addresses the following:

- How do age cohorts differ in terms of what motivates them at work?
- How can personality help to explain these trends?
- Is there evidence of personality differences across age cohorts?

This paper links in with the strand of “Leadership, Engagement and Motivation” because answers to the above questions will have implications for motivating employees through personal and organisational development and job redesign; as well as for further development of theories of motivation.

The unique contribution of this study, beyond contributing to the field of human lifespan development and motivation, is in the detailed way in which we measure personality by using the 16PF 5th Edition Questionnaire (Russell and Karol, 2002). It measures 16 facets organised into the over-arching five-factor framework. This goes beyond the Five Factor Model of personality, which includes only global factors of Extraversion, Emotional Stability, Agreeableness, Conscientiousness and Openness to Experience. This Five Factor Model is sometimes so broad that it obscures useful information found in more detailed personality assessments.

Method

We looked at the following demographic age cohorts:

- 16-19 year olds
- 20-24 year olds
- 25-34 year olds
- 35-49 year olds
- 50-65 year olds

A nationally representative sample of working age adults was used. We only considered participants who were working or students (N= 1067). Data was collected with online questionnaires: the 16PF (Russell, & Karol, 2002) alongside additional surveys. Age ranged from 16 to 65 (mean = 38.41).

Results

A series of one-way between groups ANOVAs with post-hoc comparisons (Bonferonni) were carried out to measure differences between age groups on motivational elements outlined in the table. For dichotomous variable of “Do you work to live or live to work”, a Chi-square test was used. The results are summarised in Table 1:

Table 1: A summary of differences between age groups on various motivational elements

Motivational element	Summary
<i>“How important is intellectual challenge to you?”</i>	No significant differences between age groups
<i>“How important is it that you develop your skills and abilities?”</i>	Significant differences between age groups. This element was most important for the 20-24 y.o. group.
<i>“How ambitious would you say you are?”</i>	Significant differences between age groups. This element was most important for the 20-24 y. o. group.
<i>“Do you work to live or live to work?”</i>	NS

All significant results were tested at the significance level of 0.05 and below.

A series of one-way ANOVAs were carried out to investigate differences between five age cohorts and 16 personality traits. Significant findings are summarised in Table 2:

Table 2. Differences between age cohorts and personality

Personality trait	Summary
Emotional Stability	The significant differences lie between the 16-19 y.o. age group and the 50-65 y.o. age group. There is a gradual increase in Emotional Stability as age goes up.
Liveliness	Significant differences lie between the 25-34 y.o. group and the 50-65 y.o. group. There is a dip at the 20-24 y.o. group which goes back up at the 35-49 y.o. group, followed by a more gradual continued decline after.
Rule-Consciousness	Significant differences lie between 20-24 y. o. and 35-49 y.o., 16-19 y. o. and 35-49 y.o. The 35-49 y.o. age group has the highest

	mean.
Abstractedness	Highest mean for 16-19 y.o. age group. Significant differences between this age group and the 35-49 / 50-65 y.o. age group.
Apprehension	Highest mean is for the 16-19 y. o. age group.
Self-Reliance	The highest mean is for 50-65 y.o. group. There is a gradual increase in Self-Reliance, with a slight dip at the 20-24 y.o. group.

There were no significant differences between age cohorts and Warmth, Reasoning, Dominance, Social Boldness, Sensitivity, Vigilance, Privatness, Openness to Change, Perfectionism, and Tension. A multiple regression model with all 16 personality traits as predictors of motivational elements outlined below was carried out. The table below lists significant traits (along with associated *b* coefficient, where the direction denotes the direction of the relationship and magnitude denotes a unit increase). The traits highlighted are those that varied as a function of age.

Table 3. Personality and motivational elements

Motivational element	<i>"How important is it that you develop your skills and abilities?"</i>	<i>"How ambitious would you say you are?"</i>
Personality trait	Emotional Stability (0.028) Dominance (0.042) Rule-Consciousness (0.028) Apprehension (0.028) Openness to Change (0.034) Self-Reliance (-0.025)	Dominance (0.074) Sensitivity (-0.042) Abstractedness (0.040) Openness to Change (0.026) Self-Reliance (-0.027) Perfectionism (0.039) Tension (-0.028)

An ANCOVA was carried out to investigate whether certain personality traits account for the differences observed between age groups in terms of what motivates them:

Importance of developing skills and abilities

- Age was a significant predictor, after controlling for Emotional Stability and Rule-Consciousness, suggesting that age contributes unique variance, not attributed to just these traits
- Apprehension was no longer a significant predictor, once age group was controlled for, suggesting that age group may explain the influence of Apprehension on this motivator

Ambition

- Age was a significant predictor, after controlling for Self-Reliance, suggesting that age contributes unique variance, not attributed to just this trait
- Abstractedness was no longer a significant predictor, once age group was controlled for, suggesting that age group may explain the influence of Abstractedness on this motivator

Discussion

Our findings suggest that there are no differences between age groups in terms of the importance of intellectual challenges. This is consistent with previous research, which suggests that some motivators are important for all age groups (Wong et al, 2008). When it comes to importance of developing skills and abilities, as well as ambition, these motivational elements were most important for the 20-24 year old group. These findings are consistent with SST because they provide evidence that younger adults are more motivated by future-directed goals such as ambition and development of skills and abilities. Research suggests that goal orientation varies as a function of age, with young adults more concerned with personal growth and being better at what they do, whereas older adults are more concerned with not losing their prowess and sustaining their success (Ebner, Freund, & Baltes, 2006). This paper also shows evidence for adding personality as a factor to this theory.

When we consider personality amongst the different age groups, we observe that there are differences in Emotional Stability, Liveliness, Rule-Consciousness, Abstractedness, Apprehension and Self-Reliance. This led us to investigate the joint effect of both age group and personality. Findings suggest that age group predicts some motivational elements that are not just attributed to personality. What is even more interesting is that the influence of some personality traits (Apprehension and Abstractedness) may be

accounted for by age, suggesting that age plays an important part in explaining the relationship between these personality traits and the motivational elements identified.

It is essential that we are aware of motivational drivers of 'Generation Y', which is made up of people born after 1980. Research by PriceWaterhouseCoopers (PWC) forecasts that 80% of its employees will be of this generation by 2016 (PWC, 2013). We will discuss how the findings have implications for personal and organisational development, motivational theories and job redesign. For instance, whilst HR practitioners should ensure that training and development opportunities are available for all employees, they must be careful not to adopt a catch-all approach, instead opting for more personalised interventions, with a focus on training, up-skilling and growth opportunities for younger people, and a focus for older workers on mentoring, work-life balance and fulfilment, and allowing them to become a provider of mentoring.

Finally, this study contributes to science and practice in analysing precise age groups. Often, it is a challenge to define a particular age group and predict how members of that age group will behave. Because this study has split participants into age cohorts, we can observe the trends associated with different age groups in a more precise way.

It is evident that while some motivational drivers are important for all age groups, certain elements are more potent for younger adults, and trends are consistent with goal-based theories of lifespan development. Furthermore, personality shifts consistent with aging provide some further insights into motivation of different age groups. Findings will have implications for the content and focus of personal development interventions, and how we motivate our increasingly age-diverse workforce.

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W22

Discussion

Should applied psychology take “five brilliant business lessons” from Mötley Crüe?

Dr Almuth McDowall, City Universty Lodnon/Birkbeck University of London

Theme **Learning, Training and Development**

This session asks attendees what and whether we can learn from a 1980s Rock band who between the four members survived death, drugs, falling outs and profound changes in how consumers buy and share music. Working in small groups we will share challenges and concerns for applied psychologists, including what is unique to those working in the area of occupational psychology and what we will need to anticipate for the future using “five brilliant business lessons” as a prompt to stimulate thought. Outputs will be

collated and prioritised as a group, which will then be “fed forward” to the BPS’s Division of Occupational Psychology (DOP) Committee and the wider psychological community; we will also have long standing members of the occupational psychology community, and also other division chairs involved to provide “expert commentary”.

Introduction

The Division of Occupational Psychology has engaged in various activities to ensure that Occupational Psychology Practice (OP) stays relevant as a discipline and fit for practice including the revision of the OP stage 1 (MSc) standards and the pending revision of the stage 2 (qualification in Occupational Psychology = conferring eligibility for “Chartership”). But is what happened too little, and too late? Are we sufficiently responsive to current developments in practice, but also in education? This session aims to provoke and stimulate discussions about our future and collate outputs for further sharing with the psychological community.

The first part of the session will be a brief presentation from the past DOP chair by asking the question – “should applied psychology take five business lessons from Mötley Crüe? A similar presentation was given as a ‘pod cast’ at a recent career event which stimulated much interest. The current session is not a re-run, but rather an interactive extension of this debate.

1. When chaos hits, stay organised and disciplined

Psychology is becoming an ever more fragmented discipline, evidenced by a growing number of specialised interest groups (e.g. new special group for trauma psychology, new interest group for independent practitioners in the UK BPS). The previous APA president has argued that such fragmentation dilutes our voice and impact. For instance, are OPs doing themselves a favour by having two different professional organisations? We could take a leaf or two out of Mötley Crüe’s book who (in one band member’s case literally!) came back from the dead, survived decades of alcohol and drug abuse and were masters of reinvention as a serious business contender.

2. Protect your brand (even if it means lost income)

In practice, many of the UK protected terms such as “occupational psychologist” mean little or indeed nothing to the point where practitioner psychologists are choosing to remove these from business cards and LinkedIn profiles in order not to deflate their business value. In higher education, the ‘accreditation through partnership’ approach advocated by the British Psychological Society means that institutions now have considerable leeway for how they implement relevant programmes. Is the flipside is that our psychological heritage and uniqueness is in danger of being lost? Again, let’s look to Mötley Crüe – whether you like Spandex or not, they never diluted what they stood for or ‘franchised’ their brand!

3. Tell your story your own way

Mötley Crüe took the lead before anyone else did, by writing funny and often gripping autobiographies, and unlike other bands, where the singer does all the talking, involving all band members in interviews and broadcasts. Oh, and there is a pending Broadway musical on the cards..... What has applied psychology done to communicate its value with such conviction?

4. Adapt to changing times

Business and the world around is changing, as is the as we are living in an increasingly global society. But what has applied psychology done to harness these opportunities? Psychology itself is also changing fundamentally, evidenced by many departments are concentrating on booming neuropsychology, seen as valuable for the REF (Research excellence framework). This is having knock on effects, as there is some preliminary evidence to be discussed in this session that applied psychology research streams and indeed professional training programmes are moving out of highly rated research institutions. Our professional society has not yet responded to any of these changes, or indeed, and perhaps more importantly, has had the strategic vision in place to foresee any of these developments. This is what Mötley Crüe did to good effect – way before any of their contemporaries acknowledged the digital age, they moved away from producing (costly) albums to single tracks embracing digital media and other strategies to market these.

5. Know when and how to quit?

We are at cross roads for psychology – we either have to adapt radically to stay relevant or bow out now with our pride (just about?) intact. We will leave it to the audience to debate in small groups.

Timetable outline:

What	Who	Duration
Introduction and purpose of the session - 5 business lessons	Almuth McDowall	15 mins
<p>Small group discussions: we will divide the audience into five groups; each will discuss one of the business lessons, but with particular reference to:</p> <ul style="list-style-type: none"> • <i>What are the strengths of applied psychology?</i> • <i>What are the challenges (weaknesses) of applied psychology?</i> • <i>What are the opportunities for applied psychology?</i> • <i>What are your concerns (perceived threats) for future working in our field, and how can the society and division support their members?</i> 		30 mins
Feeding back and prioritizing, close	Facilitator	15 mins

How does this session link with the main conference theme of Learning, Sharing, and Impacting?

This session will provide food for thought and input, and no doubt some controversy, to stimulate discussion about how exactly we can increase our impact as a profession. We will ensure that the impact is shared and maximised, through a submission to the psychologist (as the issue goes beyond the community of occupational psychologists) and also as a paper to the BPS board of trustees.

Key Web link:

Rottenberg (not dated). 5 Brilliant Business Lessons From Mötley Crüe (Seriously!).
<http://www.fastcompany.com/3031014/5-brilliant-business-lessons-from-moetley-cruee-seriously>

W23

Leadership Development Programme (LDP) Pecha Kucha Session
Leading within the DOP: Developing a more focused approach
Roxanne L. Gervais, Independent Practitioner & **Gene Jonson**, Working Matters Ltd
 Theme **Leadership, Engagement and Motivation**

The British Psychological Society (BPS), like most professional bodies, relies on volunteers among its various networks in promoting the profession. The Division of Occupational Psychology (DOP), as a network within the BPS, is as stated, volunteer driven, which at times might not realise full commitment to the various roles in which individuals may choose to engage. However, as the Division does consist of occupational psychologists (OPs), it decided to practice what it preached and to develop a yearly cadre selected from its just under 4000 members, into future Division leaders. The DOP’s Leadership Development Programme (LDP) started in 2012 and is now in its third year. Graduates of the first two cadres have gone on to support the DOP in various roles and this outcome has thus ensured that the Division has been able to gain a definite return on its investment.

This pecha kucha session is to provide DOP members with an opportunity to learn about various aspects of the LDP. The presentations would involve presenting material on 20 slides for 20 seconds each, so you will have to be very attentive. The respective cadres have worked on projects during their year long tenure on the programme and a few of these would be presented. Also, the presenters will discuss the programme and how it could evolve to continue to meet the demands of a professional body that has an overall remit the improvement of the working environment. The DOP by guaranteeing that its leadership meets its needs in terms of required competencies is promoting a standard for similar groups. The Division is speaking also with the various BPS member networks to gauge interest in the programme across these groups to determine their perceptions on a more structured approach to leading within a specific framework.

This session covers every aspect of the conference theme of *Learning, Sharing, and Impacting*, as it will provide, for example, the attendee with information on why effective leadership is essential in the volunteer context. The presenters will encourage the audience to raise questions on leadership and volunteering within the DOP. The pecha kucha format supports an interactive session that allows attendees to gain a better understanding of the DOP and the use of its resources in promoting the profession of occupational psychology.

W24

Short Paper

Local or general? – informing the norms debate

Paul Deakin, OPP Ltd

Theme **Psychological Assessment at Work**

Introduction

Personality questionnaires aim to provide accurate predictions of future behaviour, and they are often used in organisations to provide support for decisions in selecting, developing and promoting people. In order to allow meaningful interpretation, scores on trait-based personality questionnaire scales are typically compared against those of a 'norm' group to produce standardised scores (such as, for example, sten scores). Normative interpretations of scores simply tell us how a person has performed relative to other people.

The selection of the most appropriate norm group to apply in a particular situation is something that the practitioner needs to consider. It is an important decision because standardised scores will differ depending on what norm group the raw scores are compared against. This paper aims to use empirical data to graphically highlight some of the challenges facing practitioners, and aims to provide guidance about how to ensure accurate and appropriate interpretation of scores.

Personality questionnaire publishers are encouraged to provide a range of norm tables for each instrument. Indeed, in accordance with the European Federation of Psychologists' Associations (EFPA) 2013 Test Review Model, the provision and adequacy of norm group information is a key criterion against which instruments are evaluated.

Broadly speaking, instruments receive positive evaluations (in terms of their norms) if the available norms are considered (1) appropriate for local use; demonstrated through being drawn from well-defined samples from the relevant applicant domain, and (2) appropriate for intended applications; demonstrated through the provision of an excellent range of sample relevant, age-related and sex-related norms with information about other differences within groups (e.g. ethnic group mix). In addition, the norms should be based on sufficiently large sample sizes (e.g. 300+ people), and less than 10 years old. Despite being recognised as important, however, sample size and population relevance (i.e. representativeness) have received little research attention (Tett et al, 2009).

Given the guidelines, is it still possible to conscientiously follow this best-practice advice but still risk systematically mis-interpreting scores? To explore this question, our study uses empirical data to illustrate what happens when personality profiles for a job applicant sample are generated on the basis of local and general population norms; both of which meet the recommended quality standards. The key issue to explore is whether norm tables should be based on more specific samples, or on broader ones which are more representative of the general population.

Typically, more specific 'local' samples are characterised by less variance (and hence smaller standard deviations), and may also produce mean scores on a number of traits that are very different from the general population. Most trait-based measures of normal personality work on the principle that traits are normally distributed. This means that interpretations of scores become increasingly inaccurate the more the norm group deviates from a normal distribution. This is why for instruments such as the 16PF, the use of general population norms is generally advocated. However, the risk then emerges that the norm group may not be considered similar enough to the population from which an applicant group is taken. Here lies the challenge.

Method

Participants and Measures

Participants for this study were 360 female applicants for overseas au pair roles, all of whom applied via the same recruiting organisation. Demographic information was captured for 153 of the participants. Of these, 95% described their nationality as German. Ages ranged from 17 to 26 years, with a mean of 19.3 years and a median of 18 years. The sample was deliberately designed to be very homogeneous in terms of demographic factors, so as to illustrate the challenges faced when interpreting scores from such a specific group.

All participants completed the German version of the 16PF (5th edition) online as part of the selection process for the role.

Results

Table 1 shows the mean primary factor raw scores for the sample, alongside those of the nationally representative 'general population' norm group. The standardised mean difference between the groups is shown in terms of effect size. An effect size of .50 means that the difference between the two groups is equivalent to one-half of a standard deviation while a score of 1.0 means the difference is equal to one standard deviation. Hedges' 'g' (Hedges, 1981) is used as a measure of effect size. This approach weights each group's standard deviation by its sample size; an approach which is appropriate when the homogeneity of variance assumption is violated and pooling the standard deviations is not appropriate. Primary factors showing effect sizes greater than .50 and 1.0 are shaded.

Table1: Mean 16PF primary factor raw scores

Primary Factor	Sample mean (SD) N=360	General population norm group mean (SD) N=1,209	Effect size (Hedges' g)
Warmth*	25.2 (2.3)	21.0 (4.2)	1.09
Emotional Stability*	29.9 (2.9)	24.8 (5.0)	1.11
Dominance*	24.0 (4.1)	23.2 (5.0)	0.17
Liveliness	20.1 (3.4)	16.4 (4.5)	0.87
Rule-Consciousness*	25.5 (3.9)	22.5 (4.6)	0.67
Social Boldness*	31.4 (6.0)	25.7 (7.6)	0.78
Sensitivity	28.4 (3.6)	23.8 (5.5)	0.90
Vigilance*	18.2 (4.6)	23.7 (4.2)	-1.28
Abstractedness	17.1 (4.4)	17.9 (4.4)	-0.18
Privateness	19.7 (4.6)	23.8 (5.2)	-0.81
Apprehension*	22.7 (5.8)	24.4 (5.7)	-0.30
Openness to Change*	25.2 (4.2)	21.8 (5.1)	0.69
Self-Reliance	13.9 (3.0)	20.9 (5.5)	-1.39
Perfectionism*	25.3 (5.3)	24.1 (5.5)	0.22
Tension	16.5 (5.1)	23.1 (5.7)	-1.19

* denotes key factors for the role

The data shows 5 factors to have effect sizes greater than one standard deviation. A further 6 factors showed effect sizes of greater than half a standard deviation.

The client had identified 9 key factors as being of particular importance for selection into this role. Of these, 3 factors showed differences greater than one standard deviation and 4 showed differences greater than half a standard deviation.

In order to explore the implications of this, Table 2 shows the proportion of applicants falling into three interpretive categories for each of the key factors, based on conversions to stens using the general population norms. Sten 1-3 are typically interpreted as 'left-meaning' scores, stens 4-7 as 'mid-range', and sten 8-10 as 'right-meaning'. The theoretical (or 'expected' distribution) is shown at the bottom of the table.

Cells showing an over-representation of scores are shaded heavily; those showing an under-representation of scores are shaded lightly. Overall, the data shows that the score distribution of only 3 of the 9 factors resembles the 'expected' distribution. This highlights that the general population norms are not appropriate for this sample.

Table 2: Proportion of sample in each interpretive score category.

Primary Factor	Sten 1-3	Sten 4-7	Sten 8-10
Warmth	<1%	26%	73%
Emotional Stability	<1%	37%	63%
Dominance	8%	78%	14%
Rule-Consciousness	2%	56%	42%
Social Boldness	3%	42%	54%
Vigilance	54%	44%	3%
Apprehension	23%	66%	12%
Openness to Change	2%	53%	44%
Perfectionism	11%	68%	21%
EXPECTED	16%	68%	16%

If we focus, for illustrative purpose on two key factors for this role, Warmth and Vigilance, and compare the general population norm conversion table with one that would be developed on the basis of this sample, we can see large differences. This is shown in Table 3:

Table 3: General population vs local norm sten conversions

	Sten									
	1	2	3	4	5	6	7	8	9	10
Warmth – Gen pop	9–11	12–13	14–16	17–18	19–20	21–23	24	25	26	27
Warmth - local	9-20	21	22	23-24	25	26	27	-	-	-
Vigilance – Gen pop	10-13	14-15	16-18	19-21	22-23	24-25	26-27	28	29	30
Vigilance - local	-	10-11	12-13	14-15	16-18	19-20	21-22	23-25	26-27	28-30

From this we can see, for example, that a Warmth raw score of 21 equates to a sten of 6 when the general population norms are used, but would equate to a sten of 2 if local norms were used.

Similarly, but in the other direction, a Vigilance raw score of 23 would equate to a sten of 5 if the general population norms were used, but would equate to a sten of 8 if local norms were used. The magnitude of these differences is considerable when it comes to the interpretation of scores by a practitioner. Table 4 shows this.

Table 4: Illustrative raw score to sten conversion differences.

	Raw score	General population Sten score	Local Sten score
Warmth	21	6 (mid-range)	2 (left-meaning)
Vigilance	23	5 (mid-range)	8 (right-meaning)

So, what norms should the practitioner apply? We could advocate the use of local norms. However, this would have its drawbacks. For example, in the case of Warmth, it would not be possible for a respondent to achieve a 'right-meaning' score (sten 8-10), even if all the Warmth items in the questionnaire were endorsed. This would make it difficult to identify the respondents who are attentive and warm towards others. Indeed, as an artefact of the way the scale is scored, a failure to endorse only 2 of the 9 Warmth items in the questionnaire would result in an individual achieving a sten score of 2. This is typically interpreted as meaning that the person is emotionally distant from other people. Evidently the norm conversion has now become over-sensitive due to the very homogeneous nature of the local norm group. The practitioner now faces a dilemma regarding how best to interpret respondent scores. Sticking with Warmth as an example, the practitioner could use the general population norms but would find in practice that almost three-quarters of respondents would achieve a score in the 8-10 sten range. This would make it almost impossible to accurately discriminate between high scorers.

The test publisher should be able to advise on an appropriate course of action in these circumstances, but what should they advise?

Discussion

The examples illustrated above are based on empirical data gathered from a client who uses the 16PF as an aid to selection. They illustrate a real dilemma that the client faces around how to interpret personality questionnaire scores.

We believe that there is no simple answer in these kinds of situations; it all depends on the context. Our experience shows the needs of the client will largely dictate the preferred solution. In this instance, we would advocate that general population norms are used for providing feedback directly to the candidate. Comparing an individual against the wider population will provide the most accurate descriptions of his or her personality characteristics in a general sense, and will avoid the over-sensitivity associated with using the local norms in this instance.

For selection into the role, we would also advocate the use of general population norms (ideally supported by results from a validation study). This is because the client is using scores to 'sift out' individuals who are clearly unsuitable for the role, rather than 'select in' those who show highly desirable profiles. This will overcome the difficulty in discriminating between individuals at certain points on the scales.

These recommendations run counter to the 'local norms are best' argument. However, that is not to say that we don't believe that local norms have their uses. There will be situations where we would advocate their use, especially where they are based on broader samples than were used in this study (for example, a general 'job applicant' sample).

The key messages we hope to convey in this paper are that there is no one size fits all solution, and that norms based on very narrow, homogeneous samples may not be as desirable as practitioners are led to believe. In some circumstances they need to be used with great caution.

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W25

Discussion

Big data is here – what the heck do we do with it?

Joanne Ailken & Hannah Hemmingham, IBM

Theme **Research Design, Analytical Techniques and Practical Applications**

The purpose of the session is to share, learn and contribute to the continual development of our profession by considering occupational psychologists response to 'Big data'. Typically most organisations tend to collect massive amounts of data which if effectively analysed can generate significant insights, but this requires a good understanding of data and an effective infrastructure to execute a big data analysis; it seems that organisations don't really know what questions to ask, or what answers they are looking for, and yet they have all this data piling up.

It's the ability to create useful insights from this big data that is key to helping organisations make decisions about real business problems and to drive real business impact (e.g. increased revenue, minimised risk and cost-efficiencies); this is where an Occupational Psychologist can add real value.

Most HR departments are nowhere near as sophisticated in their use of data. According to Deloitte's 2014 Human Capital Trends survey, 86% of companies reported no analytics capabilities in HR and 67% rated themselves 'weak' at using HR data to predict workforce performance and improvement. To operate analytics without that level of understanding and context creates a risk – to get value out of analytics, organisations need a professional who understands it. Analytics can be really helpful, but the stats behind it are often so complex, you have to be a statistician to work it. From an HR point of view, it's having the

people around who know how to measure the impact of people, and people initiatives, on business results and metrics, to prove the value in the people initiatives they recommend and implement.

We will provide examples of how organisations are collecting Big Data in areas such as for HR analytics and learning analytics to make business decisions about people and business initiatives. We will also discuss the value of employing Occupational Psychologists to partner with HR to make sure they are collecting and measuring the right data (i.e. data that is meaningful) and answering the right questions. For example, HR typically have data and report on the time and cost per hire but why not look at how successful the recruitment process was at predicting someone's future performance, tenure or even engagement; does cost matter if you have recruited someone who has been a great performer and has stayed in role? Likewise HR may look at training cost but which training actually leads to a real business impact (e.g. does a course on negotiation for sales roles lead to more sales?)

The main focus of the discussion will be to explore what big data is and what organisations are doing with Big Data and how Occupational Psychologists understanding of research design, data collection and statistical analysis can help draw appropriate conclusions from data, to ensure insights and decisions are based on verifiable evidence rather than intuition or bad data analysis.

We will facilitate a conversation that shares our experience in relation to Big Data, what we have heard from our clients and our thoughts so far to initiate a conversation. We will seek to hear from others to share, learn and consider how occupational psychology can support organisations in understanding Big Data analytics.

What are the main psychological theories, models and research underpinning your session? This approach draws strongly on research design and research methods, that Occupational Psychologists draw on to decide on the overall strategy for collecting data, including what data to collect, and then the specific techniques about how we interpret the data to draw valid conclusions to support organisations in making informed decisions.

How do you see your proposal linking with the main conference theme of Learning, Sharing, and Impacting? It's an opportunity for delegates to learn about Big Data and the use of analytics to support real HR initiatives/recommendations and the power those insights will give in terms of linking those initiatives/recommendations to real business value/impact.

Why is the submission appropriate for the particular strand you have chosen? The collection of Big Data and then drawing insights from that data directly relates to research designs and analytical techniques.

What do you consider to be the most novel or innovative aspects of the ideas being presented? Many of the delegates will have understanding of narrative, context and matching qualitative and quantitative information from multiple data sets but Big Data is about understanding more than the impact of one initiative; it takes a far more broader look to draw insights from a range of data using advances in software technologies.

Why do you think conference delegates will find the session stimulating and useful? Many Organisations need to be better at prioritising investment in people initiatives and more effectively demonstrate their impact in increasingly cost-conscious environments. As result of training, occupational psychologists have training that puts great emphasis on data collection and statistical analysis of that data; this is a key opportunity for Occupational Psychologists to play an increasingly central and strategic role in organisations and use technical skills to increase the effectiveness of the organisation at the strategic level and add real insightful value. Big Data analytics can enable Occupational Psychologists to work with strategy functions, finance departments and business operations to influence business leaders to make more business decisions. Not only does this enable better organisational outcomes, but it plays to the heart of the supporting the 'business partner' role HR strives to play.

What might the public find interesting about your paper or session? Big data analytics is an umbrella concept which encompasses HR metrics or workforce analytics. It refers to the analysis of large data sets to understand patterns and correlations, which enable organisations to achieve competitive advantage through data informed business decisions. It is predicted that the application of workforce analytics which

investigates the relationship between people data and business data sets could produce enormous returns for the business, therefore anyone in business could have an interest in this topic.

What form will the discussion take – e.g., town hall meeting, panel discussion, debate, roundtable (describe the process in detail)? Roundtable. The facilitator will present research study on how organizations around the globe are leveraging key capabilities to amplify their ability to create value from data and analytics. The group will then have an open discussion, about what is Big Data, what questions would organisations like to answer and how we can add value to Organisations. The aim is to understand our role in leveraging analytics to achieve competitive advantage for the organisations we work for and explore what people data we would collect, what already exists within organisations and interpreting that data with real business data to drive business value. This will also include a discussion about the associated risks associated with Big Data.

What topics are to be debated and what do you see as the major questions to be raised and points to be argued? Example questions area below:

- Will the cost of collecting and analysing big data be less than the incremental margin of its predictive qualities and capabilities?
- What is an Occupational Psychologists role in this Big Data trend?
- What are the limits/risks in regards to privacy that will be placed on the big data?
- How will we be sure that we collect the right data?
- How do we ensure that Big Data will be used for the greater good?
- How do we make the data we collect relevant?
- How do we create/promote a culture of analytic rigour- credibility around measurement and the insight that comes from it?
- How do we help organisations harness the power of analytics?
- What is organisations technology readiness for Big Data Implementation and analytics?

How and by whom will the discussion be facilitated? There will be 2 facilitators who will introduce the concept of Big Data and present some real working examples. The facilitators will then open the conversation up for debate by using some of the questions already given above debate. We will also draw on the group's experiences and encourage people to share and challenge in a constructive way. The facilitators will ensure fair opportunity for all to participate.

Who will be the main discussants and what is their experience and general perspective on the topic?

The facilitators are Chartered Psychologist who work with a variety of clients on global assessment and development projects, who will lead the discussion and share learnings from clients who are starting to implement Big Data strategies. They are passionate about the use of Occupational Psychology to enable organisations to make informed choices. They are also open to the ideas of others and keen to learn from other practitioners their thoughts on open organisations and what this means for our practice. We expect delegates who are Occupational psychologists, HR personnel and those who have strategic roles within organisations.

W26

Short Paper

Cyber-bullying in the workplace: a female perspective

Ethan Shapiro & Neill Thompson, Northumbria University

Theme **Well-being and Work**

Cyber-bullying has shown a rising prevalence within UK workplace. Despite an increasing awareness, due the infancy of the research field the implication to organisations and employees has not yet been fully understood. In particularly gender differences may be present as it has been suggested that female employees may experience the phenomenon differently to their male counterparts. In order to understand the cyber-bullying experiences of female employees, this qualitative study engaged directly with those who had experienced cyber-bullying in the workplace in order to construct an in-depth perspective of their reactions and experiences.

Introduction/Background

Cyber bullying is any form of harassment that has conducted through electronic communication (Piotrowski, 2012). How the harassment is initiated is therefore wide-ranging and further confounded in the plethora of related terms adopted: '*electronic flaming*', '*cyber-incivility*', '*cyber-harassment*', and/or '*cyber-stalking*' (D'Cruz & Noronha, 2013; Alonzo & Aiken, 2000; Privitera & Campbell, 2009). All of these terms refer to the action of the exchanging of unwarranted or inappropriate to the victim through any technological medium with the most common being emails or text messages from a mobile device (Privitera & Campbell, 2009). These messages have been sent generally with the intent to ridicule or humiliate the victim (Lim & Teo, 2009).

For employees, experiencing cyber-bullying can have consequences to wellbeing and organizational behavior (Baruch, 2005). Empirical research has indicated that an individual who experiences cyber-bullying could be severely at risks for issues of depression, which in some cases has led to increased risks of suicide (Hong, Chien-Hou, Hwang, Hu, & Chen, 2014). Baruch (2005) further supported these findings by noting that there is a connection between job performance, stress, and anxiety. It was found that individuals who are experiencing stress and anxiety as a result of cyber-bullying at work were more likely to attribute negative feelings to their job and as a result their job performance would suffer (Baruch, 2005).

Historically cyber-bullying has grown as a form of harassment alongside the development and increased reliance on technology. Although the growth of personal computers and the internet from the 90s and beyond made this form of harassment accessible, prior to this the development of games where it was possible for an individual to bully another through a virtual world highlighted much earlier origins (Monks & Coyne, 2011; Baruch, 2004). The increase of young children and adults possessing smart phones and other devices to communicate electronically (Piotrowski, 2012) has meant that there is a much greater scope for cyber-bullying to take place than ever before.

Previous research has indicated there are significant gender differences among victims of cyber-bullying (Alonzo & Aiken, 2004, Snell & Englander, 2010; Monks & Coyne, 2011). Among children and adolescents males or those with masculine characteristics have been shown to act particularly aggressive while the females or those with feminine attributes act more passively (Monks & Coyne, 2011). In adults female victims of cyber-bullying typically experienced harassment that was sexual in nature (Snell and England, 2010). These previous studies have solely utilized surveys and other quantitative approaches in their research and as such were not properly able to gain an in-depth perspective of the experiences of these victims.

Despite an increased awareness by the public and through the media, cyber-bullying has received increased attention, which can be attributed to research has been completed has often focused on adolescent settings (D'Cruz & Noronha, 2013; Privitera & Campbell, 2009; Lipinski & Crothers, 2014). Early studies have indicated some gender differences; however those early findings are limited to only a few studies and methodology bounded by survey usage. The current paper looks to explore these emergent findings further through a qualitative design.

The aims of the current paper are:

- To understand the significance of cyber-bullying in the workplace setting
- To examine how female employees experience cyber-bullying

To further understand the multi-faceted impact of cyber-bullying on female employees.

Method

Semi-structured interviews were conducted with female employees (n=10) who had experienced cyber-bullying. Participants were recruitment through professional networks and social media across different organisations. The interviews lasted between 15 and 45 minutes in duration and were coded anonymously. Thematic analysis (Bruan and Clarke, 2006) was used for analysis where an inductive, semantic, essentialist perspective was taken.

Findings

Results will be presented on the overall experience of a cyber-bullying. Early analysis of the interview data have identified four emergent themes: poor relationships at work, gender differences, emotional reactions, and physical affects. An examination of these themes shows that there are significant experiences and

reactions that female employees report as a result of cyber-bullying. Recommendations for further research and the implications for practice consideration will be highlighted.

Conclusions

Cyber-bullying risks damaging consequences for organisations and their employees. A current lack of research has limited the full understanding of the experience, therefore limiting the effectiveness of how organizations address the problem. This paper contributes to increasing the knowledge base and understanding of cyber-bullying, with a particular focus on female experiences, and offers new insights for research and practice.

Links to the conference theme

Linking to the conference theme of 'learning, sharing and impacting' this research aims to highlight the increasing area of concern that Cyber-bullying in organizations and share the experiences of the participants reported in the study. This is particularly relevant with the ever reliance on technology usage and associated practices, e.g. remote working, virtual teams etc. and the multi-level impact that cyber-bullying can cause. Our understanding of the phenomenon remains limited and the study is original as it critically examines the experiences from a female perspective. The use of a qualitative approach in the study will offer a greater depth of understanding and the findings will be of interest to organisations faced with complaints of cyber-bullying or those involved in the design and delivery of interventions.

W27

Standard Paper

Closing the academic-practitioner-nonexpert gap: automated selection in SMEs

John Hackston & Paul Deakin, OPP Ltd

Theme **Psychological Assessment at Work**

Introduction

Much has been written about the academic-practitioner divide in occupational psychology (e.g. Anderson et al, 2001). Less has been written about the gap between the practitioner and the end user, where the end user is not an occupational psychologist and may have had little or no training in psychology. Yet the shift towards 'non-expert' users is a very real feature of the market today, and may be a particular issue for smaller organisations (SMEs), where there are limited resources to employ or hire specialised staff. The challenge facing occupational psychologists is to ensure that quality standards are maintained.

What follows is an outline of the journey we've been through; sharing key lessons so that others can contribute to the debate and build systems that meet the needs of an evolving market. The session will describe the development of an automated approach to competency selection, testing and interviewing in recruitment. This will include the rationale for and development of a number of innovative features not found elsewhere. Such a system may be of particular utility for SMEs, which may not have the resources or expertise to take a more conventional route, and should have a positive impact on their selection practices. The presentation will cover:

- The issues facing SMEs in selection, and in particular the challenges of using objective assessment methods
- The parameters for an automated selection system, where expertise is held in the system, rather than by a human expert
- How the system was developed, including the reasons for design decisions made and the lessons for selection practice in general
- How clients are using the system, and lessons that can be learned from this.

Issues facing SMEs

There is a conventional selection paradigm (Smith with Smith, 2005). Carefully define what is needed in the job, choose tools that measure these attributes effectively, use the tools ethically, and embed them in a structured process that maximises cost-benefit and facilitates good decision-making. Yet recruitment mistakes continue to be made, with one report estimating the costs of poor hiring decisions at over 100 billion dollars (Future Foundation and SHL, 2004). There are many factors that operate to stop organisations from adopting new selection processes (Klehe, 2004), but a key issue is that some of the most effective selection methods, such as ability tests, structured interviews, and personality questionnaires (Robertson and Smith, 2001), typically require training to purchase and/or use effectively. This will be a particular barrier for small to medium enterprises (SMEs) as many do not have the resources to have staff trained in test use; some will have no dedicated HR resource at all. Indeed, the use of ability

tests, structured interviews and personality questionnaires is much lower in smaller organisations (Zibarras and Woods, 2010). As 99.9 per cent of private sector businesses are SMEs, employing an estimated 14.4 million people (Department for Business, Innovation and Skills, 2013), a large proportion of the UK economy will not currently have access to objective assessment methods and may not be recruiting optimally.

Parameters for an automated selection system

One solution to the issues faced by SMEs would be the development of an automated selection system. All the information and expertise needed for good selection decisions would need to be incorporated into the system, as users would not have any training in test administration or interpretation. In addition to the general principles of good software design and user interaction, such a system therefore needs to include:

- An objective and systematic mechanism for selecting job-relevant competencies.
- Online administration of tests and questionnaires to candidates without direct intervention by the user
- Algorithms for calculating predicted competency scores from test results, and for sifting candidates on this basis; although the 'professional' or 'clinical' judgement paradigm is the norm in selection, research (e.g. Grove et al, 2000; Kuncel et al, 2013) shows that mechanical algorithms typically make better selection decisions
- Provision of user reports that embed the knowledge of 'experts' so as to facilitate competency-based interviewing, final decision-making and candidate onboarding
- Feedback reports for candidates
- A straightforward workflow so as to ensure a systematic and structured selection process
- The ability to be used by clients and candidates in different countries.

Development of the system

Rather than attempting to demonstrate the whole system, the session will centre on the challenges we faced and in particular on how and why we developed the more novel and innovative aspects of the system, such as:

- Competency selection. Research with existing clients and other SMEs showed that the most logical and convenient workflow involved developing a 'job profile'; individual vacancies could then be raised against each profile. For each job profile, users identify the essential and desirable qualifications and experience for the job, then move on to competency selection. Users are given a list of 20 competencies, and asked first to decide on the *criticality* of each – does it have a critical, large, moderate or small impact on the job, or no impact at all? Then, for all those showing any impact, the user defines the *frequency* – is this needed several times a day, daily, weekly, or less than weekly. Finally, the system awards each competency an importance score based on a weighted combination of criticality and frequency.

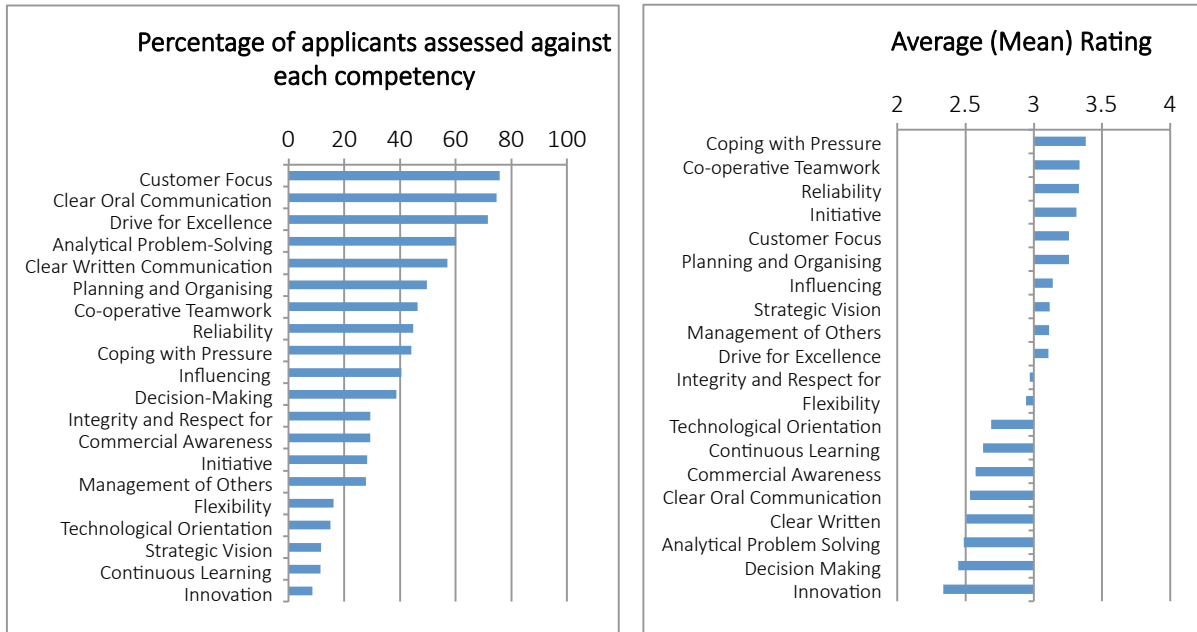
In developing this part of the system, many decisions needed to be made; for example, how to weight the relative importance of criticality and frequency, how to make the task as straightforward as possible for users, whether to include qualifications and experience and how to present them; in the presentation we will discuss these issues and how we resolved them. This also has wider relevance for competency selection in other contexts.

- Test administration. Online administration of tests and questionnaires is hardly novel, but giving untrained individuals the ability to administer these tools in selection raised particular challenges. What, for example, to do about social desirability and impression management? These issues, and the implications for future development and for practitioners, will be discussed.
- Sifting. A key requirement was that users would be able to sift candidates for the next stage in an objective and systematic way. To do this, each candidate has an overall score. This is calculated as a weighted total of their score on the individual competencies. These in turn are calculated as a weighted total of scores on a personality questionnaire and an ability measure. We will discuss:
 - How we decided on the way competency scores were calculated – and why we changed the way the ability test results are incorporated
 - Why we changed the norm group
 - How we calculated the weightings for the overall score and why we decided on a norm-based calculation.

System Usage

We will report on what types of organisation are using the system. At present, 55% of candidates have applied for jobs with SMEs; updated and more detailed information will be presented in the session. We will

also look at which competencies are the most widely used, which are rated higher or lower, and how the system is used:



Updated figures will be presented in the session.

Conclusions, and implications for the future

Automated selection systems provide a way to bring the benefits of objective assessment, including psychometric testing, to a wider range of organisations. In so doing, they offer the possibility of improving the sum total of selection decisions in the UK. But there may be problems too. Is it ethical to remove the human expert and abrogate decision-making to a set of algorithms, or will this actually lead to better decisions? If such systems become commonplace, what are the implications for the human expert – and for the employment of occupational psychologists? How should these considerations affect the revision of the ITC guidelines on internet testing (ITC, 2005)? In an interactive session, we will debate these issues in small groups and produce recommendations for the future.

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W28

Short Paper

Ambivalence in the face of change: Understanding employee responses in three dimensions

Susan Cozzolino, Birkbeck, University of London

Theme **Work Design, Organisational Change and Development**

When people encounter change at work, they resist or comply -- right?

This study investigates employees' thoughts, feelings and actions as they experience organizational change based on a re-thinking of 'resistance'.

Traditional change literature evaluates responses from a 'top-down' perspective:

- ☞ Employee reactions are often a leading cause of failure in change efforts
- ☞ Dissent is inevitable
- ☞ Resistance is chiefly carried out by workers
- ☞ Management must therefore consider strategies to prepare for, manage or overcome resistance

Critical thinkers challenge this with a 'bottom up' view:

- ☞ Resistance redresses an imbalance of power over exploited workers
- ☞ Resistance is an individual right, and a resource for good

This project transcends 'for' or 'against' debates by examining responses from the middle ground: employees who don't privilege the role of power or resistance.

To do this, I tested a proposed rethinking of resistance as a series of responses that can be measured along three dimensions: emotions, cognitions and intentions (Piderit, 2000). I especially focused on conflicts between or within these dimensions (ambivalence) in order to understand some of the complex perceptions and experiences that inform such responses.

The project is a mixed methods study in parallel convergent parts: one examines attitude survey data from a sample of 155 employees at a large British university; the other analyzes qualitative interview data from a subset of respondents.

RESEARCH QUESTIONS

Piderit argues that simple measures of opposition vs. support don't capture the full content and complexity of most responses. Instead, she proposes analyzing responses along three dimensions:

- ☞ The **emotional dimension** represents "feelings, moods, emotions and sympathetic nervous-system activity that people [experience] in relation to an attitude object" (Eagly & Chaiken, 1998).
- ☞ The **cognitive dimension** represents "beliefs [that] express positive or negative evaluation of greater or lesser extremity, and occasionally are exactly neutral in their evaluative content" (Eagly & Chaiken, 1998)
- ☞ The **intentional dimension** represents "plans or resolutions to take some action, rather than a plan to try to achieve some goal" (adapted from Bagozzi, 1992).
- ☞ In a related concept, **ambivalent responses to change** are "neither consistently negative nor consistently positive" and "where two alternative perspectives are both strongly experienced" (Piderit, 2000).

Piderit provides anecdotal evidence suggesting that ambivalent reactions may be most common. So far, that presumed prevalence remains untested.

Question 1: How prevalent are employees' ambivalent responses to change initiatives as measured through the dimensions of emotions, cognitions and intentions?

Since Piderit, a few organizational researchers have embraced the idea of multi-dimensional responses to change. But so far none have investigated the nature of ambivalent responses to change as an integrated concept.

Question 2: How are multi-dimensional ambivalent responses to organizational change expressed?

Ambivalence and indifference: the bipolar problem

Core to the concept of ambivalence is the mixed or contradictory nature of responses, yet most empirical studies on attitudes use uni-directional measures that range from positive to negative (Kaplan, 1972). These measures have an inherent limitation, known as the 'bipolar problem': "Such a uni-dimensional

continuum does not allow for distinguishing ambivalent attitudes from indifferent ones because both attitudes can be expressed only by ticking the neutral midpoint of the bipolar scale” (van Harreveld, van der Pligt & de Liver, 2009).

‘Potential’ vs. ‘felt’ ambivalence

There’s a related challenge, namely the assumption that reported ambivalence is accompanied by feelings of psychological unease. Studies have found a relatively low correlation of 0.40 between attitudinal ambivalence (measured by reported positive and negative reactions) and *feelings* of ambivalence (Thompson, Zanna & Griffin, 1995). Subsequent research calls one ‘potential ambivalence’ and the other ‘felt ambivalence’ (Newby-Clark, McGregor & Zanna, 2002). While attitudes toward organizational change have been measured through scale surveys, researchers have yet to explore the nature of ‘felt’ ambivalence among those who are currently experiencing workplace change, nor the circumstances that provoke it.

Question 3: What are the experiences and perceptions associated with expressions of ‘felt ambivalence’ in response to an organizational change?

METHOD

Study setting

The study took place at a large British university in the active phase of formal change initiatives following the arrival of a new Vice-Chancellor; a subsequent reorganization of faculties; and a parallel review and restructure of non-academic staff. Data were collected while the change initiatives were in mid-implementation.

Data collection - Quantitative survey

In the first strand I collected data from a non-probabilistic sample via a web-based survey. The questions were based on a change attitude scale (Oreg, 2006) which draws on Piderit’s tri-dimensional concept of ambivalence. Participants responded to 15 statements -- five for each dimension -- related to a specific, personal workplace change. Each item was measured on a seven-point scale.

Data collection - Qualitative interviews

While survey responses came in, I interviewed a subset of respondents who volunteered to participate. The data were collected through semi-structured interviews using a critical incident technique or CIT (Flanagan, 1954), widely used in organizational research but a novel approach in the relevant literature.

Each interview began with questions exploring the nature of the change underway and a general impression of ‘how it’s going so far’. At that point I asked each to hand-draw a timeline indicating their perceived start and finish of the change, then an indication of ‘where we are now’. I then asked them to think about some key moments associated with the change that are especially meaningful to them, and to indicate those on the timeline. The timeline then provided the sequence and framework for the remainder of the interview, a visible reference point to explore the thoughts, feelings and intentions around each significant event.

Survey respondents

155 academic and administrative staff completed the online survey, representing 8.4% of the university’s full-time staff. The majority were female (72.3%), representing the full range of workplace age groups (18 to 65+), with the largest group (33.8%) in the 35- to 44-year range. There was a normal distribution in tenure ranging from < 1 year to 35 years; the largest group (33.3%) indicated 5 to 10 years.

Nearly two-thirds (64.9%) indicated that the change that most affects their work is a change in organizational structure. This aligns with the Vice-Chancellor’s focus on consolidating faculties during the months the survey was distributed.

In addition, most (68.6%) identified themselves as ‘directly affected by the change’, with smaller proportions identifying as ‘indirectly affected’ (17.6%) and ‘responsible for leading the change’ (15.3%).

Interview participants

Six women and two men were interviewed. All were between 35 and 64 years old, with tenures ranging from 2 to 35 years. One was responsible for leading the change, six were directly affected, one was both a leader and directly affected. In all, they explored 31 critical incidents.

KEY FINDINGS

Quantitative analysis

While the vast majority of responses were neither fully supportive nor fully opposed, it is overstepping to assume they were *all* ambivalent.

An analysis of responses measured along three dimensions reveals that only a minority -- 17.4% -- reported significantly contradictory attitudes that indicate ambivalence. This suggests that others who occupy this 'middle range' of responses could be indifferent or disengaged from the change or the workplace, a different mindset altogether; future research should bear this in mind and consider alternative ways to measure and understand related attitudes and responses than traditional bipolar 'for' or 'against' scales.

Qualitative analysis

The study's qualitative findings support and illustrate the quantitative analysis, with relatively few describing simultaneous conflicting attitudes indicating acute ambivalence.

But the analysis does reveal many more examples of positive and negative responses expressed sequentially, unfolding in response to the change initiative itself, occasionally becoming ambivalent at a point of conflicting attitudes. This suggests that the element of time is important in understanding the full range of employee responses -- that they are seldom fully formed at any one point, and possibly open to influence.

While these findings rely on memories of recent events that are recounted using the critical incident technique, they are potentially more robust than cross-sectional surveys or interviews that try to capture either a 'snapshot in time' response or a collapsed summary of responses over weeks, months or years of a change initiative. Future research using more longitudinal measures -- such as a series of interviews or regular diary reports -- could provide an even richer view.

Finally, this study's qualitative findings provide insight into the circumstances surrounding 'felt' ambivalence:

- ☞ **Knowns vs. unknowns:** Gaps in information and social cues that influence an employee's perceptions of 'what does this mean for me'? The most common examples involved missing or absent information. In two cases, the 'known' information was knowingly withheld or revealed to be untrue, which overlapped with 'Value conflicts' below. I also include in this category the competing responses that greeted an initial announcement of a change initiative when information is delivered in a burst, often with tentative, incomplete and/or ambiguous facts.
- ☞ **Responsibilities vs. responses:** Instances where an employee feels a tension between their perceived responsibilities and their personal reactions to the change. This was often expressed by those with manager responsibilities or those who felt a formal or informal role as a liaison between individuals or teams, however it also came up in those who had professional qualifications that led to feelings of responsibility for others' welfare.
- ☞ **'What could be' vs. 'what is':** Indications that the change initiative may not meet anticipations. This was expressed in terms of discrepancies with expected personal benefits as well as frustration at an inconsistency between stated organizational outcomes and actual practice.
- ☞ **Conflicting values:** Situations where the change process or the change conflicts with principles, ethics or values that are personal and meaningful. These included values related to identity and self-worth, often expressed through references to previous professional qualifications or roles that would indicate expertise or knowledge.

IMPLICATIONS FOR ORGANIZATIONS AND RESEARCHERS

Experimental studies show that people who are ambivalent toward another group are more likely to process information they receive about that group in a deliberate and systematic way (Maio, Bell & Esses, 1996). Additional experiments indicate that those experiencing ambivalence may be more pliable and open to influence or persuasion (Armitage & Conner, 2000). A further set of experiments holds that emotional ambivalence is linked to "recognizing unusual relationships between concepts... an ability believed to be important to organizational creativity" (Fong, 2006, p. 1016).

If these findings hold true in the context of a change initiative, ambivalent employees could be sources of thoughtful deliberation about the perceived benefits and drawbacks of a change, perhaps inspiring new and creative ways of looking at a situation. It also suggests that more information about the change could help the process, perhaps by reducing any ambiguities in their minds. Given the timespan of most large change

initiatives, tapping into these deliberations as they occur could offer insights that can inform the change project's overall strategy and implementation. But deliberation takes time -- and it isn't always clear whether inaction is related to careful thought and creative problem-solving, or to coping strategies (like procrastination or internal denials of responsibility) designed to avoid incompatible thoughts and feelings. In the absence of a dialogue, such 'foot-dragging' may be interpreted as inertia, reluctance or even a passive form of resistance. In all cases, moving research on ambivalent attitudes from the lab into organizations experiencing change would provide much more accurate information and insight. In the meantime, organizations would do well to generously share information about the change, provide time for adequate deliberation and find ways to probe resulting thoughts and responses in an effort to discern the nature and value of such reactions.

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W29

Qualification in Occupational Psychology Session 1

Getting started on the BPS DOP Qualification

Rosemary Schaeffer & Karen Moore, QOccPsych Qualification Board

Theme **Learning, Training and Development**

This session is for intending candidates, and will cover the enrolment process including finding a supervisor. Completing the application form and how to evidence the core requirements will also be discussed.

W30

Short Paper

How transformational leadership impacts employee outcomes: Culture and commitment

Mandip Johal, University of Leeds

Theme **Leadership, Engagement and Motivation**

Introduction

My session will be based on my MSc research which investigated how transformational leadership affects the employee outcomes of job satisfaction, organisational citizenship behaviour (OCB) and burnout. The research is underpinned by transformational leadership theory (Bass, 1985) which states followers with transformational leaders will display high levels of motivation and display performance beyond expectations. These positive follower outcomes are argued to occur because transformational leaders; act in accordance with their values, provide a strong vision, encourage creativity, recognise the different needs of followers and because they are admired and respected.

There is an abundance of evidence to support the impact of transformational leadership theory on positive follower outcomes, for example, research showed that transformational leadership, or certain traits of transformational leadership significantly predict job satisfaction (Podsakoff, MacKenzie, Moorman & Fetter, 1990) and OCB (Pillai, Schriesheim & Williams, 1999), whilst negatively predicting burnout (Leithwood, Menzies, Jantzi & Leithwood, 1996). That being said, key mediating variables that connect transformational leadership to such outcome variables have not been fully studied (Yukl, 1999) and we need to understand more about how this style of leadership is influenced by the context in which it occurs (Bass, 1999).

Due to the limited research on how transformational leadership is linked to job satisfaction, OCB and burnout, my research investigated the potential mediating role of affective organizational commitment (AOC), which is defined as an employee's emotional attachment with their organisation. Bycio, Hackett and

Allen (1995) suggest AOC could be one mechanism via which transformational leadership influences job satisfaction, OCB and burnout because transformational leaders foster feelings of emotional attachment in their followers. This in turn engenders a strong belief in the organisation's values which can generate positive follower outcomes. Moreover, research from other settings indicates that AOC mediates some of the relationship between transformational leadership and job satisfaction (Yousef, 2000), OCB and variables similar to burnout.

Separately, the moderating role of organisational culture on the relationship between transformational leadership and job satisfaction, OCB and burnout were also investigated as the theory of transformational leadership asserts that features of the organizational environment can moderate the relationship that links transformational leadership with follower outcomes (Bass, 1985). Bass (1985) contended that transformational leadership was more likely to materialise in less bureaucratic organisations, as leaders of these organisations would be likely to use transformational behaviours to shift followers to higher levels of motivation and performance. Similarly, the integrative model of organisational dynamics suggests organisations are made of several structural elements including, culture, people and technology, which are all interrelated, wherein a change in one element impacts other elements. Despite numerous researchers arguing that there is an ongoing interplay between organizational culture and leadership, there are limited empirical studies investigating the relationship between leadership and culture as well as their combined effect on important organizational outcomes (Yiing and Ahmed, 2009). Based on a review of the literature and the key papers examining these relationships (Yiing & Ahmed, 2009; Yousef, 2000), the following hypotheses were developed for my research:

Hypothesis 1: Transformational leadership is a predictor of AOC.

Hypothesis 2: Transformational leadership is a predictor of job satisfaction.

Hypothesis 3: Transformational leadership is a predictor of OCB.

Hypothesis 4: Transformational leadership is a predictor of burnout.

Hypothesis 5: AOC is a predictor of job satisfaction.

Hypothesis 6: AOC is a predictor of OCB.

Hypothesis 7: AOC is a predictor of burnout.

Hypothesis 8: AOC mediates the relationship between transformational leadership and job satisfaction.

Hypothesis 9: AOC mediates the relationship between transformational leadership and OCB.

Hypothesis 10: AOC mediates the relationship between transformational leadership and burnout.

Hypothesis 11: Organisational culture moderates the indirect relationship via AOC, between transformational leadership and; job satisfaction, OCB and burnout, such that;

- a. The mediated relationship will be weaker under high bureaucratic culture and low transformational leadership.
- b. The mediated relationship will be stronger under high innovative culture and high transformational leadership.
- c. The mediated relationship will be stronger under high supportive culture and high transformational leadership.

Figure 1 shows the proposed theoretical model for the research.

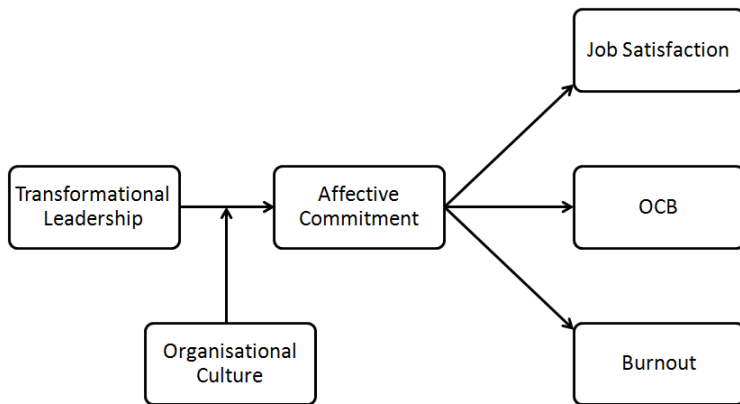


Figure 1

Research Design

A deductive, theory-testing approach was adopted to test the hypotheses and Bass's transformational leadership theory. The study was conducted in a UK organisation in the healthcare industry which employed nearly 2000 staff in 14 offices across the UK.

A survey design was used to collect the data. Questionnaires were distributed to all 14 offices in the organisation. A response rate of 18% was yielded (328 responses) but 39 respondents were excluded from the analyses due to missing data, leaving an *N* of 289. Although the *N* was less than the 320 ideal for achieving good statistical power (based on a 5% margin of error and 95% confidence interval) 289 was still regarded as acceptable given the large sample size.

A cross-sectional, between-subjects design was utilised to explore the predictive power of the independent variables (transformational leadership, organisational culture), the mediator (AOC) on the dependent variables (job satisfaction, OCB and burnout). A quantitative approach was adopted to measure the statistical significance of the relationships between the study variables. An online questionnaire was used to collect the data as it was deemed more convenient for participants. The data were analysed using multiple regression analyses.

The questionnaire included questions on demographic data so that these could be controlled for. The transformational scale from the Multifactor Leadership Questionnaire (MLQ) Form 5X was used to measure the degree of transformational leadership displayed by the organisational leaders. Organisational culture was measured by the Organizational Culture Index. AOC was measured by the AOC scale. Job satisfaction was measured with three items from the Michigan Organizational Assessment Questionnaire. Williams and Anderson's (1991) scale was used to measure OCB. 3 items from the Maslach Burnout Inventory were used to measure burnout.

Results

The results of the hierarchical multiple regressions showed that transformational leadership significantly predicted AOC and job satisfaction, but not OCB or burnout (*hypotheses 1-4*). Further hierarchical multiple regressions showed AOC significantly predicted job satisfaction, OCB and burnout (*hypotheses 5-7*). Based on these initial results and the prerequisites for a mediated relationship to exist, further hierarchical multiple regression analyses to test the mediating effect of AOC were only performed for the relationship between transformational leadership and job satisfaction. Using a bootstrapping approach, the results suggested the relationship between transformational leadership and job satisfaction was mediated by AOC (*hypothesis 8*). Further multiple regressions were utilised to test the moderating effect of organisational culture on the indirect relationship between transformational leadership and job satisfaction via AOC. The results showed organisational culture did not moderate the indirect relationship between transformational leadership and job satisfaction (*hypothesis 11*).

Discussion

The research contributes to the literature on transformational leadership by demonstrating that AOC is one mechanism by which transformational leadership influences job satisfaction. The evidence for transformational leadership as a predictor of job satisfaction is consistent with previous findings (Podsakoff

et al., 1990), as is the finding that transformational leadership predicts AOC. Furthermore, my research appears to be one of the first studies to have shown the mediating effect of AOC on the relationship between transformational leadership and job satisfaction as previous research has demonstrated a similar mediating effect of AOC but with different styles of leadership (Yousef, 2000). Thus the research fills some of gap in the literature. Furthermore, my results have more generalisability to UK organisations as previous studies (Yousef, 2000; Yiing & Ahmad, 2009) were conducted in Asia.

The research also adds value by addressing the shortage of empirical data examining the relationship between leadership and culture, and their combined effect on important organisational outcomes (Yiing and Ahmed, 2009). Although there was no evidence for organisational culture as a moderator of the indirect relationship between transformational leadership and job satisfaction, it is recognised moderator effects are difficult to detect in applied research. Furthermore, significant positive correlations existed between transformational leadership and both innovative and supportive organisational cultures, which is consistent with Bass's (1985) notion that transformational leadership is more likely to materialise in less bureaucratic organisations.

The research is of practical significance to the organisation where the study was conducted, as the data suggests job satisfaction levels could partially be improved by enhancing transformational leadership behaviours amongst leaders of the organisation. Leadership training could be improved, by teaching leaders how to target emotional commitment levels as a way of improving employee job satisfaction.

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My research is linked to the conference theme of "Learning, Sharing, Impacting" as it furthers academic learning on the subject of leadership by testing aspects of transformational leadership theory which have previously received little attention in the literature. In addition, the empirical data collected from the organisation in my study, answered important questions for the organisation, such as which style of organisational culture and what level of transformational leadership existed in their organisation, and the impact of these variables on their employees. This learning was shared with the organisation, along with some recommendations for improving employee job satisfaction.

My submission is directly relevant to the strand of Leadership, Engagement & Motivation. It tests the theory of transformational leadership (a style of leadership that evidence shows is positively linked to employee

engagement and motivation) and how this style of leadership impacts the employee outcomes of job satisfaction, OCB and burnout.

The most novel aspect of this research is how it empirically tests the relationship between leadership and organisational culture, as well as testing their joint effect on employee outcomes. There is extensive theoretical literature linking these two variables but empirical research testing this theoretical work is limited.

My session should be useful and stimulating to a wide range of delegates as it will cover two of the biggest and widely researched areas in organisational psychology; leadership and organisational culture. Furthermore, the research is based on empirical data collected from a UK organisation with a large sample size which should be of value to researchers in the area of leadership but also to practitioners who want to learn more about how transformational leadership and organisational culture impact employee outcomes.

The public would find my session interesting as the topics of leadership and organisational culture are very broad and affect all workers, regardless of their job role, industry or organisation size. Furthermore, high job satisfaction and nil job burnout is something people naturally desire at work.

Electronic copies of the slides will be made available to delegates.

W31

Short Paper

Transformational leadership in research supervision: a mediation analysis

Peter Tomsett, Bangor University, **Dr Calum Arthur**, University of Stirling **Dr James Hardy & Prof Nichola Callow**, Bangor University

Theme **Leadership, Engagement and Motivation**

1) Introduction

Transformational leadership (TL) is one of the most widely researched leadership theories in organisational psychology. The efficacy of this theory has been demonstrated in contexts as broad as the military (Dvir et al., 2002), sport (Callow, Smith, Hardy, Arthur & Hardy, 2009), business (Barling, Weber & Kelloway, 1996) and education (Beachamp, Barling & Morton, 2011). Studies have investigated the mechanisms underpinning transformational leader effectiveness. One such mechanism is leader-member exchange (LMX), which has been found to mediate the relationship between TL and organisational citizenship behaviour and task performance (Wang et al., 2005). This finding supports the assertions of Deluga (1992), and Howell & Hall-Merenda (1999) that TL and LMX are positively related constructs. Wang and colleagues contend that LMX “personalises” transformational leadership, and that TL fosters the development of high quality LMX relationships, which positively impact follower outcomes.

An alternative mechanism underpinning TL effectiveness is the satisfaction of basic psychological needs. Within self-determination theory, it is proposed that all people have three innate needs of autonomy, competence and relatedness, which, when satisfied, help to promote more autonomous forms of motivation and psychological growth. Satisfaction of follower needs has been integral to the conception of TL since its early development; Burns (1978) defined a transformational leader as someone who “seeks to satisfy higher needs and engages the full potential of the follower” (p. 4). In an experimental study, Kovjanic, Schuh and Jonas (2013) demonstrated that TL positively impacts follower perceptions of basic needs satisfaction, which positively impacts upon their work engagement.

In line with calls for more integrative research efforts regarding TL and its mediators, one aim of this study is to integrate these two mechanisms in one model. Researchers have identified need satisfaction as one mediator of LMX effectiveness (Graves & Luciano, 2013). Consistent with, and extending their rationale, we contend that TL behaviours help to foster high quality LMX relationships, which in turn help to satisfy follower’s basic needs, which in turn positively influences follower outcomes such as engagement and performance.

Hypothesis

Follower level LMX, perceptions of basic psychological need satisfaction and engagement will serially mediate the relationship between TL and performance

Methodology

Participants - Participants consisted of a sample of 252 final year undergraduate students (147 = male, 102 = female, mean age = 21.6) from five British universities, all of whom were currently participating in a supervised research project or dissertation in completion of their degree course. All students were studying in a science based subject (Bsc). The supervised nature of these projects requires a close working relationship between student and supervisor for satisfactory completion of project outcomes, and thus represents an appropriate context in which to investigate both TL and LMX. Furthermore, the higher education context represents a new environment in which to test the efficacy of these two well established leadership theories.

Measures

Leadership – Students' perceptions of supervisor's TL behaviours were measured using the differentiated transformational leadership inventory for higher education (Mawn et al., 2014). This measure was developed for use in the higher education setting, specifically in a lecturing context. The scale was adapted to reflect the supervisory context; items are framed in reference to "my supervisor" as opposed to "my lecturer". The measure consists of 30 items measuring seven specific TL behaviours; individual consideration, inspirational motivation, intellectual stimulation, high performance expectations, appropriate role modelling, self-belief and sense of humour, as well as one transactional behaviour, contingent reward. Participants report the frequency that their supervisor exhibits these behaviours using a likert scale from 1 ("never") to 7 ("always").

Leader-member exchange - LMX was measured using the LMX-MDM (Liden & Maslyn, 2007). Items were adapted to reflect the academic context, e.g. "I am impressed with my supervisor's knowledge of his/her work area" becomes "I am impressed with my supervisor's knowledge of his/her research area". The measure consists of 12 items across four factors; loyalty, professional respect, affect and contribution to the work effort. Responses are measured using a seven-point likert scale from 1 ("strongly disagree") to 7 ("strongly agree").

Satisfaction of basic psychological needs - Satisfaction of the basic needs of autonomy, competence and relatedness were measured using an adapted version of the Basic Needs at Work Scale (BNS-W, Deci et al., 2001). Items were adapted to reflect the context and research project work undertaken by the student e.g. "I have been able to learn interesting new skills at work" becomes "I have been able to learn interesting new skills whilst working on my project". Participants indicate how true each statement is using a likert scale from 1 ("very untrue") to 7 ("very true").

Engagement - Engagement was measured using a scale developed specifically for the purpose of this study. The items were designed to capture three aspects of academic engagement, specifically, frequency of task related behaviours, quality of effort and time-on-task. The development of these items was supported by a review of literature underpinning academic engagement in the higher education sector. See Trowler and Trowler, (2010) for a review of the available literature.

Performance – Final module grade was operationalised as the key performance variable for this population. Final grades were collected from University administrators upon their release, with consent from the participants.

Procedure

Initially, a questionnaire was administered to the student sample approximately half way through their final year that contained measures of transformational leadership from their respective research supervisors (DTLI – Mawn et al, 2014) and quality of LMX relationships with those supervisors (LMX-MDM – Liden & Maslyn, 2007). A second questionnaire was administered to the sample immediately following completion of their research project to capture satisfaction of basic psychological needs within the context of their research project, and engagement with their research project work. Of the original sample, 140 students (82 = male, 57 = female, mean age = 21.37) completed the second questionnaire. The two questionnaires were separated by approximately 12 weeks.

Analyses

To address the hypothesis, a mediation analysis was conducted using PROCESS for SPSS. Data were analysed in a multiple serial mediation model with three mediators, whereby transformational leadership was entered as the independent variable, and grade as the dependent variable. LMX, need satisfaction and engagement are entered as mediators one, two and three respectively.

Results

Results of the mediation analysis showed a significant indirect effect of transformational leadership on grade performance via the mediators of LMX, need satisfaction and engagement serially, as hypothesised. The analysis provides estimates of path coefficients and significance tests for the specified model as well as an estimate of the indirect effect. TL impacted LMX ($\beta = .633$, $P = .001$), which subsequently impacted perceptions of need satisfaction ($\beta = .535$, $p < .001$) which subsequently impacted upon engagement ($\beta = .2948$, $p = .006$), which finally impacted student final module grades ($\beta = 5.114$, $p < .009$). Bias corrected bootstrap confidence interval for the indirect effect based on 5,000 bootstrap samples was entirely above zero (0.178-1.319), indicating significance. Results indicated no other significant indirect effects. The direct effect of leadership upon grade while accounting for the three mediators was not significant ($p = .211$).

Discussion

The results demonstrated support for the hypothesis that LMX and need satisfaction are mechanisms that underpin transformational leadership effectiveness. Furthermore, support for the serial nature of the relationship was also provided, namely, that TL positively impacts LMX, which impacts needs satisfaction, subsequently engagement and finally grade. Overall the results provide some preliminary evidence that transformational leadership may be useful as a model for supervisor effectiveness in a higher education setting to promote the development of good quality working relationships, student engagement and performance.

2) *Link to Conference Theme* - The project most strongly reflects the learning aspect of the conference theme in its focus on key outcomes for students in an academic setting, such as engagement with their research project work and final module grade. This research will support further study investigating transformational leadership as an innovative approach to teaching and learning in higher education, specifically within a supervisory context. The impact of this and subsequent research will be to provide a theory driven and demonstrably useful/effective model of leadership for research supervisors to share with the wider academic community. In the long term this could have wide reaching impact for all students participating in supervised research in completion of their degree.

3) *Appropriate for topic/strand* - Theories and concepts of leadership, engagement and motivation are a primary focus of the research project, indeed leadership, engagement and motivation are purposely targeted in the current research. More specifically the project aims to explore how these concepts relate to one another and ultimately impact on a key performance outcome, namely, final module grade.

4) *Novel and Innovative Aspects* - The study makes use of a novel engagement measure designed specifically for the context of supervised research in undergraduate study. Furthermore this setting represents a new context for the study of transformational leadership and its mediators, ratifying the utility of transformational leadership as a model for the effective supervision.

5) *Stimulating and useful for delegates* - The presentation will provide an overview of a rationale for connecting two established underlying mechanisms of transformational leader effectiveness, forming one conceptual model whereby transformational leadership impacts upon performance outcomes via the mediating role of LMX and subsequently needs satisfaction. In addition, adoption of a contemporary approach to analysing and interpreting mediation relationships provides a specific point of interest from an analytical perspective.

6) *Public Interest* - Members of the public may find interest in transformational leadership theory as a management/leadership style with applicability to wide array of contexts, perhaps including their own.

7) *Materials Provided* - An electronic version of the presentation slides will be provided.

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W32

Career Case Study

What about a phd?

Dr Fiona Beddoes-Jones

Theme **Learning, Training and Development**

Is going down the PhD route for you? Is it worth the financial, emotional and physical investments required? Learn from the experience from someone who has been through it and got out the otherside. This session is a case study of going through a PhD and what to expect, before during and after. There will be a chance to ask questions at the end.

W33

Short Paper

Developing academic leaders via a coaching app

Dr Dasha Grajfoner, Heriot-Watt University, **Dr Celine Rojon**, University of Edinburgh

Theme **Leadership, Engagement and Motivation**

Overview and background

Whilst we know that effective academic leadership is a key contributor to attaining academic excellence (e.g., Rowley, 1997), most leadership vacancies in academia are filled with scholars who, whilst likely being specialists in their subject area, typically have not previously acquired the necessary skills to provide effective leadership (e.g., Hoppe, 2003; Raines & Alberg, 2003). To assist academic leaders, by which we mean scholars who have taken on a managerial/ administrative role (e.g., head of department/group, programme/degree leader/director, committee/working group leader) in being effective in their roles, we developed an intervention based on the extant evidence on leadership development. The core of the intervention is based on widely accepted and commonly used coaching techniques, including goal-setting (Locke & Latham, 2002) and positive psychology coaching (e.g., strengths' identification, feedforward) (e.g., Biswas-Diener, 2010). We anticipate the intervention, which is made available via an application for smartphones and tablets, to not only enhance academic leaders' general effectiveness in their roles, but to also have a positive impact on their self-efficacy and well-being. As a consequence, we examine the effect of using the application on new leaders' effectiveness via measures of individual well-being, performance and self-efficacy. To test the new coaching intervention's effectiveness, the study is initially conducted with participants from Scottish universities, but following subsequent optimisation of the application based on study findings, we anticipate conducting a larger-scale study across UK/European universities.

Thus, in our present study (for details please see below), using a quasi-experimental design, we examine the effects of a newly developed coaching application intervention received by an intervention group and

compare participants' levels of individual workplace performance, well-being and self-efficacy pre and post intervention to those of a control group, which is not exposed to the intervention. We expect the leadership coaching application to have a positive impact on participants' performance, well-being and self-efficacy. The study, which is funded by the Leadership Foundation for Higher Education (LFHE), is currently underway; findings will be made available at the time of the conference.

Current study

Research question

To what extent does coaching enhance academic leaders' performance, self-efficacy and well-being compared to a control group that does not receive the intervention?

More specifically, we expect the following:

2. Participants in the intervention group (i.e. who receive the coaching intervention) will score significantly higher on measures assessing performance, self-efficacy and well-being than those in the control group (i.e. who do not receive the coaching intervention) following exposure to the coaching leadership application.
3. For participants in the intervention group, there will be a significant difference in means for the performance/self-efficacy/well-being measures between the baseline assessment (pre-intervention) and follow up assessments (post-intervention).
4. For participants in the control group, there will not be a significant difference in means for the performance/self-efficacy/well-being measures between the baseline assessment (pre-intervention) and follow up assessments (post-intervention).

Method

Participants

Participants recruited for this study are individuals working in academic leadership roles from Scottish universities; both new/incoming academic leaders and those who have been in such functions for longer are considered. Following calculations to determine statistical power, 27 participants are being recruited per group (i.e. intervention/control) (i.e. $N_{total} = 54$).

Design

We are implementing a quasi-experimental, 2x2 mixed factorial design as follows (see also Table 1):

- Independent variable 1: condition (between-groups comparison)
 - o Intervention/experimental group
 - o Control group
- Independent variable 2: time (within-groups comparison)
 - o Pre-test/baseline (just before being exposed to the coaching intervention)
 - a. Post-test/follow up (different time lags after exposure to the coaching intervention: immediately afterwards/1 month afterwards/6 months afterwards)
 - a) Dependent variables: scores on assessments of performance/self-efficacy/well-being

Table 1

Study design

		Between-groups comparison			
Within-groups comparison	Intervention group pre-test/baseline	Control group pre-test/baseline			
	Intervention group post-test/follow up	Control group post-test/follow up	Within-groups comparison		
		Between-groups comparison			

As explained, the design is mixed, measuring changes within each group across baseline and follow up, as well as measuring differences between the intervention/experimental and control groups.

Procedure & materials

Having conducted focus groups to evaluate the newly developed leadership coaching application, participants across Scottish universities are recruited through email lists (having gathered the respective research department's/head of school's consent to do thus) and through the LFHE directly. Participants are

assigned to conditions using a random number generator. The overall approach to this research is shown in Figure 1 and further explained below.

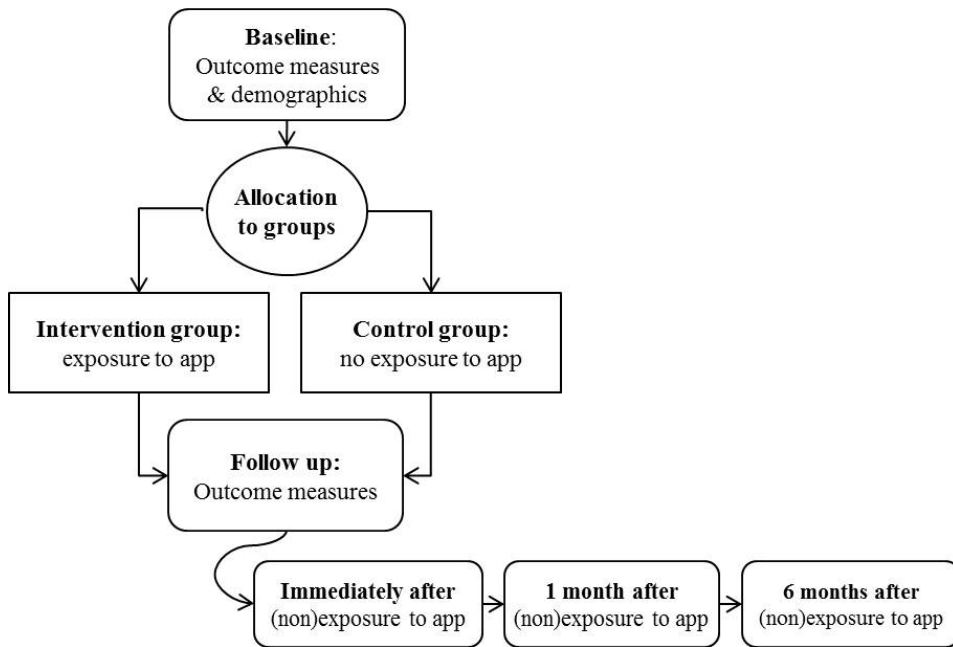


Figure 1. Study procedure.

The subjective measures, which are validated self-report questionnaires of individual workplace performance (Comprehensive Workplace Performance Framework Questionnaire (CWPFQ), Rojon, McDowall & Saunders, 2013), self-efficacy (New General Self-Efficacy Scale (NGSE), Chen, Gully & Eden, 2001) and well-being (Warwick-Edinburgh Mental Well-Being Scale (WEMWBS), Tennant et al., 2007), require that participants rate themselves on a variety of aspects; they are presented online. When agreeing to be involved in the study, participants commit themselves to completing the outcome measures both at baseline and follow up. With the aim of improving usability and usefulness of the newly developed application prior to the main study, this is being discussed with individuals similar to the targeted population as part of focus groups.

Intervention/experimental group

At baseline, having been allocated to the control group, individuals are asked to complete the online measures of performance, self-efficacy and well-being. They will then get access to the newly developed coaching intervention application for four weeks. Following exposure to the intervention, participants complete the outcome measures again at follow up.

Control group

At baseline, having been allocated to the control group – with the option to get access to the coaching application upon completion of the study –, individuals are asked to complete the online measures of performance, self-efficacy and well-being. During the time the intervention group is being exposed to the coaching application, the control group does not have to carry out any further tasks. However, in the same way as the intervention group, they complete the outcome measures again at follow up.

Analysis

We will conduct appropriate group wise comparisons and tests of difference depending on the normality of the data generated. Findings of the study will feed into improvements of the coaching application for a larger study.

As aforementioned, results of the study will be available for presentation and discussion at the time of the conference.

Please note that whilst we have chosen the category/strand ‘Leadership, Engagement and Motivation’ here, we believe our paper would fit equally well into ‘Learning, Training and Development’.

Selected references

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Thursday 8 January 2014

T01

Keynote Session

Talent Identification in the Reputation Economy

Dr Tomas Chamarro-Premuzic, University College London & visiting Professor at New York University

This talk will discuss the repercussions of the digital revolution on the talent identification industry. In particular, it will explain how recent developments in social media and big data are re-shaping our ability to identify the leaders and entrepreneurs of tomorrow, how technology and millennials will transform the world of work, and how the sharing economy will re-define the psychology of reputation and talent. The talk will also emphasise the organisational and cultural consequences of digital narcissism, and examine the future of work.

T02

Poster Snapshot Session

Strand Research Design, Analytical Techniques and Practical Applications

Poster presenters will be providing a brief overview of their poster in order to showcase their work. This will take place on Thursday 10:20-11:00. The posters will be displayed throughout the conference and the traditional poster session will take place during the lunch break on Thursday 13:05-14:00.

T03

Standard Paper

The Psychology of Strategy

Michael Wellin, Business Transformation Ltd

Strand **Leadership, Engagement and Motivation**

AIM & PURPOSE OF THIS PAPER

The purpose of this paper is to show how occupational psychologists can significantly contribute to the formulation of business strategy by business organizations.

The paper has five objectives which contribute to this purpose:

5. **Present three case studies** from very different organizations of how the author contributed to the formulation of business strategy in 2014
6. **Extract and share key learnings** from these case studies about how and where occupational psychologists can contribute to strategy formulation, including how involvement in organization culture opened the door to work on strategy, and insights about the psychological contract of those working on strategy
7. **Present a model of facilitation behaviours** created and used by the author which can add significant value to senior teams working on strategy issues
8. **Share a robust strategy framework** which demystifies 'strategy' so psychologists can more quickly understand and work on the issues involved
9. **Share relevant academic frameworks which support this work.** The author has used and built on the work of leading experts in the areas of culture, facilitation and business strategy.

The paper will be structured around these objectives, each of which is described in more detail later in the submission.

What is Novel about this Paper, Why Conference Delegates will find it Stimulating and Useful, and its relevance for the Leadership Strand

Business strategy is not an area where occupational psychologists typically contribute – yet it is an area which takes up a large amount of senior leaders energy and time. It is also an area where few books or articles have been written. This makes this paper about “The Psychology of Strategy” innovative, stimulating and hopefully useful for how conference delegates can learn to increase their impact.

The author's practitioner perspective will provide novel practical methods for psychologists and members of the public alike – especially business leaders - about how psychology can contribute and add value to organization performance.

THE THREE STRATEGY CASE STUDIES

The paper will present three different case studies where the author contributed to strategy formulation in 2014:

- 2) The formulation of a critical piece of technology strategy which potentially will have £M100/s impact on what will become the largest infrastructure project in Europe
- 3) To business strategy formulation in the UK business unit of an international insurance group which has UK premium incomes of over £1B
- 4) The creation of vision and culture in a small consultancy business where the MD has an international reputation

In each case study the contribution of the author was primarily as a facilitator, rather than as a strategy expert. The different ways this role was fulfilled will be explored and shared with the audience, and related to the context in which these businesses operate.

In the technology case study the author's role was identified at the outset by top management as a facilitator whose role was to design a series of half day workshops over a number of months, and facilitate different teams of individuals representing multiple stakeholders, to contribute to strategy formulation. This work is in progress, and when completed the final technology strategy will be presented to the main board for ratification and then be implemented over 10 years.

In the Insurance Company the role of the author was as facilitator a two day 'Executive Retreat' where the agenda was created by the client. The author was originally invited to present the results of in depth diagnosis of the organizations values and behaviours. Shortly before the workshop the Chief Executive suggested the author also facilitate the total Executive Retreat, the first day of which was devoted entirely to business strategy. As well as facilitating the strategy the author's recommendations about the values were endorsed by the Executive Directors and are now being implemented in the UK Company.

In the consultancy the author was invited by the MD to undertake a diagnosis and then design a one day workshop and facilitate the team to learn from past experience, formulate vision, and define the aspirational future culture. The author pre-ceded the workshop with individual discussions with each team member to gain their perspective of the issues. Following sharing of learnings, including about individuals' strengths, the team clarified their vision of the business in 3 years. This has increased understanding between team members and the MD - also the main shareholder. It highlighted some inherent tensions in the firm's business model.

KEY LEARNINGS

The organizations from where these case studies are taken are highly diverse. The technology strategy case study is from an organization of 1000 people, which in 4 years is expected to employ many 1000/s directly and indirectly, and have a budget of circa £40B. The consultancy business has a turnover of £1M, which may perhaps double in 3 years. The insurance company falls somewhere in the middle.

The author was privileged to win work in such different contexts for strategy formulation, and this is an amazing personal learning opportunity. Some key learnings will be presented in the paper:

Learning One: *The entry point for working on all organizations' strategy arose from the author's work on each organizations' behaviour and culture.* In each case the author pre-ceded his contribution to strategy by working on organization behaviour and culture:

- b) In the technology strategy case study he had previously facilitated a workshop about the implications of the new technology on culture, and had also facilitated the Executive Board about their own leadership.
- c) In the Insurance company the author had some 4 months previously been engaged to research the core competencies and values

- d) In the consultancy the author had previously worked with the MD when he led a large organization, and the brief was to undertake a team workshop for all members of the consultancy

The author's learning from this is that demonstrating effectiveness in organization behavior and culture requires high levels of trust. If this has been built, together with a reputation for providing insight and impartiality the client is more likely to invite contribution in another area which requires these – business strategy. In the authors mind occupational psychologists are the best-equipped profession to work on organization behavior and culture.

Learning Two: In all three case studies the organizations progressed significantly in their formulation of business strategy. The results at the time of submission of this paper are

- a) The technology organization has successfully run one strategy workshop, and three more are planned during the autumn of 2014
- b) The insurance company strategy formulated at the Executive Retreat was presented and approved by the Board.
- c) The MD of the consultancy expressed his appreciation of the workshop, and feels he is in a more positive position to finalise the vision and strategy for the business going forward

While the detailed strategy outcomes for each case study are very different, the important conclusion from these is that the organizations did progress their formulation of strategy while the author worked with them as a facilitator.

Learning Three: The author's main contribution to strategy formulation for all three organizations was as a facilitator. In each organization those who formulated the strategy know their business, the market in which they operate, and the business and technical issues they face. The primary value and contribution of an outsider is to support, facilitate and challenge members of the organization to share their knowledge and understanding. The facilitation framework used for this is presented below.

In both the technology and insurance case studies the author specifically mentioned at the point of engagement that he is not an expert in business strategy – but that his value is rather to support and encourage others to share their knowledge, in the context of a broad business strategy framework.

In the authors experience the training and skills of occupational psychologists make us better equipped than most facilitators – because of our insights into team dynamics and individuals' motives which non psychologist mostly do not have.

Learning Four: The psychological contracts of those involved in strategy formulation were very different.

- a) In the technology case study the sponsor for the strategy comes from within and outside the organization – and will have an impact on all UK taxpayers. In this case the psychological contract or deal between the strategy contributors is that while there are a few highly influential individuals who will impact the strategy, many different individuals and parties views will be taken into account, and the decision process will involve multiple stakeholders. No one individual can call the tune.
- b) In the insurance company all those present at the Executive Retreat were significant influences of the strategy, with the Chief Executive having more influence than other Directors. Ultimately the Board including non-executives were the final strategy decision makers.
- c) In the consultancy the decision maker about the strategy and vision is the MD and owner of the business. All those present at the one day workshop recognized this – despite the open nature of discussions.

Understanding the psychological contract of those involved in formulating strategy is important for successful facilitation. Sensitivity to, and understanding the psychological contract is an important contribution psychologists can make to strategy formulation.

FACILITATION BEHAVIOURS

There are many different behavior frameworks in the literature, including the work of Clutterbuck. As a result of experience of working with senior business teams the author has created his own framework of seven facilitation behaviours for senior teams. The paper will define the seven facilitation behaviours and

provide examples of them in a strategy discussion. The value of these is that they are especially important for teams exploring and working on strategy issues.

The core facilitation behaviours are:

- Focus on the agenda
- Consideration
- Invite others to contribute
- Active listening
- Give personal feedback
- Challenge & provoke
- Manage disruptive emotions

These seven facilitation behaviours were and are used by the author when facilitating senior teams, and help build awareness and options about how best to contribute and add value to the team.

STRATEGY FRAMEWORK

Many strategy frameworks are available – however the one the author has learned most from is “Good Strategy Bad Strategy” by Richard Rumelt. The essence of Rumelt's work will be presented, as follows:

- Strategy is about influencing the future of the organization
- The essence of strategy involves discovering the critical factors in and outside the business which impact its future, and designing ways to coordinate and focus resources and actions to effectively deal with these
- Strategy is more than ambition – and while this is important - much strategy is ineffective (bad) because it assumes that formulating goals is sufficient.
- Much strategy fails to properly take account of the issues and challenges faced by the organization and how they can be overcome
- The kernel of effective strategy is
 - Diagnosis of the challenge
 - Creating a guiding policy for dealing with the challenge
 - Formulating coherent policies and action to achieve the guiding policy
- Strategy is hypotheses and choices about what will work – it is an educated judgment which requires breaking free from the past and applying insights and learning.

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Facilitation Behaviours

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“Facilitation – an art, Science or skill or all three?” Tony Mann & Sue Fillio, 2007, Resource Production

“Techniques for Coaching and Mentoring” David Megginson & David Clutterbuck, 2004, Routledge

The Psychological Contract

“Managing the Psychological Contract”, Michael Wellin, 2007, Gower

Business Strategy

“Good Strategy Bad Strategy”, Richard Rumelt, 2011, Profile Books

“The Strategy Book” Max Mckeown, 2013, Pearson

“What Matters Now” Gary Hamel, 2012, Jossey Bass

T04

Standard Paper

Avoiding a vicious cycle in graduate recruitment

Eugene Burke, CEB SHL Talent Measurement, **Nicholas-David Bearfield**, European Personnel Selection Office

& **Tom Gibbs**, CEB SHL Talent Measurement

Strand **Psychological Assessment at Work**

Based on UK and global surveys, the UK as a whole spent just short of £1 billion on graduate recruitment in 2013. Yet, 1 in 4 graduates say they are likely leave their first employer within 18 months and UK organisations report unfulfilled graduate vacancies from the 2013 recruitment season. This paper draws on a sample of nearly 200,000 graduates across 32 companies to address two questions: (1) how do UK organisations identify the strategic space they occupy in the competition for graduate talent, and (2) how do those organisations improve the return from their investment in graduate recruitment.

Value to the conference and stakeholders:

- This is an applied paper that does not draw on any single psychological theory, but it does touch on a very topical subject, the employability of graduate talent, and explores a validated model of employability and how assessment data can contribute objectivity to an often opinionated debate lacking clear and relevant evidence
- The paper links directly to the main theme of learning, sharing and impacting:
 - First, by sharing the learning from several years organisational research
 - Second, by sharing the insights from that research and particularly how assessment data and occupational psychology know-how can be used to address key strategic HR issues
 - Third, by showing the impact that applied occupational psychology research can have on how organisations frame key issues and take practical action to improve key HR processes such as recruitment, on-boarding and development
- The paper is appropriate for the strand selected as it draws on an extensive database of assessments and talks directly to how assessment data provides value in helping organisations manage talent processes more effectively
- The paper offers a number of insights and innovations: (1) the model of employability which has resonated with the Association of Graduate Recruiters in the UK as well as educators and organisations in several countries; (2) the use of assessment data and data analytics to understand the dynamics of the graduate recruitment space; (3) a new analysis of the key motivators of today's graduates based on a segmentation of the bench strength of graduate talent across 32 countries including the UK
- Delegates will find the paper of interest in terms of the application of big data and analytics to assessment data applied to one of the key areas of occupational psychology, selection and assessment
- The wider public, particularly press, will find the paper of interest given the topic of graduates who are seen as key to the economic development of the UK, the debate between employers and educators on the thorny issue of employability, and on the call to action for organisations in breaking down the silo between recruitment and learning and development functions within HR
- Those attending the session will have free access to a recent report describing the research, models and data in detail. This does not describe a specific commercial solution as it is framed as a thought piece, so the request for materials not to push a specific commercial pitch will be met through this report. Slides used in the session will also be made available.

How will the session be interactive? The session will begin with an overview in an Ignite (5 minute) format to sensitise the audience to the key themes and findings, and will follow that introduction by asking the audience for reactions and observations. The session will then proceed with two 10 minute segments, the first covering the bench strength of graduate talent and what that data says about the strategic spaces occupied by 17 industry sectors as well as the UK in contrast to 31 other countries, and the second covering how data from motivational models and assessments challenges many of the failed investment organisations are making in social media. The two facilitators will share the voice on the content with one providing the occupational psychologist and analyst perspective, and the other, a director of a pan-European recruitment agency, the view from the practising recruiter. These two short cycles will also allow for Q&A and observations towards the end of the presentation. As such, audience interaction will be more than the 10 minutes requested and woven into the overall fabric of the session.

Graduate recruitment programmes are struggling to deliver

While graduate job opportunities are increasing in many economies, organisations are struggling to fill their graduate vacancies. In the UK, around 9 in 10 (87%) organisations have unfilled graduate vacancies well into the normal graduate recruitment cycle.

At the same time, the dynamics of the graduate talent space have changed. Surveys conducted by the Organisation for Economic Co-operation and Development (OECD) show that the number of students enrolling in educational programmes outside their own country has more than doubled in the past decade to around 4.5 million¹. The UK is among the most popular destinations.

For many of these educational migrants, the country in which they choose to study is also where they choose to seek employment, with 1 in 5 staying on to look for work. With over half of these student migrants coming from Asia, such migration patterns impact graduate talent pools in the country of origin as well as the chosen country of destination.

And what happens in China may well impact on the aspirations of organisations in other parts of the world. With 78% of the growth in global GDP projected to come from new markets by 2030² and 61% of CEOs placing greater emphasis on global expansion³, shifts in employer preference overseas are presenting challenges in achieving multinational corporations (MNCs') aspirations for growth. While MNCs in China enjoyed a 5 to 1 advantage in employer preference in early 2007 that advantage has now disappeared, with preference for Chinese companies rising to more than 50% higher than MNCs by Q4 2013⁴.

Question 1: Why are employers not finding the graduate talent they want?

In a space with so many dynamics and increasing uncertainty, we argue that data and specifically talent intelligence is critical. But, to analyse data and uncover that intelligence, a fundamental question needs to be addressed: what are employers looking for?



Figure 1: CEB Model of Employability

In 2013, the US National Association of Colleges and Employers (NACE) tackled that question by surveying their members. The answer was a ranked list of 10 skills, 8 of which we would describe as soft skills⁵. We used that list to map to the CEB Universal Competency Framework⁶, a validated behavioural taxonomy that itself has been mapped to assessments such as the Occupational Personality Questionnaire (OPQ).

The result is the model of employability shown in Figure 1. This model anchors around two higher order constructs of **execute** or the capacity to get things done and **engage** or the capacity to bring people with you.

We argue that these constructs and the subordinate behaviours articulate key talents that support graduates in their first roles and early careers, and are critical to building the talent pipelines of future managers and leaders of an organisation, one key reason why many organisations invest in graduate recruitment programmes.

¹ Education Indicators in Focus, OECD, July 2013. http://www.oecd-ilibrary.org/education/how-is-international-student-mobility-shaping-up_5k43k8r4k821-en

² Goldman Sachs (2010), EM Equity in Two Decades: A Changing Landscape, Global Economics Paper No. 204.

³ CEB (2012), Realising Recruiting Success in a Global Environment

⁴ CEB (2013), 2007-2013 Global Labour Market Survey

⁵ National Association for Colleges and Employers (2013), Job Outlook 2013

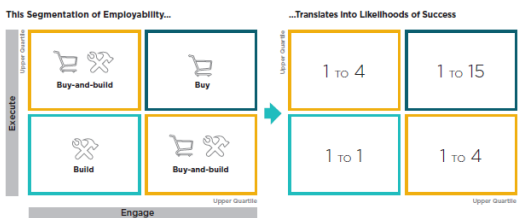
⁶ Bartram, D. (2011). The SHL Corporate Leadership Model. CEB

Question 2: What do the data on 197,335 recent graduates tell us about the dynamics of graduate recruitment?

We segmented our data on the two higher order constructs of execute and engage, taking the upper quartile on the metric for each construct⁷ to define stronger talent and to create a simple 2 x 2 segmentation shown to the left of Figure 2. This segmentation captures three recruitment strategies:

The assessment data used to construct these metrics were drawn from the Occupational Personality Questionnaire and the Verify suite of cognitive ability tests

- **A buy strategy** where employers compete for those graduates with strong potential across all of the talents described by our employability model
- **A buy-and-build strategy** where employers acquire graduates with strengths across our employability model but recognise that improving overall graduate bench strength will need ongoing investment in their development. This strategy requires clarity on where graduate hires have strengths and where to focus any learning and development spend
- **A build strategy**, where employers may be satisfying the immediate need for core knowledge and skills but are acquiring graduate talent that will need development in the potential to both execute and engage effectively



The numbers to the right of Figure 2 show the odds of graduates in our sample falling into any one of the four quadrants with the off diagonals representing the same buy-and-build strategy.

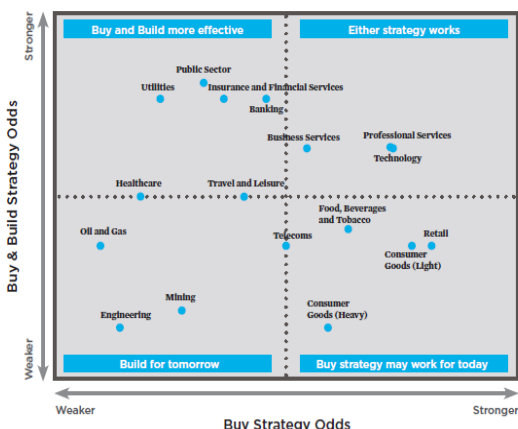
Our findings help to explain why many organisations are struggling to achieve their aspirations for graduate recruitment. The odds for the success of a buy strategy are substantially lower than for other strategies at 1 to 15.

Figure 2: A segmentation of graduate talent and the associated success of recruitment strategies

Every organisation needs to decide the extent to which its finite talent investment capital should be applied in pre-hire recruitment or in post-hire development of graduate talent. Our data suggests that a more sustainable position for most organisations is a buy-and-build strategy. Combining both off diagonals in our two-by-two segmentation relating to this strategy, the odds of finding the required graduate talent are 1 to 2 or 7.5 times more likely than for a buy strategy.

An analysis of which sectors occupy which strategic spaces

Assuming that organisations want to attract the strongest graduate talent they can, we reasoned that the buy and buy-and-build strategies are the most likely to drive graduate recruitment investment. Yet, many organisations lack the talent intelligence to know whether that reasoning is paying off and how they are competing on those strategies. To explore this, we calculated the relative odds of success for both strategies from our data across 17 sectors and 32 countries. As Figure 3 shows, sectors occupy one of four strategic spaces:



- **Either strategy works.** Business Services, Professional Services and Technology are more likely to be able to exploit a either buy or a buy-and-build strategy. Organisations occupying this space are in a stronger position to manage the flux in demand for and supply of graduate talent.

Figure 3: How the odds of success play by industry sector

- **Buy strategy may work for today.** Those in Consumer Goods, Food, Beverages and Tobacco, Retail and Telecoms clearly occupy a buy strategy space. Maintaining that strategy will depend on how they are able to sustain the investment required to maintain competitiveness as well as respond to the changing dynamics of graduate markets locally and across geographies.
- **Buy-and-build strategy more effective.** For those in Banking, Insurance and Financial Services, the Public Sector and Utilities, the balance of pre-hire and post-hire investment in graduate talent is critical. Getting that balance right requires talent intelligence to ensure that organisations are able to compete for the graduate talent they need in the short-term, and to target learning and development to close talent gaps and build sustainable talent pipelines for the longer-term.
- **Build for tomorrow.** Engineering, Mining, and Oil and Gas are sectors that rely on technical knowledge and skills. However, to provide a pipeline for managerial and leadership roles, our data shows organisations in this sector should consider whether their investment in the broader talents needed for success in more senior roles is sufficient. If this investment is insufficient, then organisations in these sectors may have to adopt a later buy strategy, competing externally to acquire the future managers and leaders they need. In contrast to the Technology sector, our data suggests that these sectors may be applying too narrow a lens on the talents they are looking for in graduate recruitment.

Question 3: Is the spend on attracting graduate talent paying off?

Thus far, we have looked at data that helps to delineate different strategic choices as well as the strategic space an organisation may actually be occupying despite its aspirations, reasoning or beliefs. We turn now to another area of substantial investment, attraction and specifically the effectiveness of employer value propositions (EVPs) and the use of social media.

In 2013, 82% of organisations planned to increase their social media usage⁸. Yet, while 71% (or 2 in 3) recruiters considered themselves competent at the use of social media⁹, only 37% or around 1 in 3 recruiting executives saw the use of social media as effective^{xiii}.

The pattern of investment in social media is revealing. While 77% of companies recently surveyed by CEB employ an employment branding specialist and while those companies typically spend 24% of their employer branding budget on professional and social media, only 5% of those budgets are spent on employment branding research and measurement¹⁰.

Contrast that spend on the employer side with other CEB research¹¹ that shows that 1 in 5 graduates apply for jobs that do not match their interests, 1 in 4 understand the day-to-day work before starting a job and only 1 in 3 say they made the right decision when accepting a job. Add to that 1 in 4 saying they are likely to leave their first employer within 12 months, then many graduates, despite the spend on branding and social media by employers, are struggling to navigate to the right job and the right employer.

Question 4: What really makes today’s graduate talent tick?

We explored the relative importance of 18 motivational factors to today’s graduates¹². Our analysis shows how important the segmentation of talent is to identifying the key motivators that drive effective recruiting practice. The results are summarised in Figure 4.

Rank	All Graduates	Buy	Buy-and-Build
1	Progression	Personal Growth	Progression
2	Personal Growth	Progression	Personal Growth
3	Competition	Competition	Competition
4	Recognition	Achievement	Fear of Failure
5	Material Reward	Fear of Failure	Achievement

Material Reward ranks 15th of 18	Material Reward ranks 9th of 18
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Across all of our graduate data, progression the desire for personal growth, the opportunity to compete for opportunities and recognition all rank as the highest of the 18 factors explored, with material reward (salary and other financial benefits) ranking 5th.

Figure 4: Motivational factors by key talent segments

⁸ CEB (2013), Recruiting Forecast Survey

⁹ Jobvite (2012), Social Media Recruiting Survey. http://web.jobvite.com/Social_Recruiting_Survey-2012-13.html

¹⁰ CEB (2012), Global Recruiting Effectiveness Survey

¹¹ CEB (2012), Rethinking University Recruiting

¹² These data are taken from the Motivational Questionnaire (MQ).

When we explore the buy and buy-and-build segments, many of these motivational factors remain constant (personal growth, progression and competition), but the ranking of material reward drops to 9th. for buy-and-build and to 15th. for the buy segment.

Our interpretation is not that these segments are prepared to seek lower salaries and benefits, but that employers have other motivational factors to trade against the financial premium they pay for graduate talent. Money is not the only factor employers have to trade with. Financial reward and other financial benefits are important attributes for an organisation's EVP, but our data shows that there are other attributes that resonate with today's graduates and that give organisations leverage in the premium they pay for graduate talent.

Simply put, those organisations with EVPs that do not talk to what motivates today's graduates will pay a higher premium for graduate talent. This is backed up by CEB research that shows that organisations with less effective EVPs pay a 21% higher financial premium than those organisations with EVPs that are more effective at talking to what really interests potential employees¹³. All of that finding on EVP with the greater odds for success for a buy-and-build strategy, and the strategic value of talent intelligence to driving more effective graduate recruitment practice is evident.

Summary

The dynamics of the graduate talent space have changed. Employers complain that they are unable to find the graduate talent they need. Taken together, these trends show that current recruitment practice has to improve. This paper shows the strategic value of assessment data in helping organisations understand the space they occupy, the investment choices they have as well as whether their EVP is helping graduate talent navigate to them and whether their investment in attraction is likely to pay off.

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- V. CEB (2013), 2007-2013 Global Labour Market Survey
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- VIII. CEB (2013), Recruiting Forecast Survey
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- X. CEB (2012), Global Recruiting Effectiveness Survey
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- XII. CEB (2006), Attracting and Retaining Critical Talent Segments

T05

JOOP session

Getting your work published

Jonathan Halbesleben, Editor, JOOP & University of Alabama

Strand **Research Design, Analytical Techniques and Practical Applications**

This session will offer attendees advice on publishing their work in occupational psychology journals. It will be led by Jonathon Halbesleben, editor of the Journal of Occupational and Organizational Psychology, who will discuss methods for crafting a story that appeals to academics and practitioners. The suggestions will be based on successful recent articles in JOOP that have made theoretical advances with clear practical implications.

The practice of running validation studies in client organisations: sharing learning and insights

Richard Stockill & Tatiana Gulko, OPP Ltd, Fiona Ferguson, Tesco

Strand Research Design, Analytical Techniques and Practical Applications

Evidence based practice is at the forefront of occupational psychology. For occupational psychologists, being able to support claims on the accuracy of the tools we use is one of our distinguishing features. The session will focus on sharing experiences of running validation studies, both from the perspective of a practitioner and the client organisation. Co-delivered by both practitioners and a client, the session will focus on one case study in particular, but will also use examples from previous validation studies. Using the medium of storytelling, the successes as well as lessons learned will be discussed. For example, why following best practice doesn't always lead to the best outcomes! During the session, attendees will be invited to share their experiences of running validation research in organisations and their own learning, thus making this a collaborative and interactive session. Lessons learned and future directions for both researchers and practitioners will be highlighted.

Main topics covered:

- ☛ Designing a validation study
- ☛ Managing sources of error
- ☛ Considering ethical concerns
- ☛ Understanding the client's perspective

Learning outcomes for attendees:

- ☛ Understand some of the key issues when carrying out validation studies
- ☛ Evaluate your own practice of carrying out validation studies
- ☛ Synthesise learning from the session into your own work
- ☛ Create more robust validation research

The session would ideally suit people new to validation studies, as well as people considering setting up validation studies who would like a reminder of some key issues to consider.

The validation case study

Validation studies focus on collecting data on the correctness of inferences that are made based on test scores (Landy, 1980); in short: does a test measure what it claims to? As occupational psychologists, the practice of carrying out validation studies supports the paradigm of evidence-based practice. Validation studies can provide evidence for us to critically evaluate our practice, and to examine the quality of what we do and how we do it. Ultimately, this can support improvements to the field of occupational psychology (Briner et al, 2010), as well as providing tangible benefits to client organisations.

The practitioners presenting this session are research consultants who carry out validation studies as part of their work. The practitioners carried out a validation study with a client organisation to gain empirical evidence on the predictive power of a series of algorithms. These algorithms combine scores on several personality traits to predict potential on a series of business-focused competencies. The client organisation agreed to take part in the study to gain insight into the characteristics that lead to success in the role of a learning and development professional.

Steps in the study:

Design a plan for data collection and sign research agreement

Create data collection tools

- ☛ Mapping 16PF questionnaire to competencies
- ☛ Creating a BARS scale
- ☛ Choosing the competencies with the client – (rank ordering based on significance)
- ☛ Choose suitable means of administration – (electronic administering using Survey Monkey)

Collect and analyse data

- ☛ Gain participants' agreement to take part (informed consent gained using email)
- ☛ Send tools to all direct reports and to their managers (using email)
- ☛ Send data collection sheet to HR department for performance data

Produce individual reports for each participant, also an overall anonymous report for client. (Individual reports were electronic reports suitable for a participant, overall report was written specifically based on data (data in this report were aggregated and anonymous))

Designing a validation study

The design of a validation study is very much driven by the desired outcomes a practitioner has for the study, but also the context practitioners find themselves in. This reflects the scientist-practitioner paradigm. The session will discuss the decision-making that went into designing a concurrent validation study, why the approach taken was used and its relative strengths and challenges. Reflections on what can be done to overcome challenges will be explicitly covered. For example, using a concurrent design (where all data are collected at one time from job incumbents) is a timely way to collect data. However, participants' motivations to take part can affect the data gathered. Ways to improve participant motivation, to increase sample size and reduce acquiescence or infrequency in participant responses will be discussed.

Managing sources of error in validation studies

Part of effectively designing validation studies involves considering the pitfalls of 'error' in the data gathered. Gaining a reasonable sample size was only the first of several challenges the practitioners faced in the current case study. More difficult challenges included rater bias and restriction of range. While the practitioners took steps to overcome sources of error, for example using a BARS scale to reduce rater bias, issues such as the halo effect were still found. The halo effect is just one of a number of cognitive biases that can influence objective decision making processes (Haselton, Nettle and Andrews, 2005). The potential impact of specific sources of error, as well as ideas for overcoming their impact, will be discussed during the session.

Ethical issues in validation studies

As well as managing the design of a validation study, human participation also needs to be considered. Ensuring the BPS's code of human research ethics (Oates et al, 2010) is followed should always be key to our practice. This session will discuss the practical steps the practitioners took to ensure their practice was appropriate for research with human participants, to minimise harm while still maintaining benefits. We will discuss issues around gaining informed consent and the challenges and realities of anonymizing data.

Client's perspective

Following best practice in validation studies will always be linked to the client's experience. The client speaker will discuss what worked well during the case study, what could be done differently and what benefits they found from taking part in the work.

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T07

Award Session 1

Academic contribution to practice award

Winner: Professor Rob Briner, University of Bath

In this interactive session I will discuss a range of questions around the idea of academic contribution to practice including: What does an academic contribution to practice really mean? What are the incentives for academics to make a contribution to practice? What are the incentives for practitioners to use academic research? What exactly is being celebrated through this award? Why was I given this award? Why isn't there an award for practice contribution to academia? What has happened over time to academic involvement in and contribution to this conference and DOP more broadly? What mechanisms or processes can be put in place to increase academic contribution to practice? Does the idea of an academic-practice 'divide' make sense or adequately describe the 'problem'? I will also ask participants to

reflect on how academic work contributes (if at all) to their own practice and whether they believe education and training in OP could enhance this contribution.

T08

Standard Paper

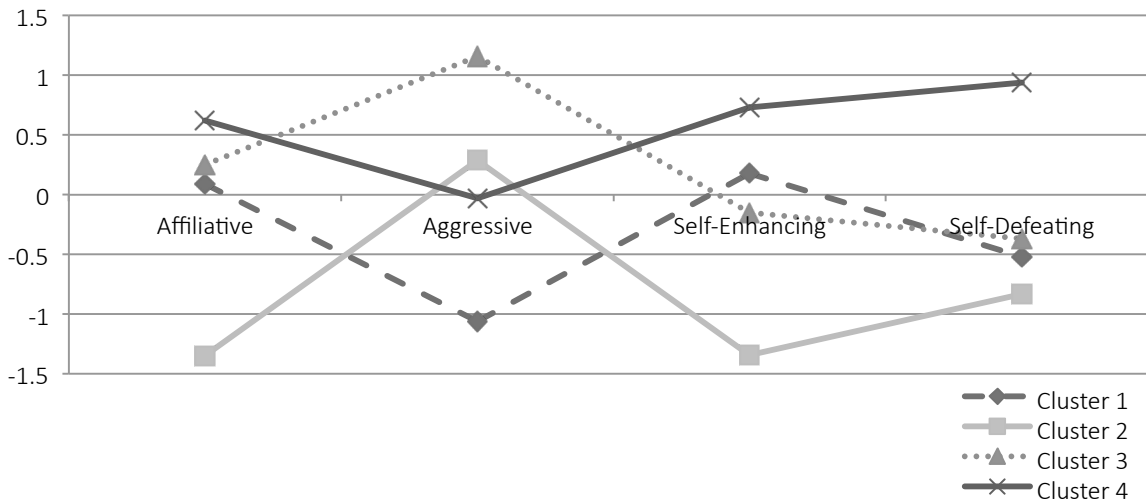
A Cluster Analysis of Managerial Humour Tendencies: Identifying the Workplace Consequences of the Aggressive Manager

Thomas Evans & Dr Gail Steptoe-Warren, Coventry University
Strand **Well-being and Work**

Managerial use of aggressive humour has been associated with numerous consequences for subordinates, including greater stress and poorer communication, creativity and job satisfaction. Research has not yet explored how use of different humour types operate not in isolation, but as a collection of behavioural tendencies. The current study reanalyses data collected from 202 working adults reporting their work environment and managers' aggressive, affiliative, self-enhancing and self-defeating humour use. Participants' managers were clustered according to their use of the four humour types, and an 'aggressive' identity clearly emerged. This group of managers were perceived to be significantly less powerful in comparison to others, and were associated with significantly worse working environments, compared to all others sampled. Results suggest that use of negative humour styles may be particularly damaging in the absence of other (positive) humour styles. Of note, no significant differences were found between clusters on participant sex or manager sex, work type (PT/FT), work environment or time working together. Both significant and non-significant results challenge many previously-accepted assumptions e.g. that aggressive humour is only used by males, and raise the question as to how the unique effect of humour can be separated from other workplace activities, and can thus be better understood.

Main Theories, Models and Research: The current study builds from the classical categorisation of humour types by Martin et al. (2013): affiliative, aggressive, self-enhancing and self-defeating, to explore whether it is the managers' use of a certain humour type, or whether it is the use of a humour type relative to the use of the others, which impacts upon the workplace. The current study therefore directly challenges the (revised) Organisational Humour Model (Romero & Cruthirds, 2006, Evans, Hughes, & Steptoe-Warren, under review) which suggests specific managerial humour types can be used to improve specific workplace facets. Galloway (2010) and Leist and Muller (2013) are the only researchers to have yet clustered humour styles, and the current study attempts to replicate the cluster patterns found within these, with British managers' humour, as rated by their subordinates. Reanalysing data from over two-hundred participants, managerial humour was clustered and the similarities and differences between clusters on numerous workplace facets e.g. creativity, communication, job satisfaction, stress, team cohesion, were explored. In addition to this, these analyses were replicated following factor analysis of the humour scales to better gauge the impact of measurement upon findings. The 'aggressive' identity will be identified (see cluster 2 in the diagram below) and explored in great detail with respect to their common qualities, impacts, and advice from the empirical literature regarding the best strategies for dealing with them. Patterns of clusters will also be compared to those found by Galloway (2010) and Leist and Muller (2013) throughout, with a discussion as to why results may have diverged. Multiple recommendations for future research on managerial humour, and clear implications for managerial communication practices, are emphasised.

Learning, Sharing and Impacting: The current study is very much about sharing the most cutting-edge understanding of humour. Participants will learn about different humour types, recent evidence validating their differentiation and the impact of each humour type in the workplace generally, in addition to the contribution of the current study. The current study is revolutionary in diverting attention away from considering humour types in isolation, to a more contextualised understanding of how and why humour styles together can influence the workplace. It is hoped that by sharing this information, delegates will learn more about humour and its importance, and for this to positively impact their daily work.



Wellbeing and Work: The current study is exploring an ideologically positive phenomenon: humour, and aims to contextualise the evidence with regards to the impact of humour upon stress, job satisfaction, and many other key workplace facets. Humour is often perceived to be a coping mechanism, and it is hoped that through understanding and application of results discussed, delegates' experience of work can become a more meaningful and enjoyable one.

Novel and Innovative Aspects: The current study is only the third paper to use cluster analysis upon humour styles. The first paper, by Galloway (2010), has many key differences from the current paper, including use of an Australian student/general population sample, etc. The most important difference is where Galloway (2010) chose to explore clusters with personality, and the current study takes a more practical and applied approach by contextualising managerial humour clusters within an organisational environment, and looking at the potential impacts of differences in humour styles. The current study also goes further than Leist and Muller (2013) who explored self-regulation, self-esteem and well-being, in use of factor analysis to improve the psychometric qualities of the scales, and the exploration of impact this has upon results. There are also many novel findings e.g. there are no gender differences between clusters, which contradicts much established literature which suggests males are more likely to use aggressive humour.

Stimulating and Useful Aspects for Delegates and Public: Humour is naturally attention-grabbing due to its perceived positivity, and the current paper aims to draw upon this to educate the delegates, and the public, on the intricacies of workplace humour. The key value in attendance is in the practical application of results. Firstly, individuals are not normally aware of different humour types, which may be eye-opening alone, and should help raise self-awareness for personal use. Similarly, the results of past research from the current authors, in addition to the results from the current study, will help further raise this awareness, with key implications for practice e.g. accidental usage of aggressive humour is not necessarily problematic when used with other humour styles. Raising awareness of the different humour types and the benefits of mindful use of all humour styles are clear messages that are informative, interesting and potentially beneficial to all.

Materials: An electronic copy of the presentation will be made available for all to access online. A summary page of the key results in diagrammatic form, and key recommendations and implications will be provided, and printed hand-outs will also be available for those who wish. Contact details will be provided here to encourage post-conference questions, debates, collaborations and suggestions to be directed to.

Interaction: Due to the inherently interesting qualities of humour, and the importance of gaining feedback, sufficient time will be given for questions, suggestions and responses to the research. There will also be opportunities for interaction within the presentation e.g. for individuals to recall experiences of having a manager who uses aggressive humour, their favourite examples of the different humour types, or exchanging strategies for dealing with aggressive personalities. To ensure individuals engage with and relate to the research, a minimum of ten minutes of the time allocated will be dedicated to interacting with others.

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T09

Symposium

Revolutionising Constructs in Occupational Psychology: What do we really know about...?

Dr Gail Steptoe-Warren, Coventry University

Strand **Research Design, Analytical Techniques and Practical Applications**

The current symposium hopes to revolutionise delegates' understanding of many hot-topics in occupational psychology: emotional intelligence, strategic decision-making, remote working and meaningful work. The predominant focus of the symposium is to present a modern and interactive overview of the constructs, and highlight the practical implications of the new theoretical developments. The aim of the symposium is to ensure delegates update their understanding of such constructs to match the most recent conceptualisations, and be better able to apply them to their own research and/or applied practice. As many of these topics have become household terms, the symposium will be revolutionary for professionals and public alike.

Often hot-topics are accompanied with many misconceptions, leading individuals to perpetuate misunderstandings and poor science through their teachings, research and application. The current symposium hopes to challenge dated or misinformed assumptions with a clear insight into the most modern empirical evidence available for each construct. Here the opportunity for interaction, discussions and questions will allow the construct experts to address any specific concerns and provide recommendations based upon the needs of the delegates. The empirical data or theoretical reviews presented will provide a fresh insight for researchers and practitioners alike. It is hoped that by sharing our coherent and modern understanding of the constructs, the quality of the future teachings, research and work with them, will be improved. Here is where the symposium directly reflects the learning, sharing and impacting conference theme.

To ensure each presentation presents enough opportunities for interaction and to address questions, comments and thoughts, the full two-hours are requested, with each paper allocated equal time. Accompanying each individual paper, a 'cheat-sheet' for each construct will be made available, in both paper and online format. This will highlight the key messages of each presentation e.g. an illustration of the construct and factors, along with the practical recommendations made for research and consultancy practice. This will be a key resource for delegates to reflect upon, use, and apply to their own works.

TO9a Paper 1

Emotional Intelligence

Thomas Evans & Dr Gail Steptoe-Warren, Coventry University

Strand **Research Design, Analytical Techniques and Practical Applications**

Theories, Models and Research: Emotional Intelligence currently suffers an identity crisis, plagued by both the jingle and jangle fallacy. Many questions have been posed: Is it an intelligence? Can it really be measured? Is it of any value or are we really talking about personality or intelligence? (Pfeiffer 2001, Zeidner, Roberts and Matthews 2008, Van Rooy, Viswesvaran and Pluta 2005, Daus and Ashkanasy 2003, to name but a few). Directly addressing these questions, the current paper will present an overview of the latest literature in the field that will reduce the inconsistency and confusion currently experienced, and educate on the appropriate use of emotional intelligence. Rejecting the 'mixed' model of intelligence that has significantly weakened the reputation of emotional intelligence, the key focus of the current paper is in presenting the empirical evidence supporting three distinct models: ability, trait and competency (Cherniss 2010).

The current paper will discuss the key properties, measurement requirements, and empirical trends within the literature for each of the three emotional intelligence models. Each model will first be theoretically and empirically differentiated from the others (e.g. through relationships to personality or intelligence; Van Rooy and Viswesvaran 2004). The aforementioned criticisms of the emotional intelligence concept will then be addressed, demonstrating how the adoption of the three models resolves such problematic claims (e.g. as a second-stratum facet of intelligence, the ability model modestly correlates with other cognitive tasks and 'g', as expected). Recommendations will then be made for measurement techniques for each model, with the empirical justifications for such, alongside recommendations for the ways in which the different emotional intelligence models can be used e.g. trait emotional intelligence for selection and recruitment, emotional intelligence competencies for training and development. Finally, the ways in which models interact e.g. the ability and competency models as apples and applesauce respectively, and plans for future research using the different models are introduced, before questions/discussions are held. The current paper hopes to revolutionise delegates' understanding and use of emotional intelligence through the presentation, explanation and evaluation of three clear and distinct emotional intelligence models.

Learning, Sharing and Impacting: The purpose of the paper is very much in-line with the conference theme, as the most recent conceptualisation of emotional intelligence will be *shared*, with delegates *learning* the key elements of each construct to ensure positive *impact* upon their practise. Due to the growing evidence that emotional intelligence is of importance in so many areas of Occupational Psychology, revolutionising the understanding of emotional intelligence will be both stimulating and useful for delegates. The paper will be littered with interesting insights commonly unknown or misunderstood e.g. a paper was published analysing the psychometric qualities of an emotional intelligence magazine quiz which rated individuals on a scale from 'newt' to 'ghandi'. Poor psychometric qualities were reported; a trend which has continued to this day. As emotional intelligence has such a questionable history and reputation, the current paper is a valuable opportunity to educate a large amount of key individuals on the most recent developments and refute such misconceptions.

Research Design, Analytic Techniques and Practical Applications: The current paper is especially apt for the strand because the choice of model is of significant consequence to the appropriateness of research method, analysis and application. The way in which models differ in this respect will be clearly highlighted to ensure clarity of understanding, but also for practical benefit in applying the understanding to the academic and applied practices of the delegates.

Novelty/Innovation: The most innovative aspect of the current paper will be in the revolutionising of understanding. As noted above, emotional intelligence is thought to be a problematic construct, especially when considering the wider 'intelligence' context from which it was developed. The current paper attempts to rid the shackles of past criticisms by directly addressing them under the new models. As such, the potential for emotional intelligence should be better-realised, allowing delegates to consider novel ways in which emotional intelligence matters for their own practices.

Public and Delegate Interest: As emotional intelligence was popularised in the public eye by Goleman in 1999, the public is also likely to be interested in the current paper. Contextualising many of the bold claims originally made about emotional intelligence should attract significant attention, and is an important step in modernising wider understanding of the construct. The current paper should also facilitate better articulation of what we (researchers and practitioners) mean by emotional intelligence, and thus better the future communications of emotional intelligence research findings and applied practices to the general public.

Materials: In addition to making an online copy of the presented paper available, a 'cheat-sheet' will be accessible in paper and online format to all delegates. This will highlight the key qualities of, and thus differences between, models alongside recommendations for the use in both academic and applied arenas. This will be a key factor in ensuring the presentation impacts future works, and will contain contact details of the current author to ensure a continued debate.

References:

Cherniss, C. (2010). Emotional Intelligence: Toward clarification of a concept. *Industrial and Organizational Psychology*, 3(2), 110-126.

Daus, C. S. and Ashkanasy, N. M. (2003). Will the real emotional intelligence please stand up? On deconstructing the emotional intelligence 'debate'. *The Industrial-Organizational psychologist*, 41, 69-71.

Pfeiffer, S. I. (2001). Emotional intelligence: Popular but elusive construct. *Roeper Review: A Journal On Gifted Education*, 23(3), 138-142.

Van Rooy, D. L., & Viswesvaran, C. (2004). Emotional intelligence: A meta-analytic investigation of predictive validity and nomological net. *Journal Of Vocational Behavior*, 65(1), 71-95.

Van Rooy, D. L., Viswesvaran, C., & Pluta, P. (2005). An Evaluation of Construct Validity: What Is This Thing Called Emotional Intelligence?. *Human Performance*, 18(4), 445-462.

Zeidner, M., Roberts, R. D., & Matthews, G. (2008). The science of emotional intelligence: Current consensus and controversies. *European Psychologist*, 13(1), 64-78.

TO9b Paper 2

Strategic Decision Making

Dr Gail Steptoe-Warren & Sophie Ward, Coventry University

Strand **Research Design, Analytical Techniques and Practical Applications**

Theories, Models and Research: The current paper aims to challenge delegates' understanding of strategic decision making. Strategic decision making as a construct has been categorised under strategic thinking, strategic planning, strategy and strategic decision making. However, the research in this field is conflicting as to what represents strategic decision making in a competitive and fast moving and global marketplace. The majority of the research has been conducted in commercial organisations and the construct itself has been built around these organisations. The current paper therefore presents the latest research, conducted in a charitable and public organisation to assess what underlying sub-constructs make up the overarching construct of strategic decision making and whether they differ depending on organisation type, personality and individual values of strategic decision maker. The paper proposes three overarching themes contribute to the construct of strategic decision making, namely strategy initiative generation; management competencies and strategic choice. The paper will discuss these three themes in relation to the construct of strategic decision making. The identification of core competencies required for strategic decision making will also be outlined which allows for the development of a tool to assess these competencies.

Learning, Sharing and Impacting: The purpose of the paper is very much in-line with the conference theme, as the most recent conceptualisation of strategic decision will be *shared*, with delegates *learning* the key elements of each facet to ensure positive *impact* upon their practise. Due to the growing debate concerning what represents strategic decision making and the need for organisations to remain competitive, a clarification of the construct will allow senior managers an insight into what factors are important in making good strategic decisions as well as the management competencies required to be a good strategic decision maker.

Research Design, Analytic Techniques and Practical Applications: The current paper is especially appropriate for the strand because the results discussed are of significant consequence to the way we should perceive, apply and measure strategic decision making. The practical benefits of applying the understanding to the academic and applied practices of the delegates will be discussed.

Novelty/Innovation: The current paper challenges accepted knowledge by presenting a novel conceptualisation of strategic decision making. As businesses in the 21st Century face a wide array of complex opportunities including, but not limited to, global market expansion, developing internal and external innovative products and practices to remain competitive the need to fully understand the construct of strategic decision making is becoming more urgent. Therefore, this paper is timely in helping businesses from all industry types in understanding the key themes that make up the construct of strategic decision making.

Public and Delegate Interest: The necessity to get the most able strategic decision maker is vital as research has found that without strategic thinking, organisations perform poorly. Bonn (2005) found that a majority of senior executives in 35 of the 100 largest manufacturers in Australia identified a lack of strategic thinking as the main problem in their organisation, and that with a clear and communicated strategic vision, the organisation prospers. The current study should therefore be of significant interest to delegates and the public by presenting a new way to conceptualise strategic thinking.

Materials: In addition to making an online copy of the presented paper available, a 'cheat-sheet' will be accessible in paper and online format to all delegates. This will highlight the key facets of strategic decision making alongside recommendations for use in both academic and applied arenas. This will be a key factor in ensuring the presentation impacts future works, and will contain contact details of the current author to ensure a continued debate.

References:

Bonn, I. (2005). Improving strategic thinking: a multi-level approach. *Leadership and Organisation Development Journal*, 26(5) 336-354

TO9c Paper 3

Remote Working

Dr Christine Grant, Coventry University

Strand **Research Design, Analytical Techniques and Practical Applications**

Theories, Models and Research: Work-life balance has been widely researched and many validated scales measuring the interaction between work and non-working lives currently exist. However, existing work-life balance scales are not currently related to applied actions or strategies and have not been linked to the emerging impact of remote e-working. E-working is now on the increase with forecasts for growth into the trillions worldwide. Whilst e-working has been linked to productivity gains, the impact of e-working on employees well-being and work-life balance has not been measured in depth. The purpose of this research was to develop a new scale that would measure the impact of remote working on job effectiveness, well-being and work-life balance. This would involve researching the dimensionality of remote e-working. The new measure would be linked to 'actionable', applied strategies for individuals, supervisors and organisations, which would seek to improve their e-working capability. The research also gathered self reports of job effectiveness employing the new e-work-life scale and of well-being using an existing well-being scale (SF36 v2).

The scale dimensions were elicited using triangulation, both qualitative and quantitative data, based on a full literature review of current theory, including work-family conflict (Greehnaus and Beutrell, 1985), boundary theory, including spill-over (Clark, 2000, Rothbard 2001) and role management theory. Interviews were undertaken, which involved 11 exemplar e-workers from across five organisations and also open responses from an online survey of over 250 participants. In total eight dimensions were postulated, including: management style, work-life integration, e-working effectiveness, job-effectiveness, trust, role management, managing boundaries and well-being. Strategies for individuals, supervisors and organisations were also developed through this process.

The eight dimensions were used to create sub scales for the e-work life scale and when employed the research found that remote technology provided the ability to manage work-life balance for many participants. Whilst the e-work life scale had previously found a high degree of positivity for e-working, negative aspects also emerged when discussing the strategies, including over-working. Well-being was reported as good amongst the e-workers, however, there were signs of tiredness and burn out amongst some of the sample. Role autonomy and role type were found to be important when considering e-working job effectiveness. Development of the project has involved the development of an online version of the scale with the associated strategies.

Learning, Sharing and Impacting: This paper fits the current theme of learning and sharing as it provides an evidence based approach to measuring how remote working can impact on job effectiveness, well-being and work-life balance. The delegates will *learn* how the scale was developed using associated theory, the concept will be *shared* using the eight dimensions and the *impact* will be demonstrated for studies already completed using the e-work-life tool. The development of constructs related to the new e-work-life scale and supporting strategies for improvement provides practitioners with a means to work with their clients to ameliorate psychological risk.

Research Design, Analytic Techniques and Practical Applications: The current paper is ideal for this strand as the paper is based upon the dimensions and measurement of e-work-life, for practical application to both academics and practitioners.

Novelty/Innovation: The e-work-life scale is novel in its approach in that no other similar scale exists covering eight key dimensions and has related strategies. The new scale also covers a gap in research in practice for remote workers.

Public and Delegate Interest: Conference delegates will find this paper of practical use and they may access the e-work life assessment tool via the web site: <https://ework.coventry.ac.uk/> for a trial. The public will be interested to understand how their own remote e-working can be measured and improved, and they too can access the e-work-life web site, providing them with hints and tips to review their own e-work-life balance.

Materials: In addition to making an online copy of the presented paper available, a crib-sheet will be accessible in paper and online format to all delegates. This will include details of the e-work-life web site and for the use in both academic and applied arenas, in addition to a case study. This will be a key factor in ensuring the presentation impacts future works, and will contain contact details of the current author to ensure a continued debate.

References:

Clark, S. (2000). Work/family border theory: a new theory of work/family balance. *Human Relations*, 53, 747-770

Greenhaus J. H. & Beutrell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review* 10 (1), 76-88

Rothbard N.P. (2001). Enriching or depleting? The dynamics of engagement in work and family. *Administrative Science Quarterly* 46, 655-684

TO9d Paper 4

Meaningful Work

Thomas Evans, Dr David Hughes & Sophie Ward, Coventry University

Strand **Research Design, Analytical Techniques and Practical Applications**

Theories, Models and Research: The paper will address the existing literature on meaningful work by first detailing existing assessments currently used e.g. Steger, Dik and Duffy (2012) and Lips-Wiersma and Wright (2012). Concurrent themes will be highlighted e.g. work giving meaning to life, and the role of social motivation, in addition to the role of spirituality or higher powers. Meaningful work will also be differentiated from similar fields such as calling and job satisfaction. Following this, the methodology and results of the current study will be presented. In this empirical study, participants were asked to complete a battery of questionnaires on calling, intrinsic motivation, job satisfaction and job commitment, in addition to all meaningful work measures currently available. This questionnaire, containing 12 established psychometric measures and over 100 questions, was completed by more than 100 individuals currently employed within the UK, all recruited through contacts of the authors. Results are analysed to validate factor structure of meaningful work measures, explore relationships between meaningful work factors within and between measures, explore structure of meaningful work as a construct and explore relationships to similar constructs, and analyse regressions to assess the predictive value of meaningful work factors alongside organisational outcomes. The paper will finish with a summary of practical recommendations for the measurement, study, and applied use of meaningful work as a construct and more general conclusions e.g. on factor structure and nomological net of meaningful work.

Learning, Sharing and Impacting: The purpose of the paper is very much in-line with the conference theme, as a new conceptualisation of meaningful work will be *shared*, with delegates *learning* the key elements of each factor to ensure positive *impact* upon their practise. Due to the growing interest in the alternative benefits of working, revolutionising the understanding of meaningful work will be both stimulating and useful for delegates. The current paper is a valuable opportunity to educate a large amount of key individuals on the most recent developments and encourage further robust research on meaningful work.

Research Design, Analytic Techniques and Practical Applications: The strand chosen is especially key for the current research because of the methodology, results and application of findings. Firstly, the factor analysis conducted to determine the structure of the meaningful work construct will need to be clearly detailed to ensure transparency and understanding. Secondly, the content of the factor structure will be of significant consequence to the way we understand and conceptualise meaningful work. Third, the factor

structure will have implications for the application of meaningful work measurement from academic and practitioner perspectives.

Novelty/Innovation: The most innovative aspect of the current paper will be in the revolutionising of understanding. Meaningful work is a hot-topic with the amount of research exploring it increasing dramatically. The current paper attempts to provide an overview of the field, with clear sign-posts as to what it is, what it is not, what factors are likely to be important, and the best way to measure these factors. As such, the potential for understanding in meaningful work to grow should be better-realised, allowing delegates to consider novel ways in which meaningful work can be enhanced in their own practices.

Public and Delegate Interest: A better understanding of meaningful work will be of great interest for, and consequence to, the general public. As many environmental pressures are increasing upon work, greater interest is focussing upon how work can be meaningful beyond financial outcomes. For this reason, the current paper should be of significant interest and impact by revolutionising the understanding of meaningful work for academics, applied practitioners and the general public alike. The current paper should also facilitate better articulation of what we (researchers and practitioners) mean by meaningful work, and thus better the future communications of meaningful work research findings and applied practices to the general public.

Materials: In addition to making an online copy of the presented paper available, a 'cheat-sheet' will be accessible in paper and online format to all delegates. This will highlight the key findings of the empirical study, alongside recommendations for the use in both academic and applied arenas. This will be a key factor in ensuring the presentation impacts future works, and will contain contact details of the current author to ensure a continued debate.

References:

Lips-Wiersma, M., & Wright, S. (2012). Measuring the Meaning of Meaningful Work: Development and Validation of the Comprehensive Meaningful Work Scale (CMWS). *Group & Organization Management*, 37(5), 655-685.

Steger, M. F., Dik, B. J., & Duffy, R. D. (2012). Measuring meaningful work: The Work and Meaning Inventory (WAMI). *Journal Of Career Assessment*, 20(3), 322-337.

T10 Careers Surgery

David Carew, *Chief Psychologist DWP*

Strand Learning, Training and Development

A chance for early career psychologists to ask questions about getting into the profession and hear about the experiences, advice and views on career planning of David and private sector colleagues.

T11

Standard Paper

Transformational leadership behaviours that predict employee engagement

Berni Gaughan, West Midlands Police & **Matthew Jellis**, Worcester University

Strand **Leadership, Engagement and Motivation**

10 minute interaction

The audience reflect on "My best boss" traits and apply to Wilber's (2000) four quadrant systemic leadership model; trait, behaviour, culture and systematic. The all quadrant all levels model synthesises to key stages in leadership development; trait (Bass, 1990); situational (Hersey & Blanchard, 1988), behavioural (Fleishman, 1973) and engaging / systemic (Alban-Metcalf & Alimo-Metcalf, 2007).

Link to conference theme of learning, sharing, impacting

This study makes the link to the main conference theme, as the research discusses the role of the leader as a "learning leader", where leaders work with followers to reach collective goals that facilitate collective growth and sharing. The research focuses on how the leader impacts on how followers feel about their work, which links to positive organisational outcomes and how witnesses and victims are treated. Further the ideas are synthesised with the leadership maturity framework (Crook-Grueter, 2002) Wilber (2000) integral theory and the learning organisation philosophy (Senge, 1991).

Why is the submission appropriate for the particular strand?

This submission is appropriate for the particular strand; leadership, engagement and motivation because the research positions leadership in Piaget's model of cognitive development, helping leaders grow through action logic to a more mature sense of self (Wilber, 2000). Rooke and Torbet (2005) argued that those leaders, who undertake this process, can transform not only their own capabilities but also those of their companies through an employee engagement model.

What is most novel or innovative about this research?

There are several reasons as to why the research is novel and innovative, firstly due to the applied nature of the research: the policing service. The policing landscape is undergoing significant change, which was initiated by the Home Office (2010) radical reforms to policing impacting on both national and local policing.

A second reason as to why the research is novel and innovative is due to the fact that whilst many studies have investigated leadership behaviour and employee engagement, the police transformational leadership behaviours that predicts police followers' engagement is virtually unknown.

Why do I think delegates will be interested in the session?

I think the conference delegates will find the paper and session interesting because it explains leadership through a systemic social change lens. We live in an interconnected complex world and problems are more complex, this session focuses on the type of leadership that is required to solve these complex problems.

Why do I think the public will be interested in the session?

At the same time the public will find the session interesting, as it will give insight into how society influences organisations and the people who lead them. The short reflection on leadership as a social construct will illustrate how the minority influence, becomes a powerful player in social change. I intend to have a printed article that can be made available to delegates on the day.

Psychological theories, models and research underpinning session

The session is under pinned by leadership research, illustrating how leadership as a social construct is influenced by social change, for example; politics, technology, culture and economy (Bass, 1985). Reflecting on leadership as a social construct, the session covers key stages in the evolution of leadership theory and research, before moving on to discuss the; research study, findings, conclusions and implications on practice.

The session starts with the 1930s "great man" theory based on leadership traits, whilst then arguing that in the 1940s there was a requirement for a different leadership approach which focused on what leaders 'did' not who they 'were'. The 1940s behavioural model was challenged in the 1960s where the role of the civil rights movement, influenced leadership development to take a situational environmental approach (Hersey & Blanchard, 1969, 1988).

The 1973 oil crisis saw a high degree of uncertainty arise along with a reality of constant change, where managers produced order and consistency whereas transformational leaders produced change and movement. Thus the transformational leader emerged as someone who could deal with the continuous pace of change and unpredictability, rather than the traditional leader / follower dyadic leadership model (Morse, 2010).

The underpinning theoretical approach is concluded by examining the link between the transformational leadership construct and employee engagement and discusses the implications on organisational productivity.

Research objective

The objective of the study was to examine the link between transformational leadership and employee engagement, it was hypothesised: (*H1*) Transformational leadership behaviours predict employee engagement. Since existing theory and empirical evidence is not conclusive regarding the likely direction of the relationship, therefore the hypotheses is 2-tailed.

Design and methodology

The research design was a correlational and the study took place within a police force, who are currently undergoing change of an unprecedented scale, which was initiated by the Home Office (2010) radical reforms to policing impacting on both national and local policing. The sample frame (N=125) were the followers of the 2013 newly promoted Inspectors, as they have to win the trust and confidence of followers, rather than existing Inspectors who have already established relationships with their followers.

The diagnostic tool used for the study contained two parts; firstly transformation behaviour constructs (Alban-Metcalfe & Alimo-Metcalfe, 2007) and then the secondly part addressed the engagement dimensions (Schaufeli, Salanova, Gonzalez-Roma & Bakker, 2002). Followers were requested to complete a questionnaire on their observation of their 'nearby' boss's leadership style. Employee engagement was assessed by each respondent rating how they felt at work.

Inspectors were invited to opt-in to take part in the study; those who gave their consent were sent an email containing a hyper link to an online questionnaire, which they were then requested to send to their followers for completion, no personal data was collected and the study was approved by Worcester University and the researchers home police force.

Data analysis

The total transformational leadership score was a statistically significant predictor of total employee engagement, $b = 0.20$, $SE(b) = 0.03$, $CI = 0.14$ to 0.26 , $\beta = .51$, $p < .001$. Further exploratory analyses were subsequently performed to identify how facets of transformational leadership predict facets of employee engagement. Preliminary analysis was conducted to ensure no major violation of the assumptions of normality, linearity, homoscedasticity and multicollinearity and that there were no outliers that were unduly influencing the results.

The results from multiple linear regression analysis depicts;

The engagement sub-scale *vigour* as the outcome variable and the six transformational leadership sub-scales as the predictor variables. The total variance explained by the model was 54%, $F(6,117) = 8.14$, $p = .000$.

The engagement sub-scale dedication as the outcome variable and the six transformational leadership sub-scales as the predictor variables. The total variance explained by the model was 52%, $F(6,117) = 7.38$, $p = .000$.

The engagement sub-scale absorption as the outcome variable and the six transformational leadership sub-scales as the predictor variables. The total variance explained by the model was 48%, $F(6,117) = 5.95$, $p = .000$.

Results

The total transformational leadership behaviour scores were statistically significant and positively correlated with the total engagement score. At sub-scale level on the transformational questionnaire the strongest correlation was between the genuine concern scale and total employee engagement score. Further at sub scale level genuine concern had the strong correlations to vigour and dedication on the employee engagement scale. Finally at transformational sub-scale level, accessibility positively correlated to followers' absorption on the employee engagement sub scale measure.

Discussion

The total transformational leadership behaviour scores were statistically significant and positively correlated with the total engagement score, suggesting the leadership style of the leader has a direct impact on how followers feel about their work. The significant relationship between transformational behaviours and employee engagement does not take into account the police leadership context, historically defined as hierarchical, rank based, transactional command and control style (Walker, 1994). In relation to the current change agenda taking place in the police services, the radical Reforms to Policing (2012) argues that in order to transform the hierarchical police in the 21st century, the role of the leader is to be transformational: empowering frontline officers and staff to remove duplication and proudly deliver a better service.

At sub-scale level on the transformational questionnaire the strongest correlation was between the genuine concern scale and total employee engagement score. Where the leadership construct of genuine concern creates an environment for followers to learn and grow, embedding a team learning approach enabling the human system to become a learning process rather than helpless reactor (Senge, 1991).

Further at sub-scale level genuine concern had the strong correlations to vigour and dedication on the employee engagement scale. Implying that transformational leaders are more likely to create meaning for their followers and reduce levels of work related stress and burnout. One explanation for the positive significant relationship between transformational leadership behaviours and employee engagement is offered by Moynihan, Pandey and Wright (2009). They found that transformational leadership is associated with employees' engagement and motivation to deliver higher public service. Thus reinforcing the argument that an engaging leadership style can rally, motivate and support employees during turbulent change.

At transformational sub-scale level, accessibility positively correlated to followers' absorption on the employee engagement sub scale measure. The absorption construct is similar to Csikszentmihalyi's (2003) notion of flow; when working on something that is going well followers become absorbed in the process. This is potentially an indication that the leadership requirement is to be approachable, accessible to followers on their terms not the leaders', in order to increase motivation and satisfaction.

Conclusion

To conclude the total transformational leadership behaviour scores were statistically significantly and positively correlated with the total engagement score, implying that the leadership style of the leader has a direct impact on how followers feel about their work.

At sub-scale level on the transformational questionnaire the strongest correlation was between the genuine concern scale and total employee engagement score. Suggesting the leadership construct of genuine concern creates an environment for followers to learn and grow embedding a learning team approach.

At sub scale level genuine concern had the strong correlations to vigour and dedication on the employee engagement scale. Thus transformational leaders are more likely to create meaning for their followers and reduce levels of work related stress and burnout.

At transformational sub-scale level, accessibility positively correlated to followers' absorption on the employee engagement sub scale measure. Where the role of the leader is to be approachable, accessible to followers on their terms not the leaders', in order to increase motivation and satisfaction.

Therefore the challenge for the organisation is to build a leadership culture that moves away from command and control and towards a continuous improvement organisation. As suggested by McGuire and Rhodes (2009) state that if you change the leadership culture, and then you change the organisational 'culture'. Where the traditional leader / follower relationship is refreshed with a more cross cutting systemic leadership model, which engages others.

Practical application

The findings have implications on the policing context, which is undergoing significant change. Where embedding a culture of engagement and high 'readiness for change' are inextricably linked (Cunningham et al., 2002).

Thus the current study reinforces the argument that an engaging leadership culture can; rally, motivate and support employees during turbulent change. Therefore within the policing services adopting an engaging leadership model can have beneficial impacts on organisational performance outcomes, behaviour change, reduced stress and increased employee engagement and productivity (Kodz & Campbell, 2010).

The research adds to the field of leadership development most particularly within the police organisational context, where problems are ambiguous and solutions uncertain (Grint, 2007). Thus the type of organisational problems influence the leadership style, for example; a technical problem requires operational command in order to 'get things done' during a critical incident. In contrast systemic leadership involves wicked problem, which are; uncertain, with no apparent solution. In this context the role of the systemic leader is based within a human system rather than operating system.

Therefore further research is recommended investigating: how police leaders know when to switch between operational command and systemic leadership.

T12

Symposium

Future Directions for Assessment Reports

Convenor: **Rab MacIver**, Saville Consulting UK Ltd
Strand **Psychological Assessment at Work**

Assessment reports are fundamental to how many assessments are used in practice, although we see relatively little literature on best practice, future directions, validity, acceptability or other important topics in relation to reports themselves. This symposium takes a look at assessment reporting from three different angles.

The first paper argues that the concept of the “user” in psychometric testing is diversifying. In some applications the primary test user is now the test taker, as opposed to other stakeholders. As the feedback needs of test takers can be very different to those of other users, we argue that it is increasingly important for test developers to produce feedback reports with the test taker in mind. We explore why such “democratisation of assessment” is important and introduce a specific case study concerning a career guidance report which provides feedback directly to the test taker.

The second paper focuses on the validity of assessment reports based on a new perspective in validity – user validity. It specifically looks at the validity of development advice related to overplayed strengths provided in a development report and how the appropriateness of development advice for different behavioural scales is related to their criterion-related validity.

The final paper considers the third approach using personality assessments within organisations – which is rather than creating bespoke assessments, how we can bespoke reports based on our pre-existing knowledge of a personality questionnaire’s validity.

The different topics covered in the papers are designed to provide a though provoking and engaging session on how we look at the assessment reports provided for test users.

T12a Paper 1

For the People, By the People: Democratising Test Feedback

Tom Hopton, Saville Consulting UK Ltd
Strand **Psychological Assessment at Work**

Introduction

Providing feedback to psychometric test users is generally considered to be a good thing to do. As is clearly stated in the BPS (2008) *Code of Good Practice for Psychological Testing*:

“People who use psychological tests are expected by the British Psychological Society to provide the test taker and other authorised persons with feedback about the results in a form that makes clear the implications of the results, is clear and in a style appropriate to their level of understanding.”

As this quotation outlines, in addition to the test taker there may be other “authorised persons” who will seek feedback on test scores. In workplace selection activities, for example, there are often other individuals who will be making decisions on the basis of the test taker’s scores.

Clearly, these different test users often have differing needs. The test taker, for example, may want constructive narrative feedback on how to improve their performance in the future, or to improve their self-awareness; other users may seek feedback to compare performance between different test takers and to use such information as part of a decision-making process.

When developing any psychometric test, it is important to consider the nature of the feedback which will be provided after the test has been completed. Something of a challenge is posed to test developers in terms of how best to balance the disparate needs of different test users when developing feedback reports.

We argue in this paper that despite the clear and unambiguous guidance from organisations such as the BPS, feedback from psychometric tests often does not sufficiently support the needs of the test taker. We believe that in many cases feedback reports continue to be more closely aligned to the needs of other test users, rather than the person who actually completed the test. In this paper we outline a number of reasons why this apparent *status quo* needs challenging.

Nature & Purpose

The central concern of this paper is:

How can psychometric test developers design output reports which optimally support the needs of test takers?

We believe that there is a pressing need for such a “democratisation of assessment”, where test takers are better informed about their own workplace capabilities and styles, for at least the following reasons:

1. Better test taker understanding of the implications of test results can help test takers to identify and pursue relevant development opportunities in order to achieve goals. Clear, unambiguous feedback from psychometric tests can help test takers to identify specific practical steps which they can take to develop their own performance. Psychologists are aware from the well-established goal-setting literature (e.g. Locke & Latham, 2002) how important setting SMART goals can be. Why not design feedback reports which help test takers to do this?
2. Better test taker understanding of the implications of test results can help reduce stress in the assessment process, empower candidates and reduce the risk of misinterpretation of test results. Shohamy (2001) has previously articulated a similar view, arguing with regard to language testing that “there is a need to make tests less authoritative and more democratic, to empower test takers and develop safeguards against misuses”.
3. Better test taker understanding of the implications of test results can assist with candidate attraction, self-selection and role fit. Candidates who are better informed about their own capabilities and styles are better placed to identify those roles to which they are likely to be a good fit.

From the perspective of organisations too, if candidates are better able to understand their capabilities and styles and how these relate to specific roles, this may help improve the efficiency of assessment processes and alleviate such issues as when certain roles are heavily oversubscribed, while other roles receive insufficient numbers of applicants.

4. From the perspective of organisations, providing test takers with a better understanding can help improve the perceived transparency and democracy of the process. This can enhance the perceived justice and perhaps even the brand of the organisation - it has been shown that individuals who receive feedback explaining a negative assessment decision react more positively than those who receive no information at all (Bies & Shapiro, 1988).

This paper will explore these issues and introduce a specific case study which clearly brings together aspects of theory, research and practice.

Outline Agenda

Our case study details the development, validation and application in a client setting of a new career guidance model, questionnaire and output report which were specifically designed with the test taker in mind.

The My Self model was developed to be used in career planning, self-insight, self-marketing and employability, coaching and career fit applications. This paper will provide an overview of the developmental process, including how the model was conceptually aligned to existing and established career guidance models (e.g. Holland, 1997).

We will discuss the development of the 12 primary scales of the model and show how they build on the power of the established, transparent and work-relevant Wave model. We will also discuss the conceptualisation and construction of the My Self output report which is designed to be used by untrained users, including test takers. The report provides personalised feedback on an individual's potential strengths, career types they are suited to and practical development tips. We will show how the output report is tailored to the test taker's responses, providing such useful information as to how to gain competitive advantage in interviews from areas of likely strength and how to turn challenge areas into assets.

We then move on to provide empirical support for the validity of the model, looking at correlations with external performance ratings in a mixed occupational sample of N=296 and also construct validity evidence from correlations with a career interests model.

Finally, we will discuss how this model has been adapted for specific organisational uses, with a client case study from the National Bank of Abu Dhabi (NBAD) who are now using a bespoke version of the model aligned to their own performance framework. We will discuss their application of the model, which includes advising people where they are likely to be best placed within their organisation.

Conclusion

Our key messages and insights from this paper are:

- The democratisation of testing practices can bring multiple benefits to a range of users – both to test takers and to organisations using the tests
- One way to develop more democratic testing procedures is to provide appropriate, intelligible and practical feedback to test takers
- We of course recognise that it is not possible or appropriate to do this in all applications, but our general view is that there are far more opportunities to harness the benefits of democratising assessment than are typically taken
- Moreover, our case study shows that it is possible to provide tailored feedback solutions to specific test users which reflect a specific context and its unique requirements

1. What are the main psychological theories, models and research underpinning your session?

This paper draws on a wide and eclectic range of existing theories, models and research – including best practice guidelines for psychometric test feedback, goal-setting theory, organisational justice theory and career guidance theory.

2. How do you see your proposal linking with the main conference theme of Learning, Sharing, Impacting?

This paper presents a clear case study which shows how our learning as test developers over recent years has impacted on tests we have developed. This session provides an opportunity to share our learning and experience with a range of other practitioners. Specifically, we have drawn together disparate strands of research and experience using tests to inform our test development activities and to improve the feedback we can offer to users of our tests.

3. Why is the submission appropriate for the particular strand you have chosen?

This paper discusses how we have applied new learning and experience to improve testing practices, with specific reference to a case study using a psychometric assessment. We therefore believe that the most appropriate strand would be "Psychological Assessment at Work".

4. What do you consider to be the most novel or innovative aspects of the ideas being presented?

In our paper we argue that test developers should consider more explicitly the test taker when developing psychometric models and feedback reports. Our argument is built on a wide-ranging selection of established psychological theory and practice. We are advocating an approach to test development which empowers test takers and tries to reduce the persistent “expert practitioner/naïve subject” dichotomy. This is not something, to the best of our knowledge, which has received a great deal of research attention in terms particularly of psychometric test feedback.

5. Why do you think conference delegates will find the paper or session stimulating and useful?

A number of conference delegates are likely to be test developers themselves and/or engaged in similar activities (e.g. feedback provision) as those we discuss in this paper. It is therefore likely to be useful to many attendees to understand what fellow psychologists are researching and implementing, and to share with other professionals what is being learnt to improve our collective practice.

6. What might the public find interesting about your paper or session?

In the general public, there are many people who have experienced psychometric tests. For many of these people, their only encounter with such tests may have been in a selection scenario (e.g. as part of a job application), and some will have had a negative experience completing psychometric tests. Understanding that test developers are having serious discussions about how to improve the testing experience from the perspective of the test taker could potentially be of great interest. This could help improve the public’s trust in psychologists by showing that we are committed to transparency and reducing the perception of psychologists that we often have “hidden agendas” in what we do.

7. If any, what materials do you intend to make available to attendees and in what format (e.g., printed hand-outs, electronic copies of slides)?

Attendees would have access to electronic copies of our slideshow presentation after the session. The lead author’s contact details will be made available so that they can request these.

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T12b Paper 2

The User Validity of Overplayed Strengths Reporting

Rab MacIver, Saville Consulting UK Ltd, **Neil Anderson & Ana-Cristina Costa**, Brunel University Strand **Psychological Assessment at Work**

Introduction

It has long been known that a test report can be rated as accurate which was written without any knowledge of the individual and is composed of general statements which apply to the majority of the population (Stagner, 1958).

Mainstream, contemporary views of test validity emphasise the importance of evidence to support test interpretations rather than just providing validity evidence for the purpose of the validation of test scores (e.g. American Educational Research Association, American Psychological Association, National Council

for Measurement in Education, 1999; Kane, 2009; Messick, 1989). Test outputs (generated following the completion of an assessment by a test taker) can take many forms: test score(s), profiles, narrative and graphical reports, spread-sheets of multiple candidates' scores, etc. With advances in technology, the options for reporting are increasing with multimedia, video, computer generated avatar, and online interactive reporting possibilities. However sophisticated or simple the test output, there is a need to take validity evidence, beyond the test score, to validate test users' interpretations from the output.

The test user for the purposes of this article is the interpreter of the test output.

User validity is a new perspective focused on the validity of interpretations arising from test outputs (MacIver, Anderson, Costa & Evers, 2014).

"User validity is the overall accuracy and effectiveness of interpretation resulting from the test output."

User validity evidence can take different forms in relation to content and criterion-related validity. From both content and criterion-related evidence, user validity can be in the form of User Available Validity (UAV) or User Received Validity (URV). URV could be, for example, evidence of the validity of interpretations made by a test user after reading a narrative report or a test user interpreting a profile of scores. UAV evidence focuses on the validity of the information/inference being provided by the test output rather than users' actual interpretation of it.

One of the key concerns for the researcher who is investigating the validity of interpretation(s) is whether their focus is on the overall effectiveness of the test in use. Or on the other hand, the potential efficacy of interpretations that are directly given and made available in the output. In terms of showing the effectiveness of the test in use, URV should generally be considered the most important form of validity evidence where a profile of scores is being aggregated to make an overall decision. However, with reports which are complex and have many elements to validate, evaluating the UAV of the individual components may often be an alternative, more appropriate strategy, giving a better indication of the degree to which individual interpretations are efficacious within the output.

This paper focuses on the user available validity of one part of a narrative report which is used for individual development following completion of a behavioural self-report indicator of personality. The development reports display potential overplayed strength narrative statements. These statements are generated in a report when a test taker (or rather questionnaire taker) receives high scores on particular scale dimensions.

The first question that the study addresses is the validity of different types of development advice statements for different scales in the model. How, for example, does the validity relate to the 12 behavioural competency potential sections in the questionnaire or to the Big Five?

The second question relates to whether the report statements which possess more user available validity for providing advice which is appropriate for high, as opposed to low, scorers are actually considered less acceptable (or appropriate).

METHOD

SAMPLE

A mixed occupational group completed the predictors as part of a large validation study involving a multiple predictor instruments and criteria. The criteria in this study were self-rated (N=279-289) and rated by external raters (N=175-192)

PREDICTORS

Saville Consulting Wave Professional Styles (Invited Access) assessment was completed online. This tool uses a format of Likert rating on a nine point agreement scale followed by a ranking to differentiate tied ratings with a most and/or least task.

CRITERIA

Ratings on a seven point appropriateness scale of 283 overplayed strength statements giving development suggestions. 1 "Irrelevant", 2 "Little Relevance", 3 "Some Relevance", 4 "Fairly Relevant", 5 "Relevant", 6 "Very Relevant", 7 "Extremely Relevant".

RESULTS

The average self rating across the 283 overplayed strength development advice statements for self is 3.53 with an SD of .29. The average of the rater rating for all the statements was 3.21 with an SD of .21. In both cases this meant that the average rating fell between 3 "Some Relevance" and 4 "Fairly Relevant".

Table 1 provides a summary of the correlations of the 283 overplayed strengths self appropriateness ratings with the dimensions which generated the score grouped under the 12 Wave Competency Potential scale sections headings. The average column indicates that certain Wave Style section scales have a stronger relationship with their respective overplayed strengths development advice appropriateness ratings. The strongest averages being for Driving Success($r=.25$), Providing Leadership ($r=.19$), Communicating Information and Building Relationships (.16).

Table 1: Summary of Correlations of Self Ratings of Appropriateness of 283 Overplayed Strengths with 12 Wave Competency Forecast Scales (N=279-289)

	Min	Max	SD	Mean
Evaluating Problems	-0.12	0.24	0.08	0.05
Investigating Issues	-0.06	0.17	0.05	0.06
Creating Innovation	0.03	0.22	0.06	0.14
Building Relationships	0.05	0.27	0.05	0.16
Communicating Information	0.06	0.30	0.07	0.17
Providing Leadership	0.06	0.31	0.07	0.19
Showing Resilience	0.01	0.27	0.08	0.14
Adjusting to Change	-0.07	0.24	0.07	0.10
Giving Support	-0.10	0.18	0.07	0.02
Processing Details	-0.21	0.11	0.07	-0.07
Managing Tasks	-0.13	0.10	0.06	-0.01
Driving Success	0.14	0.34	0.06	0.25

Table 2 focuses on raters' views of the appropriateness of development advice of overplayed strengths for an individual they are rating. The criterion-related user available validity (UAV) follows a similar pattern to the pattern for self ratings of appropriateness with the strongest average correlations being for Driving Results and Communicating Information. By contrast areas such as Giving Support, Processing Details, and Managing Tasks do not show a positive relationship on average with the overplayed strengths development advice statements.

The minimums, maximums and SDs in the table show that there is a variation with some of the sets of the overplayed strength development advice statements showing more validity than other areas. Although care should be exercised in interpreting specific correlations given sampling error and the large number of variables.

Table 2: Summary of Correlations of Raters' Ratings of Appropriateness of 283 Overplayed Strengths with 12 Wave Competency Forecast Scales (N=175-192)

	Min	Max	SD	Mean
Evaluating Problems	-0.19	0.05	0.05	-0.03
Investigating Issues	-0.01	0.15	0.05	0.06
Creating Innovation	-0.03	0.21	0.07	0.10
Building Relationships	-0.03	0.26	0.08	0.14
Communicating Information	0.07	0.28	0.06	0.16
Providing Leadership	0.01	0.28	0.07	0.12
Showing Resilience	-0.11	0.32	0.12	0.07
Adjusting to Change	-0.09	0.14	0.05	0.03
Giving Support	-0.14	0.02	0.05	-0.07
Processing Details	-0.15	0.03	0.06	-0.07
Managing Tasks	-0.22	0.17	0.11	-0.07
Driving Success	0.05	0.30	0.07	0.17

The relationship between the mean rating on the overplayed strengths development advice statements and the criterion-related user available validity (UAV) for self reports is shown in Table 3 and for raters in Table 4. The results indicate that for both self reports and raters the more desirable statements (with higher mean acceptability ratings) have less strong criterion-related validity.

Table 3: The Correlation Between the Self Report Appropriateness Ratings and the Criterion Related (User Available) Validities of 283 Overplayed Strength Development Advice Statements Self Ratings

	Mean	SD
Mean		
SD	-0.25	
r	-0.30	0.30

Table 4: The Correlation Between the Raters' Appropriateness Ratings and the Criterion Related (User Available) Validities of 283 Overplayed Strength Development Advice Statements Ratings

	Mean	SD
Mean		
SD	-0.06	
r	-0.24	0.32

DISCUSSION AND CONCLUSION

The overplayed strengths development advice statements are rated on average as having “Some Relevance” to “Fairly Relevant” by both self and external raters. The overplayed strengths statements in this report are provided for the test user to select advice which they deem as appropriate for their development.

The overplayed strengths statements which have the strongest average criterion-related validity (UAV) in this study are for the areas in the Big Five scales related to Extraversion (Communicating Information and Providing Leadership) and Openness to Experience (Creating Innovation). The areas of Agreeableness (Giving Support) and Conscientiousness do not show the same validity (Processing Details and Structuring Tasks – although Driving Success shows more evidence of UAV and is sometimes defined as an aspect of Conscientiousness). It may be that overplayed strengths development advice is less relevant to aspects of high Agreeableness and Conscientiousness than for the other traits – although given the mean appropriateness ratings for these areas it may be that the advice offered is appropriate – but may be more generalizable to those that have lower scores on Giving Support not just those that are more Agreeable (higher on Giving Support).

The present study demonstrates an approach which focuses on the validity of test output reports rather than on test scores and provides the basis of a greater understanding of development advice related to overplayed strengths in the report.

The study assesses the user validity of interpretations in a test output report. It provides a richer understanding of interpretations that result from questionnaires in use, as opposed to the validation of test scores which is much more commonplace but less ambitious and only goes so far in validating a test in use. By gaining a more detailed understanding of which parts of narrative have the best validity and are rated as most appropriate we can start to go further in building reports which are well researched and effective for their intended use.

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T12c Paper 3

Standard Assessment, Bespoke Reporting - The Third Approach

Lauren Jeffery-Smith, Saville Consulting UK Ltd

Strand **Psychological Assessment at Work**

Introduction

This paper provides an overview of the issues that clients and practitioners face in the use of standard versus bespoke personality assessment and reports. It also explores the balance between these two approaches which can provide an optimal solution.

A summary of these two approaches is provided below.

- Standard assessments use off-the-shelf instruments developed by psychometric test publishers.
- Bespoke assessments are designed specifically to measure a bespoke model of workplace performance, usually when the standard assessments available are too generic for the role or organisation.

- Standard reporting involves using a standard model of workplace performance to report against.
- Bespoke reporting involves using a model of behavioural attributes related to a specific role or organisation to assess against.

Standard personality assessment models have been around for many years with many different standard assessments available for a client to choose from. Specific measurement for a particular purpose has also been a long-term aspiration with Woodworth's Personal Data Sheet of 1919 designed to assess officers' capacities to handle the emotional ravages of war. Morgeson et al., in their 2007 review reconsidering the use of personality tests in selection, recommend test users to "make sure you know what the outcome is and direct your personality measure towards that outcome, then you not only are more likely to have validity, but you are also more likely to be able to defend the use of that test if it is challenged". This approach, however, requires a substantial amount of development effort devoted to obtaining the necessary norm, reliability and validity data to support the use of the new bespoke assessment.

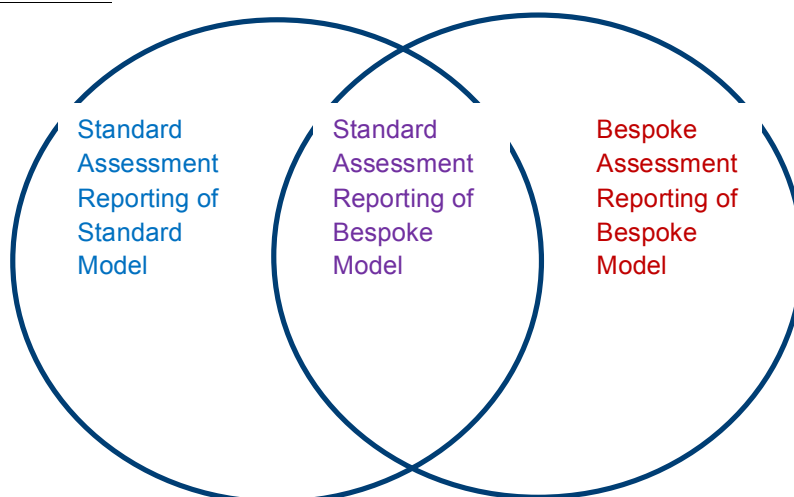
Ensuring the validity of an assessment and its reporting without the development effort of obtaining large amounts data would appear to offer certain advantages. The third approach offers this by combining standard assessment with bespoke reporting.

How can this approach be justified? As Johnson (2007) notes, Lawshe introduced the term of synthetic validity over 50 years ago, although it had little impact within the world of occupational psychology. It is based on two assumptions, firstly that when behaviours are common across multiple jobs, predictors of performance on these behaviours are common across different jobs. For example, if multiple jobs require some kind of data analysis, then identifying analytical potential in candidates would be a valid predictor of their ability to analyse data across the various jobs. Secondly, that the validity of a test for predicting an aspect of a job is similar across jobs and situations, and any differences are the result of sampling error, unreliability or other random factors. Therefore, if an assessment is a valid indicator of analysing data in research assistants, then it should also be a valid predictor in accountants (excluding errors as a result of the reasons listed above).

Similarly, transportation of validity evidence can be achieved where there is validity information already available for a similar job, which implies that the validity evidence will also apply to another comparable job that does not have specific validity evidence available. This provides more equivalent validity evidence for a specific role, but requires evidence for another similar role and is a less generalisable approach than synthetic validity, which can be assumed on a large scale if representative validity is provided for job components.

Meta-analysis and co-validation studies in mixed occupational groups present a basis for synthetic validity and transportation of validity evidence from personality assessments.

The Different Approaches



Benefits and Drawbacks of Different Approaches to Standard and Bespoke Assessment

	Standard Assessment Standard Reporting of Model	Standard Assessment Reporting of Bespoke Model	Bespoke Assessment Reporting of Bespoke Model
Development Effort	None	Limited and One-off	Substantial and On-going
Norm Groups and Benchmarking	High	High	Needs to be developed
Criterion Validation Requirements	Existing evidence (validity transportation)	Synthetic validity - mixed occupational group validity/Meta-Analysis required	Local validation study required
Reliability	Good	Good	Needs to be established
Items/Questionnaire	Existing	Existing	Needs to be developed
Match to model	Relies on User	Consistent	Direct
Theoretical Framework	Solid foundation	Solid foundation	Variable
Face Validity/Buy-in of Assessment	Moderate	Moderate	High
Face Validity/Buy-in of Reports	Moderate	High	High
Fairness	Existing evidence	Existing evidence can be used	Data required
Measuring highly job-specific components	No	No	Yes
Controls for faking	Built in	Built in	Needs to be built

Standard Assessment with Standard Competency Model

Standard reports carry all the advantages of big data, in particular existing norm groups and validity and reliability evidence.

Where there is no existing model or there are competing models used within an organisation, a standard questionnaire with strong evidence of validity in mixed occupational groups or from a meta-analysis has strong benefits, given the lack of requirement for development beyond designing how the questionnaire will be used and any associated training.

Bespoke Assessment with Bespoke Competency Model

Where the job is highly unusual, in that the components that constitute its success are less likely to be represented in an existing model, an argument might be made for developing a bespoke assessment. However to create such a bespoke assessment with high reliability, validity and appropriate norm groups is likely to require huge development effort and time, and the uniqueness of the job needs to be offset against such a large investment. In practice, it is questionable how many jobs are this individual or unique.

A particular concern when developing a new assessment and model is ensuring the independence of constructs and that all major constructs are measured (such as the Big Five). Additional measures must be taken to make sure only items with high reliability and validity are included in the final assessment and any poor items can be removed. Items can be written directly to measure the components of the job, but they then need to be validated. While local validation data is a valuable source of information for organisations, when developing a bespoke assessment validation must be done before the assessment can be used with confidence. Additionally, it is more difficult to validate across jobs to see how well staff are performing relative to others, as bespoke models are not consistent so are less likely to have consistent criteria.

A more pragmatic approach may be to specifically look for any unique behaviours, quality, skills in other aspects of the recruitment process (application form, interview, etc.).

Standard Assessment with Bespoke Competency Model

With the increasing research demonstrating the validity of personality assessments in general and some personality questionnaires in particular, it makes sense to utilise these assessments for recruitment and development. Examples of this research includes Ones et al. (2007), Bartram (2005), MacIver et al. (2009) and Hogan, Davies and Hogan (2007).

These assessments can be mapped to bespoke models so that the reporting is given in terms of the client competencies. Using standard assessments with reporting against bespoke models represents a compromise, ensuring the most relevant competencies for a role or organisation are displayed and the validity, reliability and norm data of an established, standard assessment is maintained (where validity evidence can be synthesised to the bespoke model).

Practical Considerations of Using Standard Assessments with Bespoke Competencies

- Level of Detail:

Getting a good match between a standard assessment and bespoke model requires many detailed, independent scales or facets which can be matched to the content of the model, preferably with a similar level of detail in the standard and bespoke models.

- Scale Correlations:

Organisational or role-specific models are not designed in the same way as standard models of personality, so may not be developed by grouping together characteristics that are similar in most people - this can lead to multiple scales which include similar competencies and therefore are interdependent. This can be mediated when using a standard assessment with a bespoke model, as the existing, representative data from norm groups can be used to check the independency of model (and adjust the mapping if necessary).

- Difficult Bespoke Competencies:

It can be difficult to measure potentially emotive competencies within a client model, or, more generally, areas which are not possible to map to from a standard model. There may be a small minority of cases, depending on the questionnaire and model, where there may be more or less in detail and breadth of the model and competencies cannot be measured from client model. In these cases, a possible alternative approach is to add interview questions or other assessment techniques for these areas. Similarly, the model may benefit from some competency titles being altered so that they are more appropriate and less emotive - this ensures they are more accurately representing the scales and items which drive the scores.

- Transparency of Reporting:

If the links between the standard assessment and bespoke model are clear in the reports, it is possible to see which scales are contributing to a score. Rather than just receiving a score on the client competency, users can also see within the scores where candidates are stronger and weaker, which is particularly useful for recruitment and development. This can also support user validity of the use of the assessment and reports.

Conclusions

Where there is no established model or there are competing models available for a role or organisation, the most suitable assessment technique is likely to be to use a standard assessment with reporting of this standard model. This approach also benefits from established validity, reliability and norm groups. Where there is a very specific model associated with a job role, which can justify the additional effort required, a bespoke assessment with reporting of the bespoke model would be most suitable. Where available time and resources require established validity, reliability and norms of a standard assessment, but there is a need to measure a bespoke set of competencies, combining the methods by mapping the standard assessment to the bespoke model provides a viable third approach. This third approach provides a useful, practical compromise between the first two approaches.

Format of the session

The session will form part of a symposium submitted under the stream of Psychological Assessment at Work. The presentation will involve discussion of the topics above, plus an interactive session where delegates are given the opportunity to map established models to a couple of example bespoke competencies. A hand-out will be provided to delegates to supplement the interactive session.

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T13

Workshop

Springboards to change? What can we learn from the Potential impacts of the Commonwealth Games and Independence Referendum on individuals, organisations and communities in Scotland in 2015?

Dr Ho Law, UEL/Empsy, **David Williams**, Eos Career Services
Strand **Learning, Training and Development**

In July 2014 the Commonwealth Games was a major event for Glasgow, the culmination of years of preparation and involving tens of thousands of citizens, plus competitors and many support organisations from Scotland and internationally. In September 2014 the Scottish Independence Referendum will be one of the biggest constitutional events in Scotland and the UK in decades. Whatever the result this may be a watershed in Scottish political and economic history, and for personal and national identity in Scotland and the UK.

Either or both events may be turning points in many lives, organisations and communities. Political and economic effects may be obvious. But deeper social, psychological and organisational change processes are likely to occur with potential hazards and opportunities in Scottish communities.

The aftermaths of these events will be a major *research opportunity* for observing the effects of major events in work and community organisations from sports clubs to local councils and national governments. A crucial opportunity for practitioners and researchers to *share* their observations and experiences of events and issues that have emerged in Scotland and other parts of the UK since the Games and Referendum. Also to share news of any research or change support programmes related to these events in progress in Scotland or organisations elsewhere.

These changes may have serious impacts on wellbeing and mental health in work organisations and communities. The facilitators can offer a number of theoretical models which participants can consider and test for themselves in their own work and practice after the conference. These include new or emerging methodologies e.g. narrative research and new approaches for empowering mental health initiatives in organisations and communities from a community psychology perspective (Law & Williams 2014). Also techniques for tracking individual and large scale transitions suggested after mass trauma or change events (Williams 2010).

Participants from other parts of the UK or other countries may see wider impacts or parallel examples of the effective of major events on large groups in other settings. These areas have immediate political implications in an election year in the UK, and potential international research and practice applications. These could be potentially sensitive issues of wider public interest. Ethical responsibilities of practitioners and researchers studying social change will be considered. Some change models anticipate potential for considerable growth, development and sometimes transformation after major changes, even after trauma loss or disappointment.

This workshop aims to leverage the above context to provide a focus for researchers and practitioners to learn more about how Occupational Psychology can utilise the advanced theories and research approaches and transfer the understanding into a wider contemporary context.

The main psychological theories, models and research

Learning theories and transition psychology:

- *Experiential Learning cycle* (Kolb, 1984) will be used to conduct the workshop.
- *Developmental learning*.(Vygotsky, 1962)
- transition psychology (Williams 2010)

Model

Universities Integrative Framework in coaching psychology that signifies self and cultural identity (Law, 2013 a, b).

Research

- Advanced multi-level modelling techniques and narrative practices (Law, 2013 a, b).

How the proposal links with the main conference theme of Learning, Sharing, Impacting?

The Process of the workshop will be highly participatory. The workshop will include phases of Kolb's learning cycle to encourage a flow from experience, observation and analysis to generate and share insights and potential priorities for action.

Participants will be invited to raise theoretical, research or professional practice issues that they think could be of value to organisations and communities in Scotland; and how the understanding of such impact may be transferred back to their own context, organisation, community and work.

Why is the submission appropriate for the particular strand you have chosen?

The workshop enables participants to learn about the importance of cultural, national and self identity, and how this understanding can be used as leverage for change at organizational and community levels.

What do we consider to be the most novel or innovative aspects of the ideas being presented?

- Applying the latest occupational psychology theory and research across contexts at meso- and macro levels (linking individuals to organizational / community / societal level as unit of analyses) using real world phenomena as examples.

Why do we think conference delegates will find the paper or session stimulating and useful? And what might the public find interesting about this workshop?

- Inspiration for new research or practice opportunities in 2015.
- Inspirational examples of Community Psychology in practice
- Using the contemporary real world phenomenon as the context for learning and sharing experiences.

Materials available to attendees

Electronic copies of slides

Learning Outcomes for participants:

- Opportunities to reflect on and share personal experiences and observations of recent major events in Scotland, or other areas that affect them, and positive developments in local organisations and communities.
- Opportunities to consider and share models, theories and techniques from their own research and or professional practice that may be relevant or important to understand the psychological aftermath of events and changes.
- Recognising the value of volunteering and participation in social settings for career and personal development.
- Shared review of the range of models of identity, individual and organisational change that may be relevant to research and practice in 2015.
- Examples of the use of models for building change scenarios including stages, hazards and opportunities that may be relevant in the post-Referendum.
- Interim evaluation of changes in progress that may affect client organisations.
- How to evaluate interventions at the community level using qualitative and quantitative methods

Specific content to be taught:

See the main psychological theories, models and research Section.

Teaching and learning methods (include details of any skills practice sessions)

Facilitative and participatory approach following Kolb's learning cycle.

Participant will be encouraged to share their experiences and reflection.

Target audience: practitioners & researchers

The level of expertise the workshop will be aimed at: intermediate to advanced

Will participation lead to any recognised certification or accreditation (if yes, please specify)?

No. though CPD Certificate may be issued if so desirable.

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T14

Award Session 2 – Student prize in excellence

Winner: Phillipa Coan – University of Leeds

Understanding and facilitating spillover effects of pro-environmental behaviour across the home and work domains

- This project focused on understanding and changing employee behaviour to be more environmentally sustainable. More specifically, it investigated the relationship between environmental behaviour carried out at work and at home with the intention of encouraging a stronger link between the two.
- Research to date has primarily focused on promoting environmental behaviour in the home. This is despite the fact that industry accounts for far more environmental degradation than the domestic sector (Eurostat, 2010). Not only have there been limited studies carried out in the workplace, but there is even less research exploring environmental behaviour across the workplace and the home (referred to as 'spillover'). This lack of attention to spillover behaviours represents a major gap both practically and theoretically.
- This project therefore aimed to broaden our understanding of the spillover process by exploring if it happens over time, why it happens, when it is most likely to happen and how it can be facilitated to promote more consistent environmentally sustainable lifestyles across an individual's multiple social contexts. This research fills a critical gap in the current literature, creating new opportunities for academic enquiry.
- This project was carried out in major organisations in manufacturing (LEGO), oil and gas (Maersk), and engineering (WSP).
- Five studies were conducted using multi-method approaches. Empirical evidence was found for multiple types of spillover (including positive spillover, negative spillover and compensatory behaviour). Whilst interviews revealed spillover can occur in both directions, quantitative evidence suggested predominant spillover from the home to the work domain. Furthermore, a number of key individual, social and contextual factors were found to either facilitate or block the process. Of particular interest, Corporate Environmental Values and Personal Environmental Values were found to both facilitate positive spillover and buffer against negative spillover over time.

- Not only have these findings led to a new theory of behavioural spillover across domains but they have also introduced new directions for how to successfully promote more consistent environmentally sustainable lifestyles.

T15

Standard Paper

What is inclusive leadership? A systematic literature review of the empirical evidence

Maria Nitu, MSc Occupational Psychology student at London Metropolitan University, Research Intern at DOP Diversity & Inclusion At Work Group, **Dr Doyin Atewologun**, School of Business & Management, Queen Mary University of London

Strand **Leadership, Engagement and Motivation**

Strand **Leadership, Engagement and Motivation**

1. Literature review and theoretical background

Traditionally, academics and practitioners have focused on the under-representation of minority employees (especially women and ethnic minorities) in organizations and challenges associated with managing diversity, such as discrimination and bias. As diversity literature evolved, focus moved towards a more positive approach, characterized by the need for inclusive organizations in which all employees are fully enabled to bring their contributions (Miller, 1998). There are however currently little empirical and theoretical bases for this work to inform organizational practices of inclusion, especially in the field of leadership (Shore et al., 2011).

Inclusion and leadership

Defining inclusion is a challenge. There is a wide variety and a lack of consistency in the definitions of inclusion proposed in the literature. Shore and colleagues (2011) defined inclusion as the extent to which “an employee perceives that he or she is an esteemed member of the work group through experiencing treatment that satisfies his or her needs for both belongingness and uniqueness”, basing this definition on optimal distinctiveness theory. They suggest a correspondence between belongingness and other diversity authors’ work emphasizing feelings of being accepted in the workplace and perceived as an insider (e.g. Pelled, Ledford & Mohrman, 1999; Lirio, Lee, Williams, Haugen & Kossek, 2008). They also make a connection between uniqueness and previous definitions’ emphasis on valuing contributions from all employees, with diverse employees having “voice” (e.g. Wasserman, Gallegos & Ferdman, 2008). In contrast, Roberson (2006) defines inclusion as the removal of obstacles to employees’ full participation and contribution at work. Finally, Mor Barak and Cherin (1998) focus on organizational processes in influencing inclusion and define it as enabling all employees’ access to information and resources, their involvement in work groups and in decision-making and connectedness with colleagues and supervisors.

The inclusion of employees from diverse socio-demographic backgrounds in organizations is essential for multiple reasons. Firstly, to remain competitive, organizations need to recruit and retain diverse employees (Pitts, 2009; Robinson & Dechant, 1997). Advantages related to the presence of gender- and racially diverse employees include increased sales, customer numbers and profitability (Herring, 2009). There is also a positive correlation between perceived inclusion and organizational citizenship behaviours (Cottrill, Lopez & Hoffman, 2014), between inclusion and non-majority group members’ job satisfaction (Brimhall, Lizano & Mor Barak, 2014) and a negative correlation between inclusion and their intention to leave (Brimhall, Lizano & Mor Barak, 2014). Finally, inclusion has an ethical dimension, as gender, race and other social identities have been historically associated with workplace advantage and disadvantage. This underlines the importance of organizational inclusion for historically-disadvantaged groups and raises the question of leadership’s role in effecting this organizational change.

Inclusive leadership refers to leader behaviours that invite and appreciate others’ contributions (Nembhard & Edmonson, 2006). Leader inclusiveness promotes followers’ psychological safety and moderates the relationship between professional status and psychological safety (Nembhard & Edmonson, 2006).

Inclusive leaders build high leader-member exchange relationships with their followers, with low differentiation between team members; they significantly reduce the negative relationship between demographic diversity and turnover (Nishii & Mayer, 2009). However, leader behaviours that foster followers’ inclusion go beyond the above conceptualizations which focus on the individual leader. Managers have an essential role in how effectively diversity-friendly policies and programmes are applied (Chasserio, Legault, 2010; Mountford, 2013) and the success of such practice is reliant on top leadership commitment (Kalargyrou, 2014; Daya, 2014).

Our unique contribution to theory, practice and understanding

Despite the personal and business benefits of diverse employees’ inclusion and the potential significance of leadership in leveraging this, there seems little good quality evidence to demonstrate exactly how and what

types of leadership are best utilised to inform practice. Although several authors have underlined the importance of leaders' roles in creating inclusive climates (Wasserman, Gallegos & Ferdman, 2008; Shore et. al., 2011), we are unaware of any systematic evaluation of inclusive leadership and its conceptual distinction from other leadership approaches. Thus, there is potential for practical and theoretical contributions in understanding exactly how leadership impacts experiences of inclusion and systematically reviewing the collective body of evidence for this.

A systematic review will summarize the evidence to date and evaluate the extent to which the research conducted on this increasingly-used concept is of a high quality and can form a reliable basis for practice. By conducting the first systematic literature review on leadership and inclusion, we offer a significant contribution to the theoretical understanding leading in contemporary times and to current diversity management practice.

Our key review question is:

“What leader behaviours/styles/approaches/traits are positively (negatively) associated with inclusion (exclusion) of employees?”

2. Methodology

We identified articles studying the impact of leadership on the inclusion of multiple diversity dimensions in organizational settings. The search process was conducted with the supervision of a review panel of academic and practitioner experts. Keywords (including synonyms and root words) relating to leadership/management, inclusion/exclusion, and demographic characteristics (gender, race or ethnicity, culture, age, disability, religion, sexual orientation and social class) were used in combinations to retrieve relevant studies.

Searches were conducted in Web of Science, EbscoHost, Google Scholar (and Google, to retrieve practitioner reports). Citations and references lists were also searched to identify relevant published or unpublished papers. Research centres and electronic distribution lists were identified and directly targeted to request relevant papers. Papers were included in the review if they were empirical studies, systematic literature reviews or publicly available reports in which the study methodology was clearly presented. To further increase rigour, specific critical appraisal criteria were applied to selected studies. Criteria related to contribution to understanding, theoretical underpinnings, methodology used and practical implications.

3. Results to date

To date, 92 papers have been retrieved. 41.3% of these studied diversity related to race, ethnicity or culture and another 46.7% studied gender diversity in organizations. 20.7% studied age diversity, while 10.9% looked at the inclusion of employees with disabilities. Two of the retrieved articles studied social class in organizations and another two studied sexual orientation in relation to the impact of leaders on perceived inclusion. Thus 88% of the papers retrieved so far focused on race/ethnicity or gender, with relatively little focus on the impact of leaders on the inclusion of employees from diverse social classes or with a minority sexual orientation.

Some studies examined socio-demographic characteristics in combination, applying an overall coefficient for the degree of diversity or studying the intersectionality of two or more identities. 57.6% of the articles were quantitative, while 35.9% were qualitative. A further 4.3% used mixed methods to test their hypotheses and a final 2.2% were relatively systematic literature reviews.

4. Findings

In the 92 articles retrieved, inclusion was conceptualized in many ways: (1) measured by questionnaires (The Mor Barak Inclusion-Exclusion Scale - Mor Barak et al., 1998); (2) Feeling valued; (3) Psychological safety. Exclusion was presented as: (1) Obstacles to advancement; (2) Biased task assignments; (3) Feeling ignored, excluded or as “outsiders”; (4) Not feeling valued. Other outcomes related to inclusion and exclusion were also studied: (1) Intention to leave; (2) Job satisfaction; (3) Performance; (4) Organizational commitment; (5) Number of non-male and members of socio-demographic minority groups in the organization.

The most studied leadership approach or theory in relation to inclusion of diverse employees was Leader-Member Exchange, in 6 articles, followed by Transformational Leadership (5 articles) and Authentic Leadership (1 article). Leaders' behaviours salient to employees' inclusion are: (1) providing support, (2) providing recognition, (3) mentorship & sponsorship, (4) top leaders' commitment to diversity, (5) justice/fairness and (6) stereotypes and discrimination. Finally, in terms of leaders' traits, salient aspects were identified as: (1) leaders' similarity with the subordinate and (2) the existence of diverse leaders in organizations.

Data analysis is on-going. Subsequent analysis will reveal how inclusion has been operationalized for different diversity dimensions and which leadership styles/traits/ approaches/behaviours are most effective across the diversity dimensions studied.

5. The relevance of our research to the theme of Learning, Sharing, Impacting

The purpose of a systematic review is to report as accurately as possible what is known and what is not known about a specific subject (Rousseau, Manning & Denyer, 2008). They achieve this goal by exhaustive literature searches of both published and unpublished studies and by conducting a rigorous critical appraisal of the studies. Compared to other types of studies (e.g. unsystematic literature reviews), they are also less open to bias as they follow a scientific and transparent method and provide an audit trail of all the reviewers' decisions (Briner & Denyer, 2012). The conclusions they provide are also superior to empirical studies considered in isolation since they provide a comprehensive summary and analysis of the evidence available on a specific topic. It seems thus logical that they are often placed at the top of the "hierarchy of evidence" (Petticrew, Roberts, 2006).

To our best knowledge, no systematic review on the topic of leadership and inclusion in the context of diversity has been conducted to date, emphasizing therefore the need for conducting such a review in order to advance the knowledge and practice in the fields of Leadership and Diversity and Inclusion. Our findings will offer insight into how diverse employees' perceptions of inclusion can be increased and provide practical suggestions for managers, consultants and HR or D&I practitioners on how they can develop inclusive leaders. Not only will these suggestions be practical, but most importantly, they will also be evidence-based. Therefore, we do not only address the theme of Sharing by encouraging a strong collaboration between science and practice but we also expect to make a positive impact on diverse employees' work experiences, thus also addressing the theme of Impacting.

6. Relevance to Leadership, Engagement and Motivation

We believe our review is highly relevant to the chosen strand, as it focuses on the impact of leadership on minority employees' feelings of inclusion.

7. Usefulness to the audience

Our paper will demonstrate the evidence supporting employees' inclusion or exclusion in organizations, potentially indicate gaps in this literature and provide suggestions for future research. Practically, our findings have implications for Diversity & Inclusion and Leadership Assessment & Development experts. Further, we will share contact details with anyone in the audience interested in obtaining additional supportive information including the PowerPoint slides used and background information about the review. A high-level summary of the review findings will also be made available upon request.

8. Interaction with the audience

Interaction with the audience will be ensured by providing 10 minutes for questions from delegates at the end of the presentation and by trying to engage the audience in a short discussion around what inclusion means at the beginning of the presentation.

T16

Careers Forum

Career opportunities for Occupational psychologists at all stages of their career
Strand Learning, Training and Development

Listen to experts in our field give a 3-5 minute presentation about their organisation, current and future opportunities and their own personal careers experiences.

T17 Workshop

The Psychology of Presentations - What every Occupational Psychologist should know

Learning a Living Working Group

Strand **Learning, Training and Development Learning, Training and Development**

Why should Occupational Psychologists take a special interest in presentations, what can psychology contribute to our understanding of presentations and how can we enhance organisational and individual effectiveness through an appreciation of the "psychology of presentations"? The "presentation" has become a ubiquitous communicative genre over the last twenty years (Knoblauch 2013) with millions being given every working day. Yet what do we actually know about the impact they have on organisations and individuals? Is PowerPoint really evil? (Tufte 2003). What is "TEDification"? The aim of this session is to identify research around work-place presentations and consider how Occupational Psychologists can apply this evidence-base. The session will highlight a diverse body of research including cognitive psychology, persuasion and influence, leadership and charisma, speaker anxiety and narrative construction. It will be interactive with opportunities to share views with peers. We aim to

support professional development but go beyond a normative approach to presentation skills with a reflective and perhaps surprising analysis of a taken-for-granted communication convention.

T18

Awards Session 3 - Practitioner of the year

Winners: Rachel Lewis & Emma Donaldson-Fielder, presented by Bethan Jones Saville Consulting Ltd

This project was commissioned to inform and underpin TfL's Health Improvement Plan (HIP) from 2014-15 onwards. The aims of the work were to help TfL: choose the 'best' health improvement activities; and implement activities in ways that maximise effectiveness.

We adopted an evidence based practice approach and, between August 2013 and January 2014, collected evidence from four sources:

- a) The best available external research evidence – We conducted literature reviews of both the academic and practitioner literature to establish the latest findings from the health promotion, health improvement, public health and behaviour change literatures.
- b) Practitioner expertise and judgement – We conducted a focus group with practitioners from relevant disciplines (OH, HR, H&S and wellbeing) from a range of organisations, as part of a master-class for the Affinity Health at Work research consortium, to gather their views and expertise on health promotion/improvement activities.
- c) Evidence from the local context – We conducted interviews with 18 stakeholders from within TfL from the Occupational Health department, Health Improvement steering group and operational management to understand what was working well and why, what the facilitators and barriers had been and what they saw as priorities for future health improvement activities.
- d) Perspectives of those who may be affected by the interventions – We conducted a questionnaire survey with employees and managers from within TfL to understand their views on priorities for health behaviour change, barriers and facilitators.

We brought all the evidence together to create a set of recommendations for TfL about where to focus their HIP activities, what to implement, and a process for implementing HIP activities in the future. We also provided a checklist to help practitioners within TfL identify whether an intervention would work in their setting. We presented these to TfL as a written report and an oral presentation in Feb/March 2014.

T19 Workshop

"Cracking the Code"

Dr Meghan Craig & Joanna Bleau, YSC

Strand Leadership, Engagement and Motivation

'Cracking the Code' refers to a large research study that was conducted in 2013 to update the debate on gender diversity across the talent pipeline. The workshop will provide participants with up-to-date knowledge on this issue through an interactive presentation of the findings. Framing the discussion around the 10 myths presented in the research report, facilitators will challenge delegates to reconsider their own assumptions, and will explore with participants what the research findings mean to them personally and in their professional roles, and what it means for organisational culture and society at large.

Abstract

'Cracking the Code' refers to a large research study that was conducted in 2013 to update the debate on gender diversity across the talent pipeline. The workshop will provide participants with up-to-date knowledge on this issue through an interactive presentation of the findings. Framing the discussion around the 10 myths presented in the report, facilitators will challenge delegates to reconsider their own assumptions, and will explore with participants what the research findings mean to them personally and in their professional roles, and what it means for organisational culture and society at large.

Overview

Research underpinning the session

The workshop will centre on a large research study that was conducted in 2013 which examined the

psychological and behavioural differences of men and women in the workplace, and explored how differing definitions of success impact on men and women's career navigation and progression through the pipeline. The findings are grounded in data gathered through an online survey completed by over 4,000 men and women across more than 100 organisations, interviews with over 80 women leaders at varying stages in their careers, and investigation of 360 feedback commentaries of more than 500 leaders across 13 organisations. Our research partners also gathered organisational metrics on the gender split at each level of the talent pipeline.

The findings from this research were presented around a framework of 10 gender myths that are frequently cited as the reasons why women don't get to the top. From this base, we structured the report around the realities emerging from our data which call into question the validity of these myths, and explored what the findings mean for organisations and leaders trying to address the diversity gap (See Appendix).

What makes this research particularly challenging & unique is that it seeks to address the causes of gender diversity issues rather than just the symptoms. Interventions focusing on individual change for women have not resulted in substantial shifts in this area, and the research findings here argue that systemic change championed by all leaders is what is needed.

Linking with conference theme: Learning, Sharing, Impacting

In this session, we will use these myths as a provocative and challenging basis for our workshop, testing out our findings with the participants and engaging them in thinking about the part they can play in generating change through their own research, practice and personal development. Delegates will learn about the latest research into Women in Leadership, share good practice examples and collaborate in shaping the impact we can make as a profession and individually in our organisations.

Workshop Structure

Who is it for?

This workshop is suitable for researchers and practitioners alike. Interested researchers will be stimulated by the current findings which shift the thinking on previous literature, and will be encouraged to explore ideas for future research. Practitioners will benefit from the real-world relevance of this topic, and will be provided with useful evidence to support their thinking in the role they may play in gender diversity initiatives. The material covered will not assume any prior knowledge of the subject area, and is open to all levels to attend. The workshop will work best with a minimum of 20 participants and a maximum of 100.

Learning Objectives

The aims of this session are three-fold and framed around the conference theme as follows:

- To provide a space for Occupational Psychologists to **learn** about the research into gender diversity in the workplace
- To **share** experience of good practice and explore the possible avenues for Occupational Psychologists to address the critical challenge of changing the balance of women in the talent pipeline and in leadership in the UK
- To enable Occupational Psychologists to consider the **impact** they can have through their own work in extending the reach of this research and contributing to best practice

Facilitation

The workshop will have an experiential focus, combining the presentation of our research findings with facilitated discussion. Our presenters will engage the participants from the outset in exploring their own perspective of the subject and understanding of the research. A business leader from one of our clients will bring an organisational perspective and share experience of specific good practice in an applied context that brings one or more of the myths to life. Conference participants will share their own experiences in small groups and explore how they can contribute to the work in this field. They will also be encouraged to think about their own bias and how they can challenge this at a personal level.

Details of Workshop Outline

Segment (and	Structure	Content
Interactive introduction to the research 15 min	Presentation by consultants from the presenting organisation.	The opening presentation will “set the scene” for the workshop by introducing participants to the current thinking on gender diversity in organisations. Drawing on policy updates, external research, and our own research, the speaker will frame the topic for discussion around the ten myths described above. An overview of the research conducted will be given, and the headline findings will be described. Participants will be challenged to consider their own assumptions about gender
The organisation perspective 15 min presentation 15 min questions	Presentation and Q&A by Client Organisation	The research findings emphasise that “fixing” women is not the solution to diversity issues and real change is dependent on engaging all leaders – both male and female – in the cultural and systemic changes needed within organisations and societies. This aligns directly with the conference strand of “Leadership, Engagement, Motivation” and will be discussed throughout the workshop. The research will be
Learn, Share, Impact work streams 45 minutes	Round Table Discussions (Facilitated by consultants from the presenting organisation)	Table conversations facilitated by the presenters will explore a number of the myths in some depth, we will provide a short overview of the detail in plenary before asking participants to discuss at their tables. The discussions will ask delegates to consider:
Panel discussion 30 min	Structured Q & A session	A panel discussion will be hosted between the research director, the client representative, and other specialists in the field to explore the questions raised by delegates through the course of round-table discussions and opening presentations. Panel speakers will share their perspectives in a challenging debate of the key issues currently in the diversity spotlight
Concluding Remarks	Presentation in plenary by presenting organisation’s speaker	To close the session, final reflections will be offered by the presenting organisation’s speaker.

Appendix: Ten myths & their research realities (Excerpt from the report)

KEY FINDINGS

Myth	Research Reality	So What
Women don't aspire to senior leadership roles.	Women become more ambitious about senior leadership as their career progresses.	Don't write women off too early. Their ambition grows with their experience.
Women don't stick it out to make it to the very top.	At senior levels, women are more likely to stay around and to miss out on promotion.	Ensure you are supporting your senior female talent to keep progressing.
Childrearing stops women getting to the top.	Childrearing slows women's careers down only marginally. More significant promotion gaps emerge earlier on.	Provide career navigation tools to men and women in the early stages of their careers. Track individual career progression effectively.
Women don't get to the top because they lack confidence.	Women are clear about their abilities and careful not to oversell themselves.	Don't confuse women's balanced self-presentation with lack of confidence.
Women lack the leadership qualities needed at the top.	The majority of men and women's leadership behaviour is the same.	Check whether any marginal differences in leadership behaviour are being reinforced.
Women don't have the networks that open doors to the top.	Women prefer formal over informal contacts when accessing support.	Encourage senior leaders to share their professional networks with female colleagues.
Senior women leaders pull up the career ladder behind them.	Senior women actively seek out other women to join them.	Make senior leaders of both genders accountable for supporting women's progress.
High potential programmes are fast-tracking women.	Women don't see development programmes as a top enabler of career success.	Where possible, invest in development activity that is tailored to the individual. Measure and assess the return on investment.
Formal flexible working arrangements ease women's route to the top.	Informal individualised arrangements made directly with their manager are what women value.	Invest in upgrading the quality of your line management skills.
The business case for gender diversity is working.	The personal case for gender diversity is a more powerful motivator for change.	Elicit personal stories about why gender diversity matters to individuals.

T20

Short Paper

Collaborative research on Dyslexia: adjustments and health outcomes

Nancy Doyle, Genius Within CIC, **Sarah Cleaver**, Honest Psychology Ltd

Strand Well-being and Work

The topic of Specific Learning Difficulties (SpLD) has been attracting welcome media attention this year, with the publication of *The Dyslexia Debate* (Elliot & Grigorenko, 2014) and the review of disability support for Higher Education. These events have called into question the very nature of dyslexia and whether we can distinguish it from a general reading difficulty that might be the result of poor education or low general ability.

While these questions make sense in allocating educational resources, in the workplace there is a clear distinction between those who struggle with everything and those who struggle with specific tasks, as a result of low working memory and/or processing speed (McLoughlin and Leather, 2013). For this reason, we have decided that the term Specific Learning Difficulties is not appropriate for an adult population, and prefer to use 'Cognitive' instead of 'Learning', to reflect the life-long difficulties that are not limited to literacy acquisition. In this paper, the term SpCD will be used to refer to those with Dyslexia, Dyspraxia, ADHD and other, often co-occurring, conditions.

With the support of the Equality Act 2010, Occupational Psychologists are often asked to provide advice and guidance on performance management and reasonable adjustments for adults with SpCD. Research into the experiences of those who struggle is still developing; because practitioners often work on a one-to-one basis, gathering sufficient data for a sample has been a challenge.

In 2013, the DOP Working Group on Enablement was formed, including practitioners with an interest in SpCD. At a meeting in January 2014, the group asked the following questions:

1. We recommend “reasonable adjustments”, but which of them are most highly rated by the users themselves?
2. Is there a relationship between SpCD and health outcomes?

The group collaborated to contribute data to an electronic exploratory survey, combining quantitative and qualitative questions.

This short paper will report the answers to those questions. At the time of submission, 111 individuals who were receiving some form of SpCD support (e.g. assessment, coaching) had completed the questionnaire. Some of the most surprising findings are,

- The most highly rated reasonable adjustments were also the least expensive: simple memory and organisational aids scored more highly than bespoke software.
- Around a fifth of respondents (who were receiving support or had done so in the past) reported that they felt their employer was not supportive of their issues. Many stated that their employer was not aware of their issues.
- Insomnia was reported by 57% of the sample – significantly higher than the 37% present in the UK population (itself, a startling figure) (Morphy, et. al., 2007).
- 38% of the sample had visited their doctor for “stress, depression or anxiety” in the last year.
- Despite these health issues, and excluding those reporting time off for unrelated issues (e.g. broken limbs, maternity leave), the remaining sample had taken fewer days off than the UK population average.

Implications of the findings of this first phase of research include,

- There is no “template prescription” of reasonable adjustments; different things appear to work for different people.
- Occ Psychs have a role to play in educating employers about adjustments – the finding that the most useful are also the least costly may help with this. Similarly, the finding that so many reported a feeling of not being supported by their employer, suggests there is a need for education among employers.
- The health outcomes reported are higher than expected, also suggesting that this group are not being supported effectively. Education may be required among managers and Occupational Health specialists, as SpCD could be among the underpinning issues for those seeking relief for stress, depression or anxiety symptoms.

Informed by the exploratory study, the group is also planning a further phase of research, focusing on health outcomes, and considering variables which may impact on this relationship. Insomnia symptoms, other low-level health symptoms and stress outcomes will be examined in this population, along with a self-efficacy measure and a measure of specific manager support. Preliminary results from this second phase will be available for the conference.

The present research is an interesting first step into collaboration in this field. We are **sharing** it with a view to benefitting from audience interaction – we intend generate discussion around future research methods. As this is such a new and important area of research, we would also like to consult the audience on further variables and relationships to investigate; and benefit from their viewpoints in explaining the model pathways that we are developing. It’s also our intention to point delegates toward our Linked In group for further documents and the opportunity to engage with the group after the Conference.

From our exploratory study there appears to be a significant group of adults in the UK – the generally accepted figure is 10% of the UK population is Dyslexic (Snowling, 2010) and around 2 – 6% is Dyspraxic (National Centre for Learning Disabilities) – who are not experiencing organisational support for their disabilities, despite clear legislative protection by the Equality Act 2010 and a wealth of reasonable adjustment options from which to choose. Occupational Psychologists have a role to play in assisting these adult individuals and educating their employers. There is also a clear need for further research to calibrate the extent of the impact of SpCD on work performance and health, as well as the effectiveness of reasonable adjustments. With a more robust evidence base, the potential **impact** we could have, in improving peoples’ lives and well-being and reducing health issues and “struggle”, is great.

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T21

Short Paper

Personality Trait Development Across 40-years: The Role of Work Experiences

Prof Stephen A. Woods, Surrey Business School University of Surrey, **Prof Sarah E. Hampson & Dr Grant Edmonds**, Oregon Research Institute, USA

Strand **Psychological Assessment at Work**

In this study, we examined the reciprocal influences of personality and work. We used data from the Hawaii personality and health cohort (N=592) to examine the role of occupational environments profiled on Holland's RIASEC model, in the development of Openness/Intellect from childhood (ages 6-12) to adulthood 40-years later. We found that childhood and adulthood Openness/Intellect were linked through occupational environments following a corresponive mechanism (by which traits promote gravitation to environments, and are reinforced and deepened by those same environments). Our findings have implications for how we understand personality development and change as a result of work.

Introduction

How do work experiences influence the development of personality traits through working life? Research on the role of personality traits at work has had an enormous impact on theory and practice in the fields of industrial, work, and organizational (IWO) psychology, and organizational behavior. Significant evidence has accumulated for the effects of personality traits on, among other criteria, job performance, leadership behaviour, vocational interests and choices, job attitudes, and counterproductive behavior at work. The progress of personality trait research in IWO psychology has been facilitated by the Big Five model of personality traits (Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Openness/Intellect), which has permitted research findings to accumulate around a common framework. This research has typically treated the Big Five traits as predictor variables, which are stable over time. However, research in personality psychology has demonstrated that personality traits develop and change in predictable ways across the life course (refs to Roberts etc). There is a growing literature on the reciprocal relations between personality traits and work (Woods, Lievens, De Fruyt & Wille, 2013; Wille et al., 2012; Wille & De Fruyt, 2014; Roberts, Caspi & Moffitt, 2003). In this paper, we examine the reciprocal relations of personality and work from childhood to adulthood, longitudinally over a 40-year period.

One pathway by which personality may be affected by work is proposed in social investment theory (Roberts et al., 2005). Applying the maturity principle of personality development (Roberts et al., 2008), social investment theory argues that normative patterns of personality development (i.e., predictable personality changes and growth that accompany aging: increasing Agreeableness, Conscientiousness, and Emotional Stability, and decreasing Extraversion and Openness/Intellect) occur in response to engaging in social institutions such as education, the labor market, and marriage/long-term relationships.

In addition to normative personality development in response to occupational experiences, there is evidence of non-normative change. For example, Wille et al. (2012) examined the impact of engaging in particular career roles (maker, expert, presenter, guide, director and inspirator) after graduation from college and found that participation in some roles attenuated normative increases, and even promoted decreases, in Agreeableness.

How can the effects of work on personality development be explained theoretically? According to the corresponive principle (Roberts et al., 2003), reciprocal influences of work on personality proceed through the mechanisms of selectivity and corresponive reactivity. Personality traits lead people to select themselves into particular work environments (selectivity), which in turn reinforce, deepen, and strengthen those same (i.e. corresponding) traits (reactivity). The corresponive principle has been applied in a number of studies examining reciprocal effects of personality and work experiences, which report substantial evidence for the corresponive principle (e.g. Roberts et al., 2003; Le et al., 2014).

Recognizing the need to integrate this literature with vocational development literatures more widely, Wille and DeFruyt (2014) examined personality change as a result of work through the lens of the Big Five personality trait model, and the Holland RIASEC model of occupational environments. In a sample of college graduates tracked over a fifteen-year period, Wille and DeFruyt (2014) showed that experience of particular Holland environment characteristics was associated with change in the Big Five in predictable ways. Their results align with research more widely on the associations of the Big Five and the Holland RIASEC dimensions (e.g. Ackerman and Heggstad, 1997; Woods & Hampson, 2010).

Personality Development From Childhood to Adulthood

In their Dynamic Developmental Model of personality and work, Woods et al., (2013) interpret the literature on reciprocal influences of personality and work, and propose a theoretical model that begins in early childhood. They propose that personality traits in early childhood exert influence on the development of vocational preferences and competencies, and therefore, reciprocal relations may be detectable from an early stage of development through to adulthood. Aligned with this proposition, they argue that work may represent an important variable that explains personality stability over time. Neither of these propositions has been tested in the research literature. In particular, the average ages of samples at the start of longitudinal studies tends to represent early adulthood (18-23), preventing extension of theorizing around personality development and work further back in adolescence and childhood.

In the present study, we examine the developmental role of occupational environment across a 40-year period beginning in early childhood. The Hawaii personality and health cohort study offers an unprecedented opportunity to examine the developmental processes of personality and work beginning at a much earlier age than has previously been possible (our youngest participants had their personality traits measured at age 6). Our analyses simultaneously address theoretical questions about the reciprocal influences of work and personality traits over this period, and the role of work in promoting personality trait stability from childhood to adulthood.

Drawing on Woods & Hampson (2010), we hypothesized that Openness/Intellect in childhood would be associated with Artistic and Investigative occupations, which in turn would be associated with adulthood Openness/Intellect. Put differently, childhood and adulthood Openness/Intellect would be linked through occupational environments following a corresponive mechanism. We tested our hypotheses using mediation models, a methodological innovation and further contribution of our study.

H1: Childhood and adulthood Openness/Intellect are linked through experience of Investigative and Artistic occupational environments via a corresponive mechanism; that is Artistic and Investigative occupational environments will mediate the pathway from childhood to adulthood Openness/Intellect.

Method

Participants were members of the Hawaii Personality and Health cohort. This cohort comprises over 2,000 children from entire elementary school classrooms on the Hawaiian islands of Oahu and Kauai who underwent a personality assessment conducted by their elementary school teachers over 40 years ago. The present sample was limited to the 592 who provided information about their current or most recent occupation(s). The sample reflected the gender ratio of the original childhood cohort with near equal numbers of men and women, and the ethnic diversity of the Hawaiian population (42% Japanese Americans, 18% European Americans, 17% Native or part Native Hawaiians, 8% Filipino Americans, 6% Chinese Americans, and 9% of other ethnicities).

Childhood personality traits. The teacher assessments of childhood personality traits were conducted in 1965 or 1967. Teachers rank-ordered the students in their classrooms on each of 43-49 personality attributes, using a fixed nine-step quasi-normal distribution. Goldberg (2001) demonstrated that these assessments yielded the five-factor structure. The validity of these childhood measures as predictors of adult outcomes has been demonstrated in previous studies (e.g., Woods & Hampson, 2010).

Adult personality traits. Beginning in 1999, participants completed the first adult questionnaire, which included the 44-item Big Five Inventory (BFI; John & Srivastava, 1999). Alpha reliabilities for this measure for the Hawaii cohort were as follows: .84 for Extraversion, .78 for Agreeableness, .80 for Conscientiousness, .82 for Emotional Stability, and .79 for Intellect/Openness.

Creating individual RIASEC profiles. RIASEC profiles were derived by a two-step process. First, the occupations listed on Q3 were matched to occupations on the O*NET database (O*NET Resource Center, 2003), which gives ratings on each of the RIASEC dimensions for each occupation. Six scores, one for each RIASEC dimension, ranging from 1 = *highly uncharacteristic of this job*, to 7 = *highly characteristic of this job* are provided for each occupation. The validity of the ratings has been established in previous studies (e.g. Rounds, Smith, Hubert, Lewis, & Rivkin, 1999). A more detailed description of this first step is provided by Woods & Hampson (2010). In the second step, these scores were used to represent an occupation environment profile for each participant.

Results

We created path models where each RIASEC dimension operated as a mediator of the association between the personality trait in childhood and the same trait in adulthood. This model is depicted in Figure 1. Mediation effects were tested by estimating the indirect effect of the child trait on the adult trait through the RIASEC dimension. We used a bootstrapped resampling method in Mplus to estimate the indirect paths and also bootstrapped 95% confidence intervals on these. Openness demonstrated corresponive effects

through two RIASEC dimensions. For jobs characterized as Investigative, we found that the association between childhood Openness/Intellect and the same trait in adulthood was mediated by Investigative job characteristics ($\beta = .02$, 95% CI [.01, .04]). We found a similar mediation effect for Artistic jobs, such that Artistic job characteristics mediated the association between childhood and adult Openness/Intellect ($\beta = .03$, 95% CI [.01, .05]).

Discussion

Our results confirmed our hypothesis. Following previous theorizing in this area (e.g. Roberts et al, 2003; Woods et al., 2013) we tested whether childhood and adulthood Openness/Intellect were linked through a corresponive mechanism; that is the same traits that select people into environments are developed in response to those environments.

In our analyses, we confirmed this processes. Replicating Woods and Hampson (2010) childhood Openness/Intellect was correlated positively with Investigative and Artistic environments in adulthood. Openness/Intellect in adulthood was in-turn predicted by Investigative and Artistic environments. Our results show that children who were more curious and imaginative were more likely to work in Investigative and Artistic jobs, and adults who worked in more Investigative, Artistic, environments were more likely to be higher on Openness/Intellect in mid-life. Our analyses also confirmed the corresponive process for Openness/Intellect with Investigative and Artistic. Children higher on Openness/Intellect were more likely to work in highly Investigative and Artistic environments, and experience of those environments was correspondingly associated with higher adulthood Openness/Intellect.

Our results have implications for how we understand personality traits in the context of learning both theoretically and practically. For theory, our study provides further evidence of personality change through adulthood and underlines the importance of work in the process of personality development. For practitioners working in the fields of learning and development and vocational psychology, there are implications for how we perceive the impact of workplace learning interventions, and career changes and stages on personality. We may find in time, that theory increasingly recognizes that learning we take from our working lives has a substantial impact on who we are.

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T22

Short Paper

Data Collection using Mechanical Turk; what we know so far...

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Strand Research Design, Analytical Techniques and Practical Applications

Research shows that Mechanical Turk (MTurk), an Internet crowdsourcing application which is used to connect workers with jobs/tasks, provides a viable means for collecting data across a range of

psychological constructs and methodologies. One area for further research is the use of MTurk to trial items for new assessments, specifically, what factors are related to high quality trial data collection, and how MTurk compares to other online data collection methods. This paper will present research examining MTurk, to provide an understanding of considerations for high quality, rapid data collection and the pitfalls to be aware of when using MTurk.

Main Body

Mechanical Turk (MTurk) is an online worker system run by Amazon.com. It offers quick, easy, and inexpensive access to online research participants. MTurk uses Internet crowdsourcing to connect potential workers with jobs or tasks, and has become a dominant crowdsourcing application for social science. Since the website (www.MTurk.com) was established, it has grown to host 500,000+ anonymous workers from 190+ countries. The “requester” (employer) posts a “human intelligence task” (HIT) on the site with a defined set of parameters for the task (e.g., complete a survey, translate a piece of text, rate a product, etc.) and indicates the payment and allotted time for successful completion of the task. The requester can also set pre-screening qualifications to identify specific characteristics in participants (e.g., location, specific age group, ethnicity, socioeconomic status, level of education, etc.) before they can complete the task. Both the tasks and the payment are provided by the “requester”, which pays MTurk “workers” based on the quality of their work. Crowdsourcing websites such as MTurk have enabled employers to mobilise hundreds of thousands of potential participants, quickly. This ability to access the “crowd” has interesting implications for researchers. For example, a researcher can post a draft survey on a crowdsourcing website and collect data to examine the reliability of the instrument for the general population or select subgroups and look at the reliability of the survey for different populations (e.g., with varying levels of education). Researchers can also go one step further and design an instrument where each survey item is followed by either an open-ended text box or a rating scale (or both), allowing participants to assess how “understandable” each survey item is. Multiple drafts of survey items could be quickly developed and refined through this crowdsourcing process.

We collect a lot of data, mainly data on new assessment types and content. In the past few years we have experimented with MTurk as an alternative to our standard online data collection methodology, due to the additional options and potential that it provides, e.g. faster data collection, ability to target a specific population, and diversifying the risks of relying solely on one other method. But, we are keen to learn more about whether we get good data from MTurk, for different instrument types. As use of MTurk has grown, so have questions from researchers about its reliability and the quality of data provided. We are also interested in the answers to these questions and have therefore begun a phase of systematic research designed to examine the potential of MTurk as a resource for research and trial data.

In a recent study we compared MTurk with our standard online data collection methodology, collecting data on a personality/competency instrument. The standard method does not pay participants, but offers feedback on performance on the instrument. The main findings were as follows:

- Data collection speed:
 - MTurk is similar to our standard method in the initial few days but tails off later on.
- Instrument completion speed:
 - Test items are completed quicker on MTurk than our standard method (3-5 seconds per item on average using MTurk, compared to 4-7 seconds per item on average using our standard method).
- Response consistency:
 - MTurk workers demonstrated greater response consistency (higher F-Ratio and higher reliability across all scales).
- Score values:
 - Test takers score higher on average across scales when using our standard method.

Further research is now underway to enable us to better understand the best practices for designing and executing studies where MTurk is used to collect data. We will look at what we can expect in terms of the reliability and quality of our data when we use MTurk and pay workers to provide data. We will experiment with variables that may facilitate high quality and rapid data collection (e.g., pay, task attractiveness), and examine impact on data quality and rate of data collection, and we will examine the pitfalls to be aware of when using crowdsourcing applications such as MTurk.

We believe that MTurk offers a highly valuable opportunity for data collection and this study will allow us to provide recommendations for other researchers using MTurk on the best practices and important considerations for applying this seeming easy method of obtaining data.

T23

Short Paper

Authentic Leadership and leader Happiness at Work

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Strand **Well-being and Work**

Introduction: As an individual leader, there is growing evidence that an authentic approach to leading is desirable and effective for achieving positive outcomes for the individual (George, et al, 2007). The theory of Authentic Leadership has emerged over the last ten years from positive organisational behaviour literature (Walumbwa et al, 2008). Authentic leadership deals with inner self-aspects of leadership. It builds on concepts of authenticity, which are central to positive psychology (Harter, 2005), and borrows largely from more charismatic models of leadership such as transformational leadership (Burns, 1978). This research explores the impact of Authentic Leadership on leader Happiness at Work.

Previous research shows that authentic leadership relates to increased levels of wellbeing in followers (Cassar and Buttigieg, 2013). However, investigations into the personal impact for leaders of adopting an authentic approach have received less attention. Because authentic leadership borrows some conceptual substance from transformational leadership, which has been shown to relate to positive mental states at work such as wellbeing (Arnold et al, 2007), it may be that authentic leadership also relates to positive mental states in leaders. One challenge with using the concept of well-being is its diffuse nature (Ryan & Deci, 2001). The concept of happiness at work has been proposed as a specific positive mental state and offers a way to more specifically understand the impact of authentic leadership for leaders. Happiness at work represents the feelings an individual has towards work; it is relatively stable over a period of months (Lyubomirsky, Sheldon & Schkade, 2005). However, it is sensitive to change through environmental factors (Seligman et al, 2005).

Hypothesis 1. Authentic Leadership will be positively related to leader Happiness at Work

Previous research suggests that part of the reason for authentic leadership relating to positive mental states is based on whether people find their work meaningful (Cassar and Buttigieg, 2013). While this has been investigated in followers, there is less evidence on whether the meaningfulness of work plays a mediating role in the relationship between authentic leadership and leader happiness at work.

Hypothesis 2. Meaningfulness at Work will mediate the relationship between Authentic Leadership and leader Happiness at Work.

If authentic leadership does have positive outcomes associated, then means of developing authentic leadership will no doubt be helpful. Fusco, Palmer, and O’Riordan (2011) propose a coaching model for developing authentic leadership, which suggests that an important part of development is to understand one’s own emotions so one can understand how they are expressed.

Hypothesis 3. Emotional Intelligence will be positively related to Authentic Leadership

Method

Participants

Participants in the study comprised a heterogeneous sample of 169 leaders from a large supermarket chain (89 women and 80 men) with a mean age of 32.9 years. Participants were invited to complete the measures as part of a development workshop on customer care.

Measures

Authentic leadership: The 16-item Authentic Leadership Questionnaire (ALQ) was used (Walumbwa et al, 2008). The ALQ has four dimensions comprising: Transparency, Morality, Balanced Processing and Self-Awareness. Items were scored on a five point scale from 0= not at all to 4=frequently. An example item includes: “seeks feedback to improve interactions with others”.

Meaningfulness of work: 7 items scale of Meaningfulness at Work was used (Spreitzer, 1995). Items were scored on a five point likert scale from 1=strongly disagree to 5=strongly agree. An example item includes: “I understand what gives my work personal meaning”

Happiness at work: The 29 item iPPQ Happiness at Work measure was used (Edmunds et al., 2009). iPPQ provides one global measure of happiness at work. Items were scored using a seven point scale from 0=not at all to 7= entirely. An example item includes: “do you feel you are doing something worthwhile?”

Emotional Judgement Inventory: The 80 item Emotional Judgement Inventory (EJI) measure was used (Bedwell, 2003). The EJI has eight dimensions comprising: Being Aware of Emotions, Identifying Own Emotions, Identifying Others’ Emotions, Managing Own Emotions, Managing Others’ Emotions, Using Emotions in Problem Solving and Expressing Emotions Adaptively. There is also an Impression Management scale. Items were scored on a seven point scale from 1= I absolutely disagree to 7=I absolutely agree. An example item includes: “I keep my feelings to myself”.

Results

Correlation and linear regression were used to explore the relationship between Authentic Leadership, Happiness at Work and Meaningfulness at Work, and to identify mediation effects. Significant results are presented below (Figures 1 and 2). Authentic Leadership related to Happiness at Work and Meaningfulness of Work. Meaningfulness of Work also related to Happiness at Work.

Figure 1: Inter correlations between Authentic Leadership, Meaningfulness of Work and Happiness at Work

Variable	Mean	SD	1	2	3	4	5	6	7
1.ALQ global score	50.0	5.8	1						
2.ALQ_ Transparency	15.8	2.3	0.72**	1					
3. Morality	13.5	1.8	0.72**	0.42**	1				
4.Balanced processing	9.3	1.6	0.68**	0.25**	0.41**	1			
5. Self-awareness	11.5	2.4	0.75**	0.33**	0.31**	0.49**	1		
6.Happieness at work	5.5	0.7	0.47**	0.36**	0.41**	0.26**	0.40**	1	
7.Meaningfulness of work	5.2	1.1	0.62**	0.22**	0.40**	0.31**	0.41**	0.46**	1

Notes: ** $p < .01$

Figure1.

Figure 2. Suggests a strong correlation between the predictor, criterion and mediation variables. Baron and Kenny’s (1986) approach to mediation and Sobel tests were then used to understand the mediating effect of Meaningfulness of Work.

Steps satisfied (Baron and Kenny, 1986)	Adjusted R2	F-ratio	Beta	P
1. Authentic leadership is a significant predictor of Meaningfulness of work	0.208	41.783	0.462	0.000
2. Authentic leadership is a significant predictor of Happiness at work	0.218	42.85	0.467	0.000
3. Authentic leadership is a significant predictor of Happiness at work, when controlling for meaningfulness of work	0.641	139.5	0.126	0.000

Figure 2.

Since the standardized regression coefficient (Beta) for Authentic Leadership is reduced, this suggests a partial mediation effect of Meaningfulness of Work on the relationship between Authentic Leadership and leaders Happiness at Work.

The above criteria can be used to informally judge whether or not mediation is occurring, but authors such as McKinnon and Dwyer (1993) have made popular statistical methods such as the Sobel test, which can assess formally whether mediation is significant or not.

Figure 3: Results of the Sobel analysis:

Regression step	Raw unstandardized regression coefficient	Standard error
1. Regression with independent variable (Authentic leadership) predicting the mediator (Meaningfulness of Work)	0.088	0.014
2. Regression with independent variable (Authentic leadership) and mediator (Meaningfulness of Work) predicting the dependent variable (Happiness).	0.483	0.036

Figure 3.

Results of the Sobel test suggest that this partial mediation effect is significant (Sobel test = 5.69804, SE=0.007; $p = 0.00$).

The results suggest that part of why Authentic Leadership relates to Happiness at Work is due to the Meaningfulness of Work for leaders. The same process of mediation modelling was followed for the individual constructs that make up Authentic Leadership.

Mediation analysis was also carried out to understand the relationship each subscale has to Happiness at Work. All subscales showed a significant relations and all were mediated by the Meaningfulness of Work.

These findings indicate that hypothesis 1 and 2 can be accepted be rejected

Multiple regression analysis was used to test if the Emotional Intelligence scales significantly predicted Authentic Leadership. The results of the regression indicated that two predictors explained 29% of the variance ($R^2=.29$, $F(2,139) = 28.2$, $p < .01$). It was found that Managing Other Emotions significantly predicted Authentic Leadership ($\beta = 0.270$, $p < .001$), as did Managing Own Emotions ($\beta = 0.416$, $p < .01$).

These findings indicates that hypothesis 3 can be accepted

Discussion

Authentic Leadership shows a relationship to Happiness at Work and is mediated by Meaningfulness of Work. This suggests that authentic leaders tend to find more meaning within their work as their approach allows them to follow their own values, morals standards and principles, which in turn leads to increased happiness at work.

A mediation effect of Meaningfulness of Work was found for all sub-scales of Authentic Leadership: Self-Awareness, Relational-Transparency, Moral Perspective and Balanced-Processing. These findings extend our understanding of previous research through identifying that Authentic Leadership relates to specific positive mental states such as Happiness at Work. In addition, that each sub scale of Authentic Leadership also relates to Happiness at Work and is therefore important to understand.

While improvements in followers has been found based on levels of authentic leadership (Grandey et al, 2005), it was not established whether these improvements are also found in leaders themselves. This may in part be due to the nature of the performance metrics used. Previous work has used customer satisfaction ratings as measures of performance. It may be that this type of performance data provides a more accurate indication of the impact of authentic leadership than does annual performance review data. Future directions could look to gain access to different types of performance data to establish more clearly the impact of authentic leadership.

Previous research has proposed coaching models to develop authenticity in leaders (Fusco, Palmer, O'Riordan, 2011). This current research supports Fusco, Palmer, O'Riordan (2011) model and suggests that using psychometric tools to provide insight into emotional awareness can lead to the development of authenticity in leaders. However, the findings clearly show that understanding one's own emotions does not account for the whole story of authenticity in leaders, as is also proposed by Fusco, Palmer, O'Riordan (2011) model. Future research direction could aim to identify additional antecedents of Authentic Leadership, possibly by testing different elements in Fusco, Palmer, O'Riordan, 2011 model such as goals, identify and values.

This study suggests a relationship between Emotional intelligence and Authentic Leadership and also between Authentic Leadership and Happiness at Work. This is something not previously established. The findings suggest that there is a need to consider leadership from a more intrinsic perspective and to develop an agenda that look first at the person's internal sense-making process of who they are as a leaders, before moving on to develop their behaviours as a leader.

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T24

Standard Paper

Sharing of how OP is impacting Social Services in Singapore

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Strand Research Design, Analytical Techniques and Practical Applications

Social Services in Singapore, by and large, do not employ their own I-O psychologists and there is no national move in this direction. Yet charities face an increasingly sophisticated public who have generous hearts, but sceptical minds. They want to know how their charity dollars will be spent before parting with the money. This demand for greater transparency from charities is not unique to Singapore. In fact, charities around the world face similar challenges in having to produce evidence for programme effectiveness and client outcomes. Here is how OP can impact and shape future Social Services.

ABSTRACT

Nature and Purpose of Session

The nature and purpose of session is to share how OP is impacting evidence-based practices in the Social Services in Singapore. Even at a time when trends are showing charities with increasing challenges and competition to obtain funding and donations, how OP can play a vital role in the creation of worthwhile ventures – through the sharing of best practices, continuous learning and improvement, and the development of strategic alliances.

Paper will consider two case studies: *First* is a Work Readiness Attachment Programme (WRAP) at a Voluntary Children and Young Persons’ Home (VCH) – and how OP has added value to the whole consultancy cycle, programme evaluation, including action research and a service excellence framework. *Second* is a potential research project that looks at Burnout Prevention and Employee Engagement in the Youth Services – with practical applications to increase innovation and/or productivity in the sector.

Case Study 1: Work Readiness Attachment Programme (WRAP)

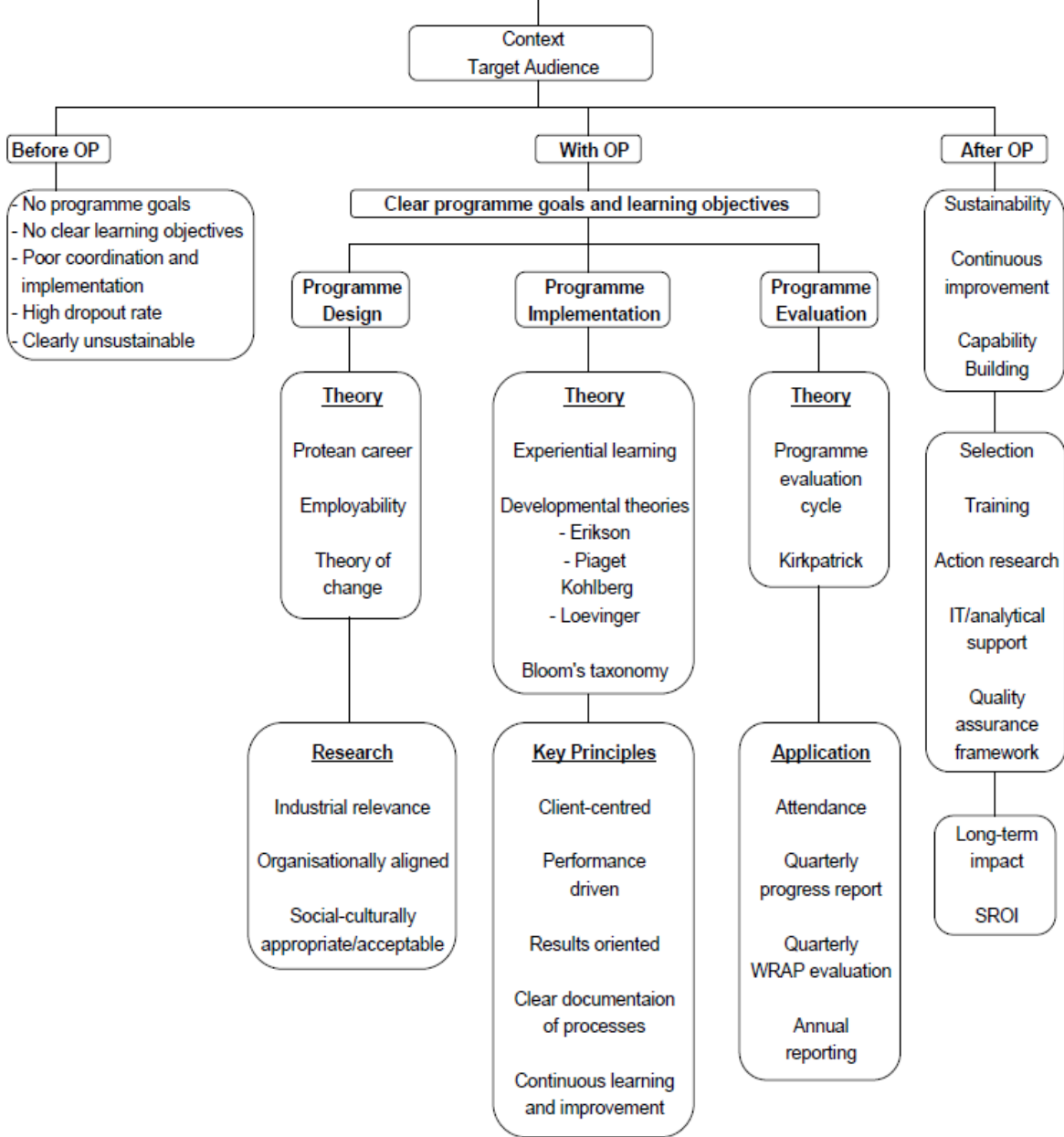


Figure shows an outline of the case study presentation. Delegates can expect engaging slides and work sample illustrations, with 5 minutes at the end of segment for questions and discussion.

Case Study 2: Burnout Prevention and Employee Engagement in Youth Services

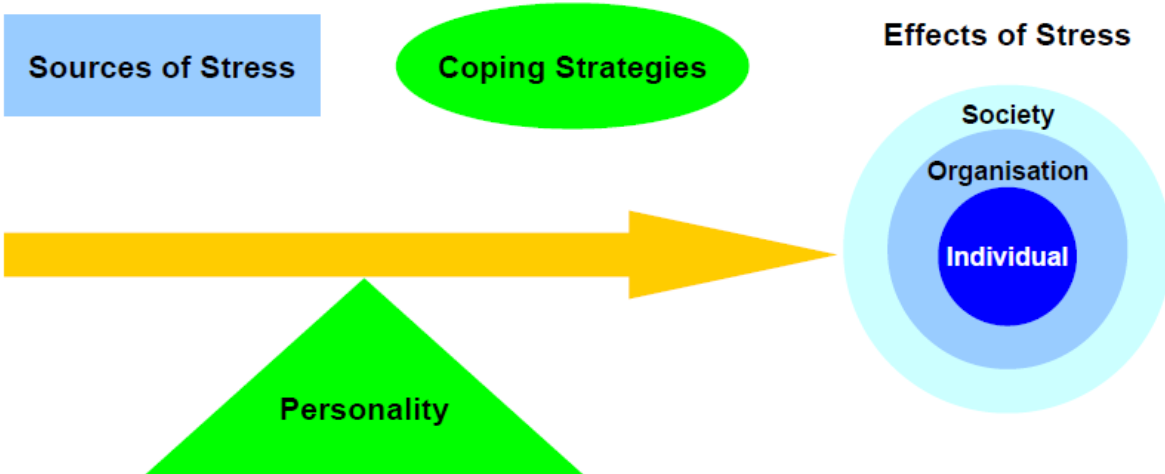


Figure provides a graphic overview of a research project which was first initiated to examine major factors that predict burnout among youth workers in the Youth Services. Specifically, the study aims to answer:

- What is the stress level currently operating in the Youth Services? How is the level of stress different among youth workers who are community-based, school-based, residential-based, and ministry-based?
- What could be some probable sources of stress (e.g., job type or work function, case load, occupational demands, clarity of role, control over work, manager and peer support, relationship with colleagues, organisational culture and change)?
- Which groups and/or individuals may be more susceptible to burnout than others? Can certain individual characteristics and/or coping responses mediate one's vulnerability towards burnout? Can protective factors be enhanced towards greater health and well-being?
- What can individuals, organisations, and policy makers do to prevent the burnout of youth workers? How can research be made ongoing and international, strategic alliances forged – to take collaborative partnerships to the next level – while truly revolutionising the way Social Services operate in Singapore?

This latter case study looks at research directions, and possible collaborations between UK universities and the Social Services in Singapore. Collaborations may take the form of:

1. Prospective MSc students who are interested to base their dissertation in social service settings in Singapore
2. Universities who are keen to offer partial scholarship to international students – who will then base their dissertation on Singapore's social services
3. Universities who are willing to offer PhD scholarship by distance e-learning

Key Messages and Insights

Conclusively with a clear link to **Learning, Sharing, Impacting** (conference theme), the presentation offers a fresh and inventive perspective to how OP is impacting the Social Services in Singapore. Through the sharing of practical case studies, delegates can expect a variety and diversity to the conference programme with clear application to work and practice.

The truth be told, this presentation would not have been made possible – or any of the OP work in the Social Services in Singapore – if not for a £2,000 scholarship that was first offered to an international student more than 4 years ago. You may not think very highly of the amount, but it was substantial enough to help fulfil the dreams of that student, who for the longest time (14 years) had harboured the hope of studying abroad.

It is the same individual who is presenting the paper, who now wants to contribute back to the professional body who first gave her that opportunity to pursue her dreams of being a Chartered Psychologist. The impact BPS has on her is a ripple effect – where the same generosity that was bestowed on her, she now seeks for others – and she will continue to promote and advance the discipline of OP in her future endeavours.

T25

Keynote Session

Adventures in Psychology in a Growth Economy

Nanette Fairley, Vice President - Corporate Psychology - Emirates Group as well as the Founder of Innovative HR Solutions

Dubai really came on to the world's radar in the late 80's when it launched its own international airline. This airline, and the country itself, grew at an enormous pace. Observing what Dubai was up to next became a bit of an international past time! The early leaders of the United Arab Emirates, were extremely visionary and this vision has been driven through infrastructure planning, healthcare, education, and leadership development to name just a few areas. This keynote presentation will explore the growth of psychology in the region, along with some of the learnings and challenges along with way. With some 21 years in the

region, Nanette has had the privilege of being a part of this growth and will share her thoughts and experience of the journey.

T26

Standard Paper

Why high-potential programmes are failing and what you can do about it

Eugene Burke, Emily Hill & Sara Asady, CEB SHL Talent Measurement

Strand **Psychological Assessment at Work**

This paper focuses on high-potential programmes and the reasons many are failing to deliver on the investment that organisations are making in them. Building on a decade of research, this paper draws on a database of 6.6 million people globally to show how intelligence on the aspiration of employees, their wider potential for more challenging roles, and behavioural indicators of their current and future engagement with the organisation substantially change the odds for the success of high-potential programmes. A cornerstone of this paper is the strategic value of assessment data in driving better returns from development investments.

This paper focuses on high-potential programmes and the reasons many are failing to deliver on the investment that organisations are making in them. Building on a decade of research, this paper draws on a database of 6.6 million people globally to show how intelligence on the aspiration of employees, their wider potential for more challenging roles, and behavioural indicators of their current and future engagement with the organisation substantially change the odds for the success of high-potential programmes. A cornerstone of this paper is the strategic value of assessment data in driving better returns from development investments.

Value to the conference and stakeholders:

- Underpinning this paper is the question of how do organisations improve their definition and assessment of potential. This does not draw on any single psychological theory, but does build on recent discussions such as that of Silzer and Church (2009) .
- The paper links directly to the main theme of learning, sharing and impacting:
- First, by sharing the learning from a decade of organisational research
- Second, by sharing the insights from that research and particularly how assessment data can be used to address key strategic HR issues
- Third, by showing the impact that applied occupational psychology research can have on how organisations frame key issues and take practical action to change the likelihood of success from talent investments
- The paper is appropriate for the strand selected as it draws on an extensive database of assessments and talks directly to how assessment data provides value in helping organisations manage talent more effectively
- The paper offers a number of novel insights, specifically how an outcome driven approach can simplify the problem space and provide an articulation that shows value to senior stakeholders, HR and the C-suite. It offers innovation in the application of big data and HR analytics to assessment data to surface the key risks to high-potential programmes, in identifying key talent constructs and how assessment can be used to change the odds of success for talent programmes
- Delegates will find the paper of interest in terms of the content area, high-potential programmes, the application of big data and analytics within an applied occupational psychology frame, as well as how issues, data and solutions can be framed for lay audiences and senior stakeholders
- The wider public, particularly press, will find the paper of interest given the poor returns being seen from these programmes, how this impacts on younger talent in organisations, and how organisations need to rethink these investments at a time when the UK economy is surfacing from the recent economic downturn, and when identifying future managers, leaders and technical specialists is becoming critical to sustaining economic growth as well as the challenges that public sector organisations are facing
- Those attending the session will have free access to a recent report describing the research, models and data in detail. This does not describe a specific commercial solution as it is framed as a thought piece, so the request for materials not to push a specific commercial pitch will be met through this report. Slides used in the session will also be made available.

How will the session be interactive? The session will be framed in three 10 minute segments: the problem, the research findings and implementation of the findings. Each segment of the presentation will flow through a cycle of a short data share to invite commentary from the audience, with each cycle of interaction setting up a segue to the next section of the presentation. This series of three short cycles will also allow for Q&A and observations towards the end of the presentation. As such, audience interaction will be more than the 10 minutes requested while also allowing for a more engaging way to share the insights from the research

¹ Silzer, R., and Church, A. H. (2009). The pearls and pitfalls of identifying potential. *Industrial and Organizational Psychology*, **2**, 377 - 412.

Are high-potential programmes delivering?

The evidence suggests they are not.

Fifty-five percent of high-potential candidates drop out of their programmes within five years and 46% of leaders moving into new roles fail to meet their business objectives. Hardly surprising that HR professionals lack confidence in these programmes with 1 in 2 reporting that they are either dissatisfied or highly dissatisfied with their programmes today.

The fundamental issue confronting organisations is how to identify their true high-potentials. Many rely on manager nominations alone.

Managers may make nominations to deal with pressure from an employee who persists in advancing their case while other employees may be nominated because the manager sees these programmes as a means to deal with a specific employee development need. On the other hand, managers may fail to nominate an employee because they are concerned that the employee will be lost to another part of the organisation if they are labelled as high-potential.

One common error is to assume that the organisation's high-performers are also its high-potential employees. This is a mistake for two reasons. First, it confuses performance to date with effectiveness in future roles where the talents and performance expectations will be more challenging. Second, our research shows that most high-performers lack what it takes to be high-potential.

An outcome driven approach and a simpler definition of high-potential

Despite the substantial investment that these programmes represent, many organisations lack adequate assessment and identification of high-potential. Forty-six percent report lacking any systematic process for identifying and developing their candidates and only 1 in 3 organisations use assessment data to identify employees for their high-potential programmes.

What is driving this lack of systematic assessment? Part of the answer lies in a plethora of definitions for high-potential. We identified 51 terms showing this to be a diverse and potentially confusing semantic space, and that much of the research in this space has focused on elaborating the qualities of the employee rather than outcomes that show whether or not a high-potential programme is successful. It is an outcome driven approach that marks out our research effort.

High-potential programmes face three real risks:

1. Employees entering those programmes drop out resulting in a substantial sunk cost in the development investment made.
2. Employees lack key talents required for more challenging and/or senior roles and prove ineffective, one consequence of focusing on current performance and existing knowledge and skills.
3. High-potential employees leave the organisation. Flight risk represents a real risk for employees seen as highly marketable and attractive to competitors.

Focusing on these risks leads to a simpler definition of the high-potential employees as someone with proven performance and three further distinguishing attributes: the Aspiration to rise to more challenging and senior roles; the Ability to be effective in those roles ; and the Engagement to commit to the organisation.

2 The term 'ability' can refer to constructs measured by cognitive ability tests. We use the term 'ability' in its broadest sense regarding effectiveness in more challenging roles.

Aspiration and the motivational and behavioural drivers of career potential

The career success of employees depends on a number of factors such as who manages them and encourages them to climb to higher positions as well opportunities available in the organisation. That said, a critical factor in career success is the motivation of the employees and their capacity to seek out and realise career opportunities.

We analysed data on over 431,000 people globally to understand what differentiates the motivational and behavioural profiles of those that achieve an executive position and those who do not. Of the 18 motivational factors that we analysed , six emerged as key to the achievement of an executive position:

- Activity: they prefer fast-paced, multi-tasking work environments
- Autonomy: they are attracted to roles that allow them autonomy in how they execute their responsibilities
- Flexibility: they seek out work environments that allow them more fluid ways of working
- Immersion: they look for roles that require a personal commitment above the norm
- Interest: they look for roles and assignments that provide variety and stimulation
- Power: they want the opportunity to exercise, influence and shape how things are done

The desire for greater influence over outcomes and for greater autonomy and flexibility are understandable end states that fuel the aspiration to rise through the organisation. An inherent attraction to roles with high activity and interest are qualities that create opportunities for employees to reach for more challenging roles. What also marks those who are more likely to achieve a senior position is that the work that they do is important to how they define themselves. In other words, the work they do is important to their self-esteem and life satisfaction.

Motivation requires action to become a reality. Our research shows that those who are more likely to achieve an executive position also exhibit the following behaviours :

- Acting on Own Initiative & Taking Responsibility: they are willing to take calculated risks to realise an opportunity and assume positions of responsibility through which they can coordinate and have impact on tasks, projects and objectives
- Achieving Objectives & Pursuing Self-Development: they push for results and are willing to invest in their personal development

These behavioural markers combined with the six critical motivational drivers increase the odds of achieving an executive position dramatically. Those in the upper quartile on this measure of aspiration are almost 11 times more likely to achieve an executive position than those in the lowest quartile .

To provide a sense of how dramatic a change in odds this represents, the odds are stacked against the success of those in the lower quartile on our aspiration metric (motivation and behaviours) with 10 failing to achieve an executive position for every one person in the lower quartile who does.

Ability – assessing for future performance potential as a manager and a leader

A second and equally critical question is whether employees will be effective in more challenging roles in the future. We believe that effective managers and leaders know how to develop a compelling vision based on clear and critical thinking, articulate goals that motivate others and provide direction, communicate effectively and support others through change, and realise tangible goals and objectives. This definition is captured in the CEB Corporate Leadership Model .

3 This sample was drawn from the analytics database and represents 431,778 people for whom job level was known. Our criterion or outcome measure was the achievement of an executive position where we defined an executive position as vice president or above. Our logic was that those who show the potential to achieve an executive position are also more likely to have the potential to rise at least one or two positions in the organisation.

4 These 18 motivational factors are assessed using the Motivational Questionnaire (MQ).

5 These behaviours are taken from the Universal Competency Framework (UCF) and are assessed through the Occupational Personality Questionnaire (OPQ).

6 We first developed an overall metric combining the motivational factors and behaviours and then calibrated our sample of 431,778 against our global analytics database to create the four quartiles used in this analysis.

We summarise leadership bench strength through an overall benchmark ranging from very low to very high. Given the ask of effective leaders from developing compelling visions through to delivering success, few rank at the highest level of this benchmark with only 1 in 15 managers and professionals showing this level of potential globally.

Drawing on observational data for 3,971 employees across 29 studies, we analysed the likelihood of being rated as highly effective across the managerial and leadership behaviours in the Corporate Leadership Model. Our analysis followed a two-step approach:

- First, assessment data (OPQ and cognitive ability tests) were combined to create predictors of potential. We then combined these predictor scores into the five-level leadership benchmark and calibrated this benchmark using our global database of 6.6 million people
- Second, we calibrated the observational data across all studies and combined that data – largely 360 ratings by seniors and line managers, peers and direct reports – into an overall criterion metric for performance. We then used the upper quartile on this metric to define highly effective performance as a manager and leader.

The results show a clear change in the odds of being seen as an effective manager and leader. For those ranking very low on our leadership potential benchmark, the odds of being rated as effective are 10 to 1 against. In contrast, the odds are 12 to 1 in favour for those ranking at the very high level of this benchmark.

Thus far, we have shown that the odds of rising to a more challenging or senior role are 11 times higher for those ranking higher on 6 motivational and 2 behavioural indicators, and that those ranking higher on a behaviourally based metric for leadership potential are 12 times more likely to be rated as effective leaders by their line managers, peers and direct reports. Now we will turn to the third key risk to these programmes – flight risk.

Engagement and addressing flight risk among high-potentials

A key question is whether the investment in high-potential programmes will provide a return over time and that high-potential employees will not be lost to competitors. Unfortunately, less than half of the high-potential employees surveyed by CEB in 2013 have a high intent to stay with their employer. In contrast, nearly 60% of high-potential employees with high engagement levels have a high intent to stay – more than double that of high-potential employees with lower levels of engagement.

The most recent phase of our research focuses on how engagement can be assessed through behavioural markers. Those markers are defined by current and future components which in turn are defined by rational and emotional commitment.

Rational commitment in a role today is demonstrated when the employee believes that their current role, their manager and their work team provide them with professional benefits, while emotional commitment today is demonstrated through an attachment to the role, the manager and the team.

Longer-term rational commitment to the organisation follows from the belief that the organisation will support and realise the employee's career aspirations, while longer-term emotional commitment follows

from a strong alignment between the employee's values and those of the organisation, and a strong belief in the organisation's mission.

In a recent pilot with 440 employees of a professional services firm, those higher on ratings across 15 behavioural statements drawn from this model are 3 times more likely to show an intent to stay with their employer for 5 years or more, while those scoring lower are 5 times more likely to indicate an intention to leave within 1 year.

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T27 Qualification in Occupational Psychology Session 2:

BPS DOP Qualification Clinic your questions answered

Rosemary Schaeffer & Karen Moore, *QOccPsych Qualification Board*
Strand **Learning, Training and Development**

This session is for current candidates, supervisors and assessors, and provides an opportunity for a face to face discussion about your individual questions. If you require a more private discussion, the Chief Supervisor will be available throughout the conference on the Qualification's stand.

T28

Standard Paper

Trait Emotional Intelligence and the Antecedents, Communication and Impact of Workplace Frustration

Sophie Ward & Thomas Rhys Evans, Coventry University
Strand **Well-being and Work**

The current study captured participants' levels of trait emotional intelligence, and used a critical incident technique-based questionnaire to gain qualitative and quantitative data on recent experiences of workplace frustration. The exact cause of the frustrating events, method and recipient of communication, and impact upon wellbeing and motivation, was captured. Relationships between factors are explored and results determine whether trait emotional intelligence is related to more positive experiences of, and effective responses to, workplace frustration. Recommendations for organisational practices, developments to our understanding of trait emotional intelligence, and future research plans to develop the frustration-aggression model, will be discussed.

Main Theories, Models and Research: Recent estimates suggest that counterproductive work behaviours account for 10% of workplace productivity and may be enacted by up to 90% of the workforce (Belot and

Schröder 2013, Boye and Wasserman 1996). Concurrent with the frustration-aggression hypothesis (Dollard *et al.* 1939), frustration, an emotion caused by interference with goal-orientated activity, has been found to cause such negative workplace behaviours (Fox and Spector 1999, Spector 1978, Spector *et al.* 2006). It is therefore of great importance to understand workplace emotion, especially that of frustration, to address such costly interpersonal and organisation-directed aggressive behaviours.

To explore workplace frustration in fine detail, the current study builds upon the most up-to-date conceptualisation of emotional intelligence, numerous theories and behavioural taxonomies, and recent literature on the experience of frustration in modern day workplaces (Skowronski 2012, Weatherbee 2010). A critical incident technique-based questionnaire captured qualitative and quantitative data on the experience of workplace frustration from over one-hundred employed UK citizens. The exact cause of the frustrating event, method and recipient of communication, and impact upon wellbeing and motivation, was captured. Relationships between these factors, and trait emotional intelligence (Petrides and Furnham 2006), will be explored to determine whether trait emotional intelligence is related to more positive experiences of, and effective responses to, workplace frustration. Results will be discussed with respect to the modern literature on emotions and coping, and the new theoretical understanding of emotional intelligence. Based on the relationships identified, recommendations for organisational practices e.g. recruitment using trait emotional intelligence assessments, will also be made, alongside elaboration on how current results impact and inform plans to further explore workplace frustration.

Learning, Sharing and Impacting: We hope to share our latest empirical research findings and thus for delegates to learn a nuanced understanding of emotional intelligence and workplace frustration that can positively influence their daily life. Participants will learn about the prevalence of specific elements of workplace frustration, and the relationships between different causes of workplace frustration, communication methods and recipients, wellbeing and motivation, and trait emotional intelligence facets. The practical recommendations based upon findings will be highlighted to ensure impact upon workplace practices.

Wellbeing and Work: The current study is all about the experience, negotiation and management of emotions in the workplace. Frustration is not often discussed openly, and can often have numerous negative consequences, particularly on an individual's wellbeing. As such the current study hopes to open debate up around the experience of emotions through presentation of the current research findings, and to thus make delegates' experience of work a more meaningful and positive one.

Novel and Innovative Aspects: The current study is the first to explore trait emotional intelligence and workplace frustration. Past research has explored emotional intelligence and coping, or workplace frustration and counter-productive work behaviours, however the current study will use both qualitative and quantitative data to present a fine-grained picture of many aspects of modern-day workplace frustration. This holistic view will also provide novel insights into the role of trait emotional intelligence, and determine how this impacts upon the experience of frustration.

Stimulating and Useful Aspects for Delegates and Public: As a common and salient experience but frequently taboo topic, workplace frustration is a field of significant interest for delegates and the public. The current study hopes to engage with this interest to educate on the intricacies of frustration and emotional intelligence in the workplace, to provide delegates, and even the public, with a better understanding of the experience. Furthermore, practical recommendations for how frustrating experiences can be better prevented and managed, and the possibilities for trait emotional intelligence to be used for recruitment and selection purposes, will be discussed in detail. The current study will therefore cater for general public, theoretical *and* applied perspectives to enhance both understanding and practice.

Materials: An electronic copy of the presentation will be made available for all to access online. A summary page of the key results in diagrammatic form, and key recommendations and implications will be provided, as well as printed hand-outs. Contact details will be provided here to encourage post-conference questions, debates, collaborations and suggestions to be directed to.

Interaction: Frustration is commonly experienced and is thus a relatable topic for discussions to be based upon. Throughout, and after the presentation, requests for interaction will be featured e.g. in getting delegates to discuss their experiences in a similar way to that of the research participants. It is also hoped that attendance at the conference will allow time to gain feedback on the present and future research from

delegates. To ensure we do justice to these activities, in addition to answering questions or clarifying thoughts, at least fifteen minutes of the time allocated is expected to be interactive.

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T29

Spotlight on Scottish Academia: Young Workers: Understanding child employment in Britain

Jim McKechnie, *University of the West of Scotland*

Strand Well-being and Work

Research clearly shows that most children in Britain have experience of paid employment while still at school. Exploring whether this is beneficial or harmful to them has led to the formulation of a Balance Model. This allows for the possibility that working may have both costs and benefits to the child. Studies by the Child Employment Research Group (CERG) has demonstrated that child workers frequently have accidents and that school students who work long hours tend to perform less well at school. On the other hand, CERG research suggests that employment provides the opportunity for learning, particularly the acquisition of social skills.

The research in this area highlights challenges for policy makers in terms of protecting young workers and understanding the work-education relationship. In this context it is to be regretted that psychology has shown little interest in this part of young people's lives.

T30

Short Paper

Can CAT ability assessment systems lessen group differences between dyslexics and non-dyslexics in terms of test scores and time taken to complete?

Sean Keeley & Jo Parkes, *IBM*

Strand Psychological Assessment at Work

According to the British Dyslexia Association, it is thought that Dyslexia affects around 10% of the population. It is classed as a Specific Learning Difficulty (SpLD) and affects the way that information is processed, stored and retrieved, the results of which include problems with memory, processing speed, time perception, organisation and sequencing.

It's important to note that dyslexia is a neurological condition occurring independently of intelligence and affecting individuals in a variety of ways to greater or lesser extent. However, significant group differences between dyslexic and non-dyslexic candidates seem to exist on many cognitive assessments which is a cause for concern given the number of organisations using cognitive ability assessments as part of their recruitment process.

In a previous paper at DOP, we showed that differences on cognitive tests used in graduate selection reduced dramatically when time was taken out of the equation, comparing fixed time, 25% extra time, and untimed scenarios.

Could the use of CAT (Computerised Adaptive Testing) help with two issues: lessening the group differences by providing all candidates with the time they require, and allowing dyslexic candidates to be included in general proctored testing sessions, due to the large decreases in test time that CAT administration requires?

Processing speed is often cited as the major reason for the differences between candidates with or without dyslexia. This suggests that the use of timed assessments should be avoided and untimed assessments used. There is still the logistics issue, for example, how to 'time' a proctored session where candidates have different time limits or the need to provide rooms for candidates needing extra time.

Our previous study suggests that the extra time provided does lessen the possible disadvantage that timed assessments present for candidates with dyslexia but does not remove the issue. 25% extra time reduced the group score differences between dyslexic and non-dyslexic candidates but this 'one size fits all' approach failed to compensate for some individuals whilst overcompensating for others.

From this, we can see that the 'reasonable adjustment' does have a real effect and may be sufficient in most cases but not all. Accordingly blanket policies to deal with time (i.e. give an extra 25% of the time)(Bartram & Coyne, 2003) may be insufficient.

The introduction of CAT-based systems (which generally use and should use untimed assessments) would seem to offer the best solution. As CAT systems adapt and modify themselves to the candidate, the need to make a reasonable time adjustment is unnecessary.

Stone and Davy (2011) outline the advantages of CAT in reduced seat time, more tailored assessments, removing the need to adjust time limits and the ability to modify the assessment itself if need be. This makes it a more useful tool in accommodating all candidates.

The greater measurement accuracy of CAT and the ability to reduce test times (while paradoxically having untimed assessments) are likely to increase candidate motivation and reduce test fatigue (Linacre, 2000).

The British Dyslexia Association suggests a range of ways in which candidates with specific learning difficulties may be disadvantaged including:

1. Poor short-term (working) memory.

This makes it difficult for the candidate to hold in mind both the question and possible answers which could result in the candidate needing to re-read the question and answer options a number of times.

2. Organising information in memory.

Dyslexic, and more particularly dyspraxic, candidates may find it difficult to tailor the wide knowledge they may have of a subject to the specific requirements of the question, for example, it may be difficult to distinguish between what is already known and what has just been read.

3. Slow reading.

A person with specific learning difficulties will need more time than other candidates to read through lengthy questions, or passages of text, which may precede multiple choice questions. In cases where the question or case study that they have to read is complex, their difficulties with slow reading will be compounded by their difficulties with working memory, and so they may need to re-read the text several times in order to grasp the detailed meaning.

4. Poor visual tracking / visual processing.

A candidate with these difficulties may find it hard to keep his/her place on a line of text and so a close group of four short answers could be visually confusing. If some answers are differentiated simply by the presence or absence of a single word (such as not), the candidate could easily fail to spot this. The candidate may identify the right answer but mistakenly mark an incorrect box on the answer grid.

5. Visual stress (e.g. Meares-Irlen syndrome).

This may cause the candidate to see:

- white paper as 'glaring';
- lines overlapping and jumbling together;
- words/letters shifting about on the page.

Visual stress is greatly exacerbated by fluorescent lighting and can result in repeated loss of place and reduced reading comprehension as well as physical symptoms such as headaches which may have an impact on cognitive performance.

6. Poor layout of papers / inconsistency in phrasing of answers.

The British Dyslexia Association's Code of Practice includes this advice: Avoid multiple choice questions if possible. These may be discriminatory for dyslexic candidates where there are difficulties in the areas of reading

comprehension, working memory and visual tracking. While CAT cannot address these issues in particular, it can create conditions which give dyslexic candidates the time to complete the given assessment. This adds to the previous suggestion that timed assessments are inappropriate.

Many of these issues are related to time limits (even if an extra time adjustment is made) or can be accommodated by appropriate test design. Administration methods such as CAT remove the time but do not address the visual issues mentioned specifically.

Questions

There are two questions that are being addressed in this paper:

- What are the changes in group difference scores between dyslexic and non-dyslexic using CAT versions and non-CAT versions of some cognitive ability tests?
- What are the test completion times for CAT vs non-CAT for dyslexic candidates?

The general hypothesis for Question 1 is that CAT should reduce the group differences significantly.

The general hypothesis for Question 2 is that test completion times on CAT assessments for dyslexic candidates will be considerably lower than those for non-CAT assessments.

Method

A group of a minimum of 100 dyslexic and 100 non-dyslexic candidates will take up to three different cognitive ability tests commonly used in graduate recruitment and selection, under two different conditions: CAT-based versions of the tests, and non-CAT, timed (reasonable adjustment being applied for dyslexic candidates).

All of the candidates will take the assessments under both conditions so it will be possible to make direct comparisons.

There may be test-retest issues but the time between the CAT and non-CAT versions of the same assessment will be regulated to reduce the learning effect. However the learning effect will impact both dyslexic and non-dyslexic candidates alike so the conditions for both groups are the same. There may be an effect on the test completion times so the non-CAT versions will be taken second although this is likely to decrease the hypothesised 'improvement' in time taken to complete.

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T31

Standard Paper

Diagnosing and building energy for change: The SSPPI Energy Index

Dr Rosanna Hunt, NHS Improving Quality

Strand **Work Design, Organisational Change and Development**

Session overview

This session introduces the SSPPI Energy Index - a diagnostic tool which was developed in the NHS and is used to diagnose and build energy for change with cross-organisational groups. It has been used by Organisational Development consultants who encounter groups with low energy or “change fatigue” in order to expose hidden issues that are significantly impacting on the success of change interventions.

It is often asserted that approximately 70% of large scale change initiatives fail to meet their objectives (Cheung-Judge & May, 2012). Further research suggests this is largely due to energy depletion over time (Bevan, Plsek & Winstanley, 2013). The purpose of the SSPPI Energy Index was to diagnose what kind of energies are being depleted in order to help groups to channel their efforts to re-energise. Facilitating the dialogue that occurs as a result of sharing a group’s energy results from the SSPPI Energy Index in an effective way, is critical to achieving impact.

The SSPPI Energy Index measures five energies. Four of the five energies: social, spiritual, physical and intellectual, build on previous work in the leadership domain such as Radcliffe (2012), Schwartz & Loehr (2004), Bruch & Vogel (2011) and Stanton Marris (2002). The fifth energy; psychological energy, emerged from an interview study with change agents and front-line staff in the NHS (Land, Hex & Bartlett, 2013) which revealed the debilitating effects of fear and uncertainty, on change initiatives. The idea that psychological safety must be created for change to occur is not new. For example, Schein (1996) identified the importance of creating psychological safety in order to “unfreeze” an organisation. The SSPPI Energy Index is the first tool to diagnose groups’ energy for change and it can be used both inter-organisationally and cross-departmentally.

This paper will be stimulating for conference delegates as it combines thinking about what impacts on successful change in organisations from both the psychological and sociological perspectives. Conference delegates will also find the session useful as it provides access to the SSPPI Energy Index online and instructions for its use under the Creative Commons license. Delegates will be provided with these instructions as printed hand-outs as well as electronic copies of the slides.

This is a standard paper offered under the conference strand that includes organisational development (OD). This session provides an in-depth look at some of the issues that impede change in the contemporary era and offers a practical tool for implementation. Modernisation and change in the NHS is always of significant public interest, so it is anticipated that the case studies described in the session will be of interest to many members of the public.

Theoretical background

The relevance of human energy to the role of organisational leaders was recognised, amongst others, by Peter Drucker, one of the most influential early management theorists, who claimed that: *“Your first and foremost job as a leader is to take charge of your own energy and then help to orchestrate the energy of those around you”* (Drucker, 1909-2005).

More recently, several management theorists such as Schwartz & Loehr (2004) and Radcliffe (2012) have highlighted the importance of energy for leaders and the need to pro-actively manage energy, primarily at the level of the individual, across four domains: physical, emotional, mental / intellectual and spiritual / spirit. Others, such as Bruch & Vogel (2011), have explored similar issues and created approaches to test energy in organisations. There are two key differences between these previous frameworks and the SSPPI Energy Index. First, the SSPPI Energy Index is aimed at the level of the group (which often comprises individuals working cross-organisationally) rather than at the level of the individual or the organisation. Secondly, the SSPPI Index includes a fifth domain: psychological energy.

Schein (1996) identified the importance of creating psychological safety in order to unfreeze an organisation so that change away from the status quo could occur. Creating “safe” conditions in which

disruption of the normal patterns of communicating and relating (Stacey, 2001) can occur is a major challenge for any OD intervention, especially in uncertain times.

Helen Bevan, a keynote speaker at the DOP 2015 conference, and the Health Service Journal (HSJ) have previously reported on the debilitating effects of fear in the NHS (Bevan, 2012; Lintern, 2012). The HSJ reported that two fifths of acute sector chief executives feel unable to speak out or take risks, with some respondents describing a 'bullying culture'. Peter Fuda describes anxiety as being contagious and argues that it encourages physical and psychological consequences that are not conducive to change (Fuda, 2012). Simon Dodds describes an outcome of fear as being the design of systems in healthcare that protect leaders from blame rather than trying to prevent bad outcomes, resulting in additional costs to the NHS (2012).

We know that creating an environment of safety is an important part of the OD consultant's role. Simple techniques like "attending to the elephant in the room, allowing people to explore the whole elephant before they try to fix the component parts" Weisbord (2012) allow people to share their conscious experience of their work and find their common ground. Helping people to share what they know about the work enables the team to become more self-aware as a collective force. Strength-based approaches to helping each other develop (such as using "feedforward" Marshal Ganz or appreciative inquiry David Cooperider) also help to provide the right conditions for people to interact (i.e. by establishing trust) and enabling positive use of energy.

Guiding principles for conducting a facilitated feedback session with a group are derived from Bushe & Marshak's (2014) eight premises for implementing dialogic organisational development:

1. Reality and relationships are socially constructed
2. Organisations are meaning making systems
3. Language, broadly defined, matters
4. Groups and organisations continuously self-organise
5. Creating change requires changing conversations
6. Participative enquiry and engagement should seek to increase differentiation before seeking coherence
7. Transformational change is more emergent than planned
8. Consultants are part of the process, not apart from the process

Moving participants through a process from diagnostic "information" to dialogic "conversation" is a key goal of the process. "Possibility oriented" questions (commonly used in appreciative enquiry) are used to facilitate changing conversations and all members of the system are invited into a container in which such questions can occur.

Dialogic OD is informed predominantly by a sociological perspective on change, which sees change as something that is socially constructed, emerging from dialogue, rather than being objectively defined, prescribed and imposed in a planned way. Diagnostic OD is informed predominantly by a psychological perspective. Here, theories of how individuals react to change are applied. Since change occurs more and more in unstable contexts (Stanford 2012), energy levels fluctuate on a day-to-day and even moment-to-moment basis and the combination of sociology/dialogic OD and psychology/diagnostic OD is useful to the success of any activity that aims to facilitate change.

The SSPPI Energy Index

The diagnostic tool comprises an online questionnaire asking individuals to answer 5-6 Likert-type questions per energy domain. These are the five energy domains:

S = Social the energy experienced through personal engagement, relationships, connections between people, collective, 'sense of us'

S = Spiritual the energy experienced through a commitment to a common future vision, shared values, higher purpose, confidence in a compelling, meaningful, different future

P = Psychological the energy experienced through a feeling of courage, trust, feeling safe to act, supported to make a change, belief in self and team, organisation or system, and trust in leadership and

P = Physical the energy experienced through getting things done, taking action, making progress, vitality, kinetic force (motion), drive to make things happen

I = Intellectual the energy experienced through igniting curiosity, undertaking analysis, thinking and cognition, insight, new knowledge, planning and supporting processes, evaluation, logic and evidence direction

Four key features of the five-domain framework are:

Inter-dependency – the five energies closely relate to each other and are mutually supportive. For example, a lack of social energy can reduce psychological energy and vice-versa.

Context-specific – different contexts will demand different energy levels; there is no ideal energy level to be met and no benchmarks to be set. Sometimes, it is appropriate for energy levels to be low, so that intense energy expenditure can be balanced by periods for reflection and renewal.

Non-hierarchical – The energy of every member of the group is equally important. Cross-organisational change requires dispersed leadership and so an individual's position in the hierarchy does not influence the extent to which their energy for change impacts on the group as a whole.

Dialogic – the purpose of the diagnostic tool is to explain the forces for and against change. It is intended to fuel conversation that leads to appropriate action, not to judge groups or individuals.

The tool has been statistically validated using a factor analysis and repeated-item reliability with 700+ respondents over two iterations. The five energies are described in more detail by Land, Hex & Bartlett (2013).

Case studies

This conference session will describe two case studies demonstrating the diagnostic and dialogic process and the impact of the SSPPI Energy Index on groups. The first case study describes how a group working towards the implementation of care bundle for premature babies in neonatal units across a region in England, diagnosed low social energy and took action to build a sense of solidarity between disparate members of this multi-professional group. Impact measures include compliance with implementation of the care bundle and breastfeeding rates.

The second case study describes how a National organisation undergoing significant downsizing and restructure identified low psychological energy and implemented a series of “personal and team resilience” sessions to raise psychological energy. Impact measures included sickness and absence rates.

The diagnostic tool itself will be described, along with the process for implementing it. Some key principles for facilitating the dialogue that occurs during the feedback session, drawing on theories of change from a sociological perspective will also be shared for discussion.

The SSPPI Energy Index is available for free under a Creative Commons licence. Conference delegates will receive hand-outs providing instructions on how to access the tool.

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T32

Short Paper

Designing and evaluating a model of values based interviewing.

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Strand **Psychological Assessment at Work**

The UK National Health Service is undergoing a period where it faced calls for for a culture shift towards a commitment to common values, based on the NHS Constitution. A core driver to this has been the recommendation that recruitment should be enhanced to integrate these shared values (Francis Report, 2013). Such approaches can be viewed as a move away from a common focus of performance outcome based competency based selection. This paper provides an update on the design and evaluation of a values based interview model that was adopted at an organisational level.

Introduction/Background

The 2013 Francis report examined the concerns of care in Mid Staff NHS Trust. The report recommendations provide targets for the whole of the NHS. An emphasis throughout was a return to core NHS values and being patient centred. The relationship between values and attitudes of staff and its impact on the quality of patient care and patient experience is well established (West and Dawson, 2011). There is clear evidence that staff whose values are more clearly aligned with that of their employer, and whose roles allow them to live out these values, have higher levels of engagement, job satisfaction and performance (MacLeod report 2009). Within the NHS the annual staff survey has indicated although high can be improved; 85% of staff feel satisfied with the quality of work and patient care they deliver; 89% of staff feel their role makes a difference for patients (NHS Staff Survey, 2012). The prevalence of using values based approaches, particular in the NHS, has grown over the last two years. Approaches have focused mainly on the use of values based interviews; although increasingly other selection methods, such as Situational Judgement Tests, are being developed and other existing tools, such as personality measures, are being utilised to consider values. However, the evidence base for the use of Values Based Recruitment in general remains limited (Patterson et al, 2014).

The aims of the current paper are:

- To provide an update on the utilisation of a VBI approach
- To review the development and evaluation of a new approach to an organisation wide selection process.
- To reflect on the implications and future opportunities in the use of a VBI model to the wider selection arena.

The VBI approach

Northumbria Healthcare NHS Foundation Trust is a large NHS Trust in the northeast of England employing over 8,500 staff. Between 2012-13 the Trust developed a values based interview (VBI) approach formed on core organisational values (*Patients First; Safe and high quality care, Responsibility and Accountability, Everyone's contribution counts, and Respect*) that had been developed through a series of engagement prior to this. Following a series of pilots a full organisation wide roll out was implemented that involved changing all recruitment materials and processes and training 500+ recruiting managers (for further information see Cook et al, 2013). Strategically these values have also been incorporated into the appraisal process, probationary period, job descriptions, recruitment materials and embedded within the existing staffing groups.

The VBI approach is used for all selection decisions across the organisation and adopts a 'behavioural descriptive' interview approach (Janz, 1982). Candidates are required to answer a minimum of two

question related to each value. Each VBI question has a behavioural anchored rating scale (Campion, Palmer, & Campion, 1997) and lasts on average 45 minutes per candidate.

Method

An ongoing evaluation has been conducted alongside the roll-out of the VBI approach. The evaluation focuses on candidate reaction and perceived fairness, construct validity, and criterion validity. A questionnaire is administered immediately after a candidate interview to assess candidate reaction and perceived fairness of the VBI; the questionnaire incorporates a values questionnaire, a single item measure of five factor model of personality (FFM, Woods, and Hampson, 2005), and a perceived fairness scale (Bauer et al, 2001). Candidate VBI scores were also collected. A follow-up questionnaire was sent to all candidates that assessed perceived fairness of the VBI following outcome decision (Bauer et al, 2001). Organisational data was also collected.

Findings

An update describing the full roll-out will be described and results from the evaluation will be presented to incorporate candidate reaction and validity.

The challenge of implementation and conducting an on-going evaluation on a 'live' selection intervention will be reported.

Discussion

The implementation of a large scale selection project is a significant undertaking, while the evaluation and lessons learned provides significant insight for organisations considering using values based approaches. The process of embedding the values requires on-going attention and monitoring particular as implementation at an organisational wide scale presents new insights and challenges. The implications of the candidate reaction, construct validity and criterion validity will be discussed in relation to the wider selection literature and any local contextual factors. The next stages of the project will be outlined and further development of the model will be discussed.

Link to the conference theme

The paper links well with the conference theme 'Learning, Sharing and Impact'. As an emerging selection area, an outline of an adopted values approach will be of interest to practitioners who may be seeking to undertake similar projects in the future and learn from the experiences outlined. The presentation will focus heavily on presenting an authentic account of the project with the authors sharing material and content on the model. The study itself aspires to impact at an organisational level through the successful implementation of the VBI model; by informing practitioners who are involved in the implementation of values based recruitment approaches, and by contributing to a currently limited evidence base.

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Short Paper

Is emotionally demanding work stressful or does it provide opportunities for personal growth? a systematic review of stress in end of life care

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Strand **Research Design, Analytical Techniques and Practical Applications**

Introduction:

Occupational stress within palliative care has received much attention in the stress and nursing literature. General occupational stressors those working in palliative care will encounter, such as workload (Bruneau and Ellison, 2004), organisational change (Duffy and Jackson, 1996), working in multidisciplinary teams (Kulbe, 2001), and relationships with colleagues and managers (Kalichman, Gueritault-Chalvin, & Demi, 2000) are identified in published works.

However, Hulbert and Morrison (2006) and Payne (2001) propose that there are unique stressors and emotions in palliative care settings, which contribute towards higher levels of stress. These exceptional stressors centre on the constant presence of death and dying, the need to develop genuinely compassionate and supportive relationships with patients, and indeed whole family units (Pereria, Fonseca, & Carvalho, 2011). Furthermore conflicts between physicians and nursing staff are thought to add to the stressful environment (e.g. conflict over care of the patient and misunderstanding of the ethos of palliative care; Lloyd-Williams, 2002).

Palliative care is characterised by high demands of the role; Professionals provide high quality medical care aimed at enhancing quality of life. This however is further influenced by the additional demands placed on palliative care professionals that are not present in other health care roles. Medical care becomes part of a much larger role in which palliative care professionals provide emotional and spiritual support to patients and their families, representing a significant additional emotional demand. However in contrast to these demands of the role, the opportunity to control outcomes is limited because the outcome of care is certain (as this represents the end of life stage of care). Therefore if we expect there to be high demands and low control, we would reasonably expect that people in this situation would be suffering from stress and even burnout (Karasek, 1979).

Those studies that have attempted to investigate stress within palliative care settings have tended to use the Transactional Model of Stress (Lazarus and Folkman, 1984; Lazarus, 1999). The Transactional Model suggests that stress is contextualised in an on-going transaction between the person, their environment, emotional meaning they attach to the stressor and their attempts to cope with it. In this model, stress occurs when the demands (e.g. physical, cognitive and emotional) of a situation tax or exceed an individuals perceived ability to cope (Lazarus, 1999). This provides a useful framework for understanding stress and emotion within emotionally demanding jobs where chronic and acute stress is observed frequently in the literature.

In reality, this means that understanding quantitatively how much stress or 'burnout' is present is insufficient to furthering our knowledge of stress in emotionally demanding work, like palliative care. Rather, it is a complex issue in which individual differences, situational, personal and emotional variables play a role.

Though these emotional responses to stress and appraisal of stress are not unique to palliative care, it is perhaps the combination of the situational and emotional demands and limited opportunity for coping that make palliative care unique and therefore an essential environment for study.

Furthermore, the expression (or repression) of emotion at work, while traditionally conceptualised as Emotional Labour (see for example Mann, 2005 & Martinez-Inigo et al, 2007) presents a somewhat exclusive challenge to occupational psychology where palliative care is concerned. Often because of the depth of relationship, the emotions expressed are genuine rather than rehearsed, forced or disingenuous. For instance, compassion in the face of pain and suffering, or grief at the death of a patient could be considered to be a genuine emotional response rather than deep or surface acting. In addition it would be acceptable or even encouraged, to display these emotions. Presently, our understanding of stress and emotion within this emotionally challenging work environment is limited however.

While burnout has been a widely researched concept in palliative care, very little is known about whether those working within palliative care are genuinely experiencing greater levels of stress and burnout than the general population.

The need for a systematic review

Petticrew and Roberts (2006) propose that by being systematic about how searches are conducted and data is screened and included, systematic reviews are a powerful tool in which to include and summarise all relevant literature in the topic area and therefore create a better understanding of a given phenomena.

Presently, our knowledge of stress levels and causes in palliative care cannot be generalised; i.e. published literature which focuses on single organisations, single geographic regions, or small samples can not speak to the stress levels of an entire industry as there may be organisation specific factors which may not have been taken into account in individual studies. This systematic review attempts to capture the multitude of environments in which palliative care is provided so that stress within this care setting can be understood more broadly (rather than providing conclusions that are confined to one organisational, political, or national context).

To date, no systematic review or meta-analysis has been conducted on stress in palliative care workers. It is logical then, that the literature that deals with occupational stress within palliative care settings should first be synthesised before we can understand what the levels of stress are and what causes stress within palliative care professionals, let alone provide stress interventions within this context. This paper attempts to provide such an analysis of published quantitative literature in order to answer three research questions.

1) What are the reported levels of stress and burnout identified by those working in palliative care, and are reported levels of stress higher than available general population means?

2) What are the causes of stress identified within the emotionally charged environment of palliative care?

3) What coping methods are identified by palliative care professionals as successful in dealing with occupational stress?

Systematic review design and methodology

Search Strategy

The method used was adapted based upon recommendations made by Petticrew and Roberts (2006), the Cochrane Handbook (2006). A research protocol was developed, in which search terms, databases, inclusion criteria and data extraction methods were set out.

Searches were conducted by combining keywords using an adjusted version of the PICOC (Participants, Intervention, Comparison, Organisation, Context) method; the key words related to the participants of the study (for example oncology nurses), the Setting or Context (e.g. hospices, oncology wards, etc.), Problems or need for intervention (e.g. stress, distress etc.) and the Outcomes (burnout, acute stress etc).

The systematic search of databases was conducted on Web of Science, Web of Knowledge, Psychinfo, Medline, CINAHL, ProQuest Nursing and Allied Health Source, Cochrane library, Embase, and Health Management Information Consortium (HMIC). Searches were initially carried out in October 2011 and included all dates within the databases. In order to update the review prior to publication, the searches were carried out again October 2013.

Inclusion screening

The total number of records generated by the initial database search was 14,565; an additional 9,589 hits were identified for the period of October 2011 - October 2013 during the search update. After de-duplication, 9,348 records remained in the initial search, and 2,010 remained after the update. The Principle Investigator and a small team of independent volunteers screened

all records for inclusion. Records not meeting all of the inclusion criteria were excluded from the final database.

Data Extraction and Synthesis

All articles were read in full and data was extracted into pre-defined data extraction forms in order to achieve consistent information for each study. Data were gathered on participants and method, measures used, variables measured, analysis and results. Once the data extraction was complete, articles were re-read, however this time data were subject to a thematic analysis in order to categorise findings and synthesise the data.

Quality Review

A quality assessment checklist was developed based on guidelines given by Papworth and Milne (2001) and Petticrew and Roberts (2006). Quality assessment included the robustness of the research design, the reliability and validity of psychometric tools, and the robustness of the analytic method.

Brief summary of findings

Of the papers included, the most frequently cited cause of stress was the presence of death and dying, followed by conflict with colleagues. This was unsurprising considering the emotional demands placed on employees who are required to work with those in the end of life stage of care.

However a surprising result concerning stress levels, was that more studies reported palliative care workers with stress levels similar to or less than general population means than those reporting stress than the general population norms. Interestingly, many studies that made comparisons to other healthcare contexts frequently indicated that stress was lower in palliative care than other healthcare contexts (e.g. medical surgical nursing).

These results, and their practical implications will be discussed, however it is proposed that the palliative care environment may enable positive growth and positive reappraisal of stressful situations. It is further proposed that a more positive approach to assessing stress and coping within palliative care may enable us to gain a better understanding of this phenomena and therefore encourage

Submission Questions

2. What are the main psychological theories, models and research underpinning your session?

Theories of Occupational stress (Lazarus and Folkman, 1984, 1999) and the Job Demand Control model (Karasek, 1979) will be used as a framework for understanding stress in palliative care. The revised transactional model will be used as a framework for further understanding positive growth in situations of occupational stress.

3. How do you see your proposal linking with the main conference theme of Learning, Sharing, Impacting?

This systematic review applies a powerful research technique widely used in health psychology research, but is underused in occupational psychology. Furthermore, it is a methodology that provides a framework

for disseminating powerful research findings to populations of interest. Findings such as this are worthy of wider dissemination to palliative care organisations who may be interested in understanding stress within their industry.

4. Why is the submission appropriate for the particular strand you have chosen?

This systematically and theoretically driven paper presents an approach to synthesising all existing knowledge on stress in this participant group. It provides an understanding of the applied needs of organisations and has some advantages over traditional meta-analytic techniques. Systematic reviews can provide a powerful basis for further research as well as being robust studies in their own right.

5. What do you consider to be the most novel or innovative aspects of the ideas being presented?

To date there is no published systematic review on stress in palliative care, therefore this synthesis of data is novel. Systematic reviews are powerful tools as a means to challenge our assumptions of participant experiences and psychological phenomena. In palliative care, the overriding assumption of the public is that stress levels are high and therefore the positive experiences and good organisational practical may be overlooked.

6. Why do you think conference delegates will find the paper or session stimulating and useful?

This paper provides a discussion of a useful methodology that delegates may not have considered in the past, but is a powerful research tool. In addition the paper presents an argument to revisit our assumptions of this work environment and proposes more positive psychological research.

7. What might the public find interesting about your paper or session?

This paper will appeal to a wide range of practitioner audiences such as those working in nursing, palliative care and counselling settings. It uses non-technical language to highlight surprising results which challenge widely held assumptions about those working in end of life care. This paper is also relevant to current debate in the NHS; the Francis report pointed to a lack of compassion and empathy in care staff, arguably an indication of high levels of burnout. Interested practitioners can use the example of palliative care organisations to develop better organisational policies for other care environments to improve staff experiences as well as quality of care.

8. If any, what materials do you intend to make available to attendees and in what format (e.g., printed hand-outs, electronic copies of slides)?

Printed copies of the Prisma flowchart (indicating the inclusion screening methodology) table of included articles will be made available.

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T34

Short Paper

Selection & Development for Project Teams: Fluctuating asymmetry, leadership and team performance

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Strand **Leadership, Engagement and Motivation**

Introduction

Working in short term (temporary) cross-functional project teams is becoming increasingly common in organisations. these teams often have dynamic compositions (Tannenbaum et al., 2012) and do not have the advantage of prior performance or long term team membership to allow members to develop trust and cohesiveness, emergent states which are linked to effective team performance (Sundstom et al., 2000). As such, effective leadership is considered key to the effective performance of these types of team. Team research has stressed the importance of interpersonal skills for effective team leaders and members (Mathieu et al. 2008). Interpersonal processes such as conflict management, communication and cooperative problem solving, have been shown to positively predict performance in project teams (Druskat & Kayes, 2000; McClough & Rogelberg, 2003). Stewart, Fulmer & Barrick (2005) posited that social skills are one of the keys to team cohesion and effective team performance. Marks, Mathieu & Zaccaro, 2011) posit three types of team processes: transition, action and affective and this research suggests that good individual level interpersonal skills will lead to good team level affective process (e.g. cohesion and trust). Emotional intelligence has also been shown to be a key requirement for good interpersonal skills and team performance (Jordan & Troth, 2004; Koman and Wolff, 2008) and is another approach to assessing interpersonal competence.

Currently, the most widely accepted approach to understanding leadership behaviours comes from relationship focussed approaches to leadership such as transformational/transactional approach (Bass, 1985) and leader-member exchange (LMX) (Graen & Uhl-Bien, 1995). Transformational leadership refers to behaviours that inspire and challenge others to reach goals (Judge, Bono, Illes, & Gerhardt, 2002). The transformational leader motivates followers and encourages them to transcend self-interest for the good of the group. Leader-member exchange focusses on the two-way interaction between leaders and individual subordinates. The theory suggests that that leaders develop an exchange with each of their subordinates,

and that the quality of these leader-member exchange relationships influences subordinates' responsibility, decision influence, access to resources and performance (Graen & Uhl-Bien, 1995).

Relationship-focussed leaders tend to use more social-based approaches in their leadership strategies (Yammarino & Dubinsky, 1994). Conversely, task focussed (transactional) leaders lean toward observing followers and rewarding desired behaviours accordingly (Arnold et al., 2005, Graen&Uhl-Bien, 1995). Pro-social behaviours and specifically interpersonal skills have been identified as a key component of effective team leadership along with emotional intelligence (Mathieu et al., 2008). Transformational leadership, for example, is generally more effective than intelligence in predicting leadership effectiveness (Bryant, 2003; Judge et al., 2002, 2004).

There is an interest in understanding whether this form of relationship-orientated leadership can be learnt, or instead whether it has some degree of a biological basis. As such evolutionary psychology is increasingly being used as a lens through which to understand why people behave the way they do in organisational settings (e.g. Senior et al. 2012; Van Vugt, Hogan & Kaiser, 2008). The paradigm suggests that some adaptive behaviours of individuals that developed in our evolutionary history may not be suitable in our current modern society and that by understanding what mechanisms drive these behaviours, we have the opportunity to change our behaviour through reflexive learning and training (Nicholson, 1998).

Recent research (e.g. Senior et al., 2011) has identified the impact that evolutionary psychology can have in understanding the socio-biological antecedents of behaviour, in particular, the relationship between developmental stability, pro-social behaviours and leadership effectiveness. Developmental stability, the degree to which an organism can withstand genetic and environmental stresses, has been linked through fluctuating asymmetry to higher levels of pro-social behaviour development with greater body asymmetry being associated with pro-social behaviours (e.g. empathy, agreeableness and cooperation) and greater symmetry with anti-social behaviours (e.g. aggression, risk-taking) (e.g. Fink et al., 2005; Zataari & Trivers, 2007). Greater asymmetry has also been associated with transformational leadership which is linked to effective team performance (Senior et al., 2012). One explanation for the link is that our nature (how we look) interacts with our nurture (the experiences we undergo). However as nature and nurture can interact it is important to also assess the impact of training on the association between transformational leadership and fluctuating asymmetry. In addition team members who are skilled in interpersonal teamwork skills and who are emotionally intelligent should be more effective in short-term project teams. As such this research aims to provide a lens through which to understand why people may have developed different levels of relationship-focussed leadership skills and emotional intelligence, the impact of training and thus the bearing this has on team selection, functioning and training requirements.

Objectives:

- Investigate if relationship-focussed leadership training moderates the relationship between fluctuating asymmetry, leadership effectiveness in short term project teams.
- Investigate whether the fluctuating asymmetry is an indicator of emotional intelligence and other relationship focused teamwork skills (conflict management style, decision making style).

Methodology

Study 1

A cross-sectional correlation study of 70 undergraduates assessed the relationship between FA, trait emotional intelligence (TEI) conflict management style, decision making style (antecedents of pro-social leadership) in addition to personality and core-self-evaluation. Participants were psychology students taking part in university research in exchange for research participation credits. All participants received information and consent sheets prior to participation. Participants were asked to complete a questionnaire containing scales on the above psychological variables as well as a number of demographic control variables (e.g. prior teamwork experience / prior teamwork training / age / gender / amount of work experience). Fluctuating asymmetry measurements were taken from the team leaders following the accepted practice used in previously published studies of FA (Prokosch et al., 2005). Using a manual calliper the right and left sides of seven body features were measured to the nearest 0.05mm (see Fig. 1 below).

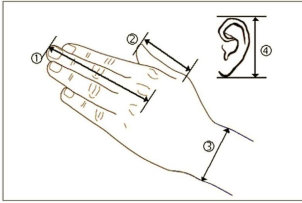


Figure 1: Diagram of FA measurements taken to calculate the composite FA score

Study 2

A longitudinal quasi experiment with 70 teams of second year undergraduate students who are part of a Business Game simulation module investigated the impact of LMX training on the relationship between FA, leadership and team performance. The aim of this study was twofold; firstly it utilised a group of people likely to have little or no prior teamwork experience or training which will allow for a clearer understanding of the moderating effect of training on the FA-Interpersonal skill relationship. Secondly it allows for comparison with previous research that found a relationship between FA and Transformation Leadership but did not offer training (Senior et al, 2012).

Team leaders and members will be approached and asked if they would like to participate in exchange for feedback on aspects of their teamwork (e.g. cohesion, conflict, trust) which could be used as evidence in their individual reflective portfolios for the module. Information and consent sheets were provided to participants at both questionnaire collection time points in the study. Four weeks into the module (time 1), team leaders and members were asked to complete an on-line survey assessing LMX, transformational leadership and group process and outcomes (e.g. conflict, cohesion, satisfaction and trust). Demographic data (e.g. prior teamwork experience / prior teamwork training / age / gender / amount of work experience) was also collected. Following this an LMX training session was offered to all 70 of the team leaders (wk 7). This was voluntary but could count toward module engagement (similar to other workshops offered as part of the course). Marks from the group presentation and business plans (wk8/9) were collected to indicate time 1 performance.

The questionnaires were completed again toward the end of the module (wk 18) and performance data was collected from the simulation performance (three time points) and two further written module submissions a group report and an individual reflective portfolio (week 20) to indicate time 2 performance. FA measurements were collected from team leaders during the module in line with the process used in study 1.

Analysis

Analysis of the two studies is currently in progress, however initial analysis of study 1 found that lower FA (more symmetrical) was correlated with high TEI-self-control [$r(63) = -.262, p = .035$]. In addition there was an interaction effect between FA and core self-evaluation dependent upon amount of prior work experience the students had: for participants with low FA, core self-evaluation was significantly lower when participants had between 1-2 years' work experience [$F(2, 63) = 4.34, p = .017, B = .12$] compared to those with less than one year or more than two years work experience. There was no difference in core self-evaluation for participants with high FA.

Analysis of Business Game is in progress however initial results suggest that the LMX training led to improved performance final group report [$F(1,69) = 4.154, p = .045$]. In addition team leaders with high FA also did better on their individual reflective essays [$r(58) = .291, p = .024$].

Discussion

As the analysis has only just started it is difficult to make any clear conclusions as to the implications of the initial results so this discussion is at a very early stage and requires input from further analysis of the studies and further reading of the literature.

One finding was that low FA (more symmetrical) was correlated with higher scores on the trait emotional intelligence self-control sub-factor. Higher self-control indicates people are good at controlling urges and regulating external pressures and stresses whereas low scorers are prone to impulsive behaviours and struggle at managing stress. Greater symmetry is associated with attractiveness (Grammer & Thornhill, 1994) and physically attractive people are imbued with more positive social traits (sociable, self-confident, balanced) and considered popular by others (Fink et al. 2006) whether they actually behave that way or not (Holtzman, Augustine & Senne, 2011). Being viewed this way, people may believe that is how they are and

therefore have a stronger self-belief which is less affected by stress. This could also feed into the variation in the core self-evaluation scores for the low FA perhaps that when first starting work, being judged solely on their work product is novel as opposed to prior social encounters and this may cause them to have to re-evaluate their once enough feedback from work has been received (i.e. after a year).

LMX training improved performance for the business game student teams in their group report which was the last piece of group work submitted – this piece of work required both individual and group work by the whole team and the LMX training may have facilitated that development of a good working relationship with each member of the team meaning the leader was more easily able to coordinate this piece of work and the team members may have been more motivated, feeling that their work was valued.

One reason participants with higher FA did better on the individual reflective essays may be due to link between higher FA and empathy (Fink et al. 2005) – being empathetic means being able to view things from other people’s perspective and this may link to an increased ability to reflect on one’s own work by being able to view it from the perspective of another i.e. be more objective.

Specific DOP Questions

- 1) Evolutionary psychology, relationship focussed approaches to leadership (LMX & Transformational), fluctuating asymmetry and longitudinal project teams.
- 2) This research aims to aid understanding of how the evolutionary psychological perspective can help us learn more about why people behave the way they do in organisational settings and the impact that training can have on performance.
- 3) This research looks at leadership of project teams and as such is suitable for the leadership, engagement and motivation stream.
- 4) The use of evolutionary psychology in an organisation context is still fairly novel and there is little empirical research using this approach in real-life leadership situations. The assessment of the interaction of nature and nurture aspects of leadership is also under researched in real-life situations as is the efficacy of LMX training
- 5) As number 4
- 6) The interaction of nature and nurture. What we look like has an impact on us but so does the experiences we have as well.
- 7) Printed hand-outs.

T35 BPS Division Chairs Session

Iain Bushnell, Division Chairs

Strand **Learning, Training and Development**

BPS Divisional Chairs’ Session

Better together – Other Divisional perspectives

A small panel discuss better ways of working together. DOP Chair-elect Ian Bushnell will be joined by BPS President Richard Mallows; Division of Clinical Psychology Chair Richard Pemberton; Division of Forensic Psychology Chair Ian Gargan; and Division of Counselling Psychology Chair Nicola Gale.

T36

A Conversation with Tomas Chamorro-Premuzic

Strand **Research Design, Analytical Techniques and Practical Applications**

Tomas will be discussing some of his most popular blogs, including his thoughts on millennials, talent management, and the future of you.

T37

Short Paper

The influence of microstressors (hassles) and uplifts on women’s well-being in the workplace.

Dr Roxane Gervais, Independent Practitioner, **Dr Prudence Milliar**, University of the Sunshine Coast, Australia

Strand **Well-being and Work**

Introduction

Research on those work characteristics that could act as macro stressors on individuals and then contribute to their mental distress is well established. For example, stressors, such as excessive workplace

demands feature in prominent models exploring those work characteristics that impact on workers' well-being, inclusive of person-environment (PE) fit (Caplan, 1987), and the job demand-control-resources model (Johnson, 1986, Karasek, 1979). In addition, the importance of adequate job autonomy, as outlined by Hackman and Oldham (1976) in their job characteristics model, as a contributor to better working conditions and thereby better health is well researched. However, the research on those minor or chronic stressors, such as hassles, that may occur over the course of a working day is less prominent in the literature and it has been stated that these are relatively ignored (Zohar, 1999). The research thus far on the topic has shown the negative impact of hassles on stress (Kohn, Lafreniere, & Gurevich, 1991; Zohar, 1999), on health (Kohn, Lafreniere, & Gurevich, 1991) and as good predictors of health outcomes (Lazarus & DeLongis, 1983). It can be hypothesised that due to the Internet, mobile technology and the increase in caring responsibilities, for many workers microstressors might eventually become more prominent as additional stressors to manage, than in the past few decades.

The occurrence of hassles, whether they occur at work or outside of work, usually does not happen in isolation, as individuals may experience uplifts at the same time, such as hearing good news, which may improve their mood and perhaps counteract the impact of the hassles. As well, uplifts are important to individuals' moods and have been shown to predict life satisfaction (Hart, 1999). Due to this slight imbalance in how stress is assessed, it is worthwhile to focus on microstressors within the work environment, to determine if these may affect negatively workers' well-being and as well if uplifts could improve on their well-being.

In assessing the influence of hassles and uplifts on workers' well-being, it is useful to include in this assessment, their mood in dealing with these microstressors. Comparable to the dual experience of hassles and uplifts, individuals do not experience moods that are separate and distinct, for example, they can be both nervous (negative affect - NA) and energetic (positive affect - PA) at the same time. However, the concurrent inclusion of both PA and NA in the research process, is rarely done (Ingledew, Hardy & Cooper, 1997), but when it has occurred, it has allowed for a better assessment of both positive and negative emotional states of individuals (Watson et al., 1988). Parkes (1990) found that negative affect was significantly related to stress and strain measures, which supports further the addition of these different aspects of mood when researching overall well-being.

Women constituted the sample for this present study. Women are a major force in the workplace and as workers are vital to the world's economies. They constitute half of the population, with 52% of global working age women actively employed (World Bank, 2012), with research showing that they are more likely to experience mental ill health than men (Mental Health Foundation, no date). Moreover, it is important to continue to focus on the gender dimension in research (EU-OSHA, 2013), as well as to assess the impact of their well-being separately from men to facilitate those issues that contribute to their ill health.

The current study examined the impact of hassles and uplifts on workers' well-being using a sample of employed women. In order to explore affective well-being (Warr, 2012), the research consisted of measures of depression, anxiety and stress. As microstressors are quite distinct to the individual, as they are relative to experience, the study included, as discussed above, positive and negative moods, together with job autonomy and general self-efficacy. It is expected that these variables will highlight that microstressors do impact negatively on workers' well-being. The research question for this study asked, "Would work / non-work hassles decrease workers' well-being, but would work / non-work uplifts assist in its improvement?"

Method

Participants and Procedure

Employed women were approached to participate in an online questionnaire. The sample ($N = 652$) was asked to complete the following scales: DASS-21 (Lovibond & Lovibond, 1995), PANAS (Watson, Clark, & Tellegen, 1988), work/non-work hassles and uplifts (Gervais, 2002), job autonomy (Voydanoff, 2004), general self-efficacy (Schwarzer & Jerusalem, 1995) and demographic information. The women were slightly older on average ($M = 51.47$, $SD = 6.74$), had around two children each ($M = 1.87$, $SD = 1.39$), were more likely to be married/living with a partner than single or divorced ($M = 2.06$, $SD = .55$), and worked an average week ($M = 35.56$, $SD = 11.65$).

Data Analysis

The data were subjected to reliability and correlation analyses, which were followed by hierarchical multiple regressions to explore further the relationships between the variables.

Results

Correlations showed that the relationships were in the expected direction, such as general self-efficacy contributing to lower anxiety ($r = -.22, p < .001$), while stress was reduced by non-work uplifts and ($r = -.20, p < .001$), and job autonomy reduced the impact of work hassles ($r = -.19, p < .001$). Due to cleaning the data in addition to missing data across cases; this resulted in reduced cases and is reflected in the results.

Hierarchical multiple regressions were conducted using depression, anxiety and stress as the dependent variables. Background variables, i.e., age, marital status and number of children, were entered on the first step of the respective models, the second step consisted of work and non-work hassles, with the third step, including work and non-work uplifts. On the fourth step general self-efficacy and job autonomy were entered, with the fifth and final step including negative affect (NA) and positive affect (PA). The results of the first model, depression (final step), were statistically significant ($\text{Adj } R^2 = .64, \Delta R^2 = .35, F[11, 298] = 50.23, p < .001$), and reflected that non-work hassles ($\beta = .35, p < .001$), and negative affect ($\beta = .60, p < .001$), increased depression, while work uplifts ($\beta = -.13, p < .05$), non-work uplifts ($\beta = -.21, p < .001$), self-efficacy ($\beta = -.14, p < .01$), and positive affect ($\beta = -.28, p < .001$), mitigated its effects.

Similar results were found for anxiety, with the final step of the model achieving significance ($\text{Adj } R^2 = .48, \Delta R^2 = .24, F[11, 298] = 26.41, p < .001$). Work hassles ($\beta = .17, p < .01$), non-work hassles ($\beta = .30, p < .001$), and negative affect ($\beta = .49, p < .001$), increased anxiety, while work uplifts ($\beta = -.19, p < .001$), job autonomy ($\beta = -.18, p < .001$), and positive affect ($\beta = -.25, p < .001$), lessened its effects. In respect of stress, the overall model reflected that hassles and uplifts were predictors of stress ($\text{Adj } R^2 = .54, \Delta R^2 = .26, F[11, 298] = 5.53, p < .001$); work hassles ($\beta = .18, p < .001$), non-work hassles ($\beta = .34, p < .001$), and negative affect ($\beta = .58, p < .001$), increased stress, while work uplifts ($\beta = -.19, p < .001$), non-work uplifts ($\beta = -.11, p < .05$), and self-efficacy ($\beta = -.14, p < .01$), tempered its effects. The background variables of age and marital status were not contributing factors, but the number of children tended to increase anxiety ($\beta = .15, p < .05$), and stress ($\beta = .12, p < .05$).

Discussion

This study has shown that both work and non-work hassles are predictors of well-being and should be considered in its assessment within the workplace. The experience of uplifts, whether occurring at work or outside of work, influenced well-being; but positive and negative affect were strongest predictors of the construct. As such, those work and non-work hassles, such as losing keys, being stuck in traffic or losing a file on the computer could over time also contribute to ill health. These hassles could influence mood, thereby increasing negative affect and perhaps strengthening the overall adverse effect on well-being. Organisations may wish to consider including hassles in evaluating work characteristics and the resources that are available to assist with reducing their effect. The importance of resources in supporting well-being is promoted with previous research (Schaufeli, Bakker & Van Rhenen, 2009) and this study, by exploring a personal resource, such as self-efficacy, has contributed to this area of research.

Limitations

This sample consisted only of women and does reduce its generalisation to the working population. Moreover, the women were slightly older. Despite these differences to the average workforce, as workers are required to work longer before retiring, it is important to understand those work factors that may help or hinder workplace well-being and its ageing population. This study assists in the understanding some of those factors.

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T38

Symposium

Advances in Personality Assessment

Convenor: Rob Feltham, Cubiks; Discussant: Prof, Stephen Woods, Surrey Business School, University of Surrey

Strand Psychological Assessment at Work

OVERVIEW

This symposium is designed to share with fellow professionals recent advances in personality assessment. The Symposium consists of three full papers of 35 minutes each followed by 15 minutes with the discussant exploring themes, synergies and challenges.

- The first paper 'Cross-cultural development of a personality tool for international use' outlines the steps taken in the cross-cultural development of the PAPI 3 questionnaire. Extensive consultation

across a multi-lingual user base was followed by trialing and standardisation simultaneously across six languages representative of the global user base.

- The second paper 'Lumina Spark – Development of an Integrated Assessment of Big 5 Personality Factors, Type Theory & Overextension' describes the rationale for the Lumina Spark personality questionnaire and the factor structure of its 32 'qualities'. The tool successfully blends trait and type theory into a Spark Mandala circumplex model and a separate Hot-Cool reactor factor. A unique feature of the tool is that underlying, everyday and over-extended personas are measured for each quality.
- The third paper 'NEO and Criterion Validation of PAPI 3 Great 8 Totals' illustrates how Great 8 Totals and their underlying competencies can be deployed to conduct construct validation against NEO and to establish criterion-related validity.

All three papers demonstrate the desire of the authors to advance personality assessment in an increasingly international environment. Interactive elements will engage the audience to further learning, sharing and impacting in the real world.

The convener/discussant will draw on his co-validation research to compare and contrast the approaches, and share his insights into the structure of personality variables.

T38a Paper 1

Cross-cultural development of a personality tool for international use

Katy Welsh, Louisa Tate & Sarah Mortenson, Cubiks

Strand **Psychological Assessment at Work**

Introduction:

There are some significant challenges in using personality tools in international assessment, which include an Anglo-centric development bias, a lack of cultural equivalence of different language versions and limited availability of validation evidence.

The Personality and Preference Inventory (PAPI), currently used in 29 languages, has been revised in line with the latest psychological research and feedback from experienced PAPI users to create the latest version of the tool (PAPI 3). A key component of the development process was also a focus on the tool's international user base. This session describes how the challenges described have been addressed by the development process, with a cross-cultural review of content, an international team of item-writers and large-scale international trialing and validation. The session will have two interactive elements – one where the audience will make predictions about which concepts were successful cross-culturally and which were not, and a second where the audience will have an opportunity to engage in an interactive exercise with the dynamic PAPI 3 report using iPads and tablets in small groups.

The cross-cultural development process:

Feedback from experienced PAPI users was considered in line with the latest psychological literature to produce initial scale concepts. As it is recognised that most of the tools on the market have been developed in English (either in the UK or the US) and are then translated into other languages, yet some constructs are evidenced very differently in different cultures (for example, Assertiveness), a cross-cultural approach was taken from the outset including an initial stage in confirming the concepts for each scale. This involved an international review team spanning 10 countries (China, Denmark, Finland, France, India, the Netherlands, Poland, Spain, UAE and the UK).

The next stage was to write the items and the same international team was utilised to create the new item content. Each country team contributed items to between three and seven scales, with each country contributing a maximum of half of the items included in the trial for each scale (i.e. a minimum of two country teams contributed to each scale). The pairings of country teams were selected to maximise the differences between the languages paired together. All of the items were then reviewed centrally and more items were included than needed to allow for loss of items during the trialing process. 16 items were trialed for each scale, and 8 for each facet (or sub-scale).

For this initial trial, data were collected from a sample of 1,186 individuals across five languages: Chinese, Dutch, English, Finnish and French. These languages were chosen to provide diversity across different global language groups.

The personality scales are grouped into higher-order factors to facilitate understanding and feedback. With the latest revisions, including the addition of two new scales, the aim of this study was to identify an appropriate international factor structure for the revised version of the tool (PAPI 3), and to ensure sound psychometric properties of the tool.

The overall data sample was split into two groups, with Exploratory Factor Analysis (EFA) conducted on the first combined language sample. A model for Confirmatory Factor Analysis (CFA) was built on this sample and confirmed on the second sample.

The EFA showed a seven-factor solution to be the most robust for group 1, and also the best fit conceptually. The factors were labelled Impact & Drive, Organisation & Structure, Interaction, Composure, Work Momentum, Ideas & Change and Engagement, as per the table below.

Table 1: PAPI 3 factor structure

Factor	Scales	Factor						
		1	2	3	4	5	6	7
Impact & Drive	Need to be noticed (X)	0.820						
	Need to influence (P)	0.803						
	Need to achieve (A)	0.697						
	Leadership role (L)	0.535				-0.503		
Organisation & Structure	Attention to detail (D)		0.817					
	Need to be organised (C)		0.778					
	Need to finish a task (N)		0.767					
	Need for rules and guidelines (W)		0.666				0.315	
	Planner (H)		0.606					
Interaction	Need to relate closely to individuals (O)			0.766				
	Need to belong to groups (B)			0.718				
	Social harmoniser (S)			0.648		-0.339		
Composure	Emotional restraint (E)				0.865			
	Core composure (Y)				0.614	-0.378		
	Optimism (J)				0.406	-0.378		-0.351
Work Momentum	Ease in decision making (I)					-0.817		
	Work tempo (T)					-0.720		
	Need to be direct (K)				-0.382	-0.535		
Ideas & Change	Conceptual thinker (R)						-0.802	
	Need for change (Z)						-0.751	
Engagement	Work focus (G)							-0.880
	Need to be upwardly supportive (F)							-0.629

This model was confirmed using CFA and acceptable levels of fit for both combined language samples were achieved for a number of statistics (Byrne, 2001). These are shown in the table below.

Table 2: CFA fit statistics

	Chi squared/d.f.	CFI	RMSEA
Impact & Drive	3.233	0.996	0.044
Organisation & Structure	6.310	0.970	0.095
Ideas & Change	0.522	1.000	0.000
Interaction	1.561	0.999	0.027
Work Momentum	0.530	1.000	0.003
Composure	3.086	0.992	0.059
Engagement	0.611	1.000	0.009

Further analyses of the individual language samples were also conducted.

While this cross-cultural development approach was a time-consuming process, the results provide promising evidence that taking a cross-cultural approach from the outset can result in a factor structure that is applicable across different cultures, making the tool suitable for international use.

Construct validity:

Construct validation evidence was gathered through a correlational study exploring the relationships between the PAPI 3 scales and an established personality questionnaire measuring the Big Five; the Revised NEO Personality Inventory (NEO PI-R). While PAPI 3 was not originally designed as a Big Five measure, during this re-development process it has been aligned with the model.

Predictions were made by four psychologists as to which PAPI 3 scales would correlate with which aspects of the NEO PI-R. The results showed that all 50 of the predicted relationships were significant (49 at the $p < 0.01$ level and 1 at the $p < 0.05$ level), and all of the relationships were in the expected direction. The range of correlations was from 0.065 (0.060) to 0.743 (0.608), with a median of 0.380¹⁴ (0.327). As the NEO PI-R factors are broad and the PAPI 3 scales are narrow, it is expected that this will have had an impact on the magnitude of the correlations found.

Criterion-related validity:

A concurrent validation study was conducted on a combined language sample ($n = 929$), with a Multi-Rater Assessment (MRA) tool measuring performance across a number of competency areas as the criterion. Data were collected across 11 different languages: Danish, Dutch, English (UK), English (US), Finnish, French, German, Norwegian, Polish, Spanish and Swedish, and the data samples were large enough for 9 of these language samples to be included in the analysis (all excepting Polish and Spanish).

Prior to the analysis being conducted, two psychologists independently made predictions about the relationships between the PAPI 3 scales and the MRA competencies. The individual psychologists' predictions were discussed and a final set of 23 moderate / strong hypothesised relationships and 22 weak hypothesised relationships were agreed.

When analysed against the self-ratings for the MRA, all of the moderate / strong hypothesised correlations were significant at the $p < 0.01$ level and in the expected direction. The range of the predicted moderate / strong correlations was 0.217 to 0.782, with a median correlation of 0.526. Of the 22 expected weak correlations, 21 were significant and in the expected direction, and the range of the predicted correlations was 0.027 to 0.522, with a median correlation of 0.356.

When analysed against the other ratings (e.g. line manager, peer, direct report etc.), the results showed that 20 of the 23 predicted moderate / strong correlations were significant at the $p < 0.01$ level in the expected direction, and one was significant at the $p < 0.05$ level in the expected direction. The range of the predicted moderate / strong correlations was 0.046 (0.028) – 0.612 (0.437), with a median correlation of 0.396¹⁵ (0.257). All of the 22 predicted weak correlations were significant at the $p < 0.01$ level and in the expected direction, with the range of the correlations between 0.091 (0.057) and 0.516 (0.341), and a median correlation of 0.331 (0.218).

Reliability:

Internal consistency was also established on the mixed language sample, which was split into two groups. The range of alpha coefficients was 0.783 – 0.949, with a median coefficient of 0.858.

Conclusions:

Following a thorough cross-cultural development process, the reliabilities and validation evidence from the combined language data give support for the applicability of the PAPI 3 structure and scales in international settings.

The relationships between the PAPI 3 and NEO PI-R give support for the construct validity of PAPI 3 and the results from the second trial using the MRA provide good evidence of PAPI 3 as a valid predictor of work performance.

Whilst the cross-cultural development process was resource-intensive and it was challenging to collect adequate data samples across the multiple languages, the benefits of this approach can be seen. In a recruitment environment that is becoming increasingly globalised, having a tool that is applicable internationally is advantageous. Whilst the recommended approach is that psychometric instruments are developed in different language versions simultaneously (de Klerk, 2008), this was the first time a tool such as PAPI has been developed truly cross-culturally.

There are some clear learning points that can be taken from the development process, including:

- The value of getting upfront agreement of scale concepts across a range of countries prior to item writing

¹⁴ The correlations have been corrected for unreliability in both instruments using Spearman's correction for attenuation. Uncorrected correlations are shown in brackets.

¹⁵ The correlations between the PAPI 3 scales and the other ratings (e.g. line manager, peer, direct report etc.) were corrected for inter-rater reliability. Uncorrected correlations are shown in brackets.

- The usefulness of providing clear item-writing guidelines to all item writers
- The value in collecting data from multiple language samples for determining the underlying structure of the tool

Sharing these across the industry will help increase awareness of the benefits and challenges associated with the cross-cultural development of personality-based psychometric instruments. This approach could be taken by other test developers in the future and is useful for the wider industry to understand.

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T38b Paper 2

Lumina Spark – Development of an Integrated Assessment of Big 5 Personality Factors, Type Theory & Overextension

Stewart Desson, Nailah Moussa & Julie Ensor, Lumina Learning
Strand **Psychological Assessment at Work**

Introduction

The purpose of the research is to develop an integrated model of personality through the use of inductive, deductive and criterion-centric methods that enables more effective measurement and prediction of effectiveness at work. The new model aims to integrate the “Big Five” personality factors approach with concepts drawn from Jungian psychology and the latest thinking in the field of personality measurement to address some of the limitations of other models of personality.

Research Objectives

This research aims to investigate whether an innovative approach to the “Big Five” can be synergized with Jungian concepts, creating an enhanced hierarchical measure of personality that can be shown to have robust psychometric properties. In particular, the proposed model incorporates the following elements:

Theoretical

- Separate measurement of both poles of each Big Five personality construct (rather than on one continuous scale with one ‘socially desirable’ end).
- Exploring the extent to which there are positive correlations between workplace performance and both poles of each Big Five personality construct.
- Replacing “dark side” (Kaiser et al, 2013) constructs and “maladaptive traits” (Judge et. al, 2009) with measures of the “extreme ends” of normal “bright side” (Kurz, 2012) personality traits. These “extreme ends” are conceptualised in this new approach as the “overextended” persona.
- Portray the interplay of dispositional traits and contextual behaviours, researching the validity benefit of measuring both. This involves conceptualising the “underlying” persona as stable dispositional traits and contrasting this with the “everyday” persona which is shaped by role demands and the “overextended” persona which is shaped by role conflicts. This approach considers the impact that context plays when measuring these characteristics.

Empirical

- To test whether the proposed model of personality is compatible with the Big Five structure.
- To better understand the link between personality predictors and performance as conceptualised by the proposed model.
- To examine whether this model is a valid predictor of the effectiveness of people at work.
- And, to examine whether the features of the new measure can demonstrate improved criterion validity over and above the traditional Big Five construct through:
 - Breaking out the Big Five factors to measure ‘both ends’ independently
 - Measuring Facets under each Big Five Construct
 - Differentiating between the Underlying, Everyday and Over-extended personas

Design & Methodology

In a cross-sectional design N=2158 participants from diverse occupational background were administered the Lumina Spark Personality questionnaire through an online system which they self-rated on a five-point rating scale from “Strongly Agree” to “Strongly Disagree”.

Lumina Spark scores at the facet level which include the average three sub-facets including “Underlying”, “Everyday” and “Overextended” personas, are averaged to form the 32 Qualities which in turn are averaged to form the 10 Aspects at the top of the hierarchical model. The 32 Qualities were expected to form five factors that resemble the Big Five Factor following Principal Component Analysis with Varimax rotation.

Results

Five factors were extracted accounting for 16.4%, 15.2%, 14.5%, 13.3% and 12.2% of the variance respectively. Table 1 shows that results of the Principal Components Analysis of the 32 Qualities of the Lumina Spark personality model after varimax rotation. The resulting factor solution replicates the Big Five Factor structure. The first factor is called Hot Reactor/ Cool Reactor and aligns with Big Five Neuroticism factor and comprises of 4 Qualities on opposite ends. The second factor is labelled Introverted/ Extroverted and corresponds with Big Five Extraversion factor and consists of 3 Qualities on each end. The third factor is Discipline Driven/ Inspiration Driven consisting of 3 Qualities each and is matched with the Big Five Conscientiousness factor. While the fourth factor is People Focused/ Outcome Focused also consisting of 3 Qualities on each pole and aligns with Agreeableness Big Five Factor. Finally, the fifth factor is Big Picture Thinking/ Down To Earth that corresponds to Openness to Experience in the Big Five also comprising of 3 Qualities on each side.

The results support the new proposed model of personality that bifurcates the Big Five Factors into 10 Aspects that are in turn measured by 32 Qualities. The factor solution shows that the 10 Aspects although highly correlated can be distinct and that both ends of personality measurement should be valued as in the case of Introversion and Extroversion. So, instead of being high or low on Extraversion, this measure is proposing that people can be high and low on the opposite ends of the construct. Scale refinements are currently underway showing promising levels of reliability and criterion-related validity.

Discussion

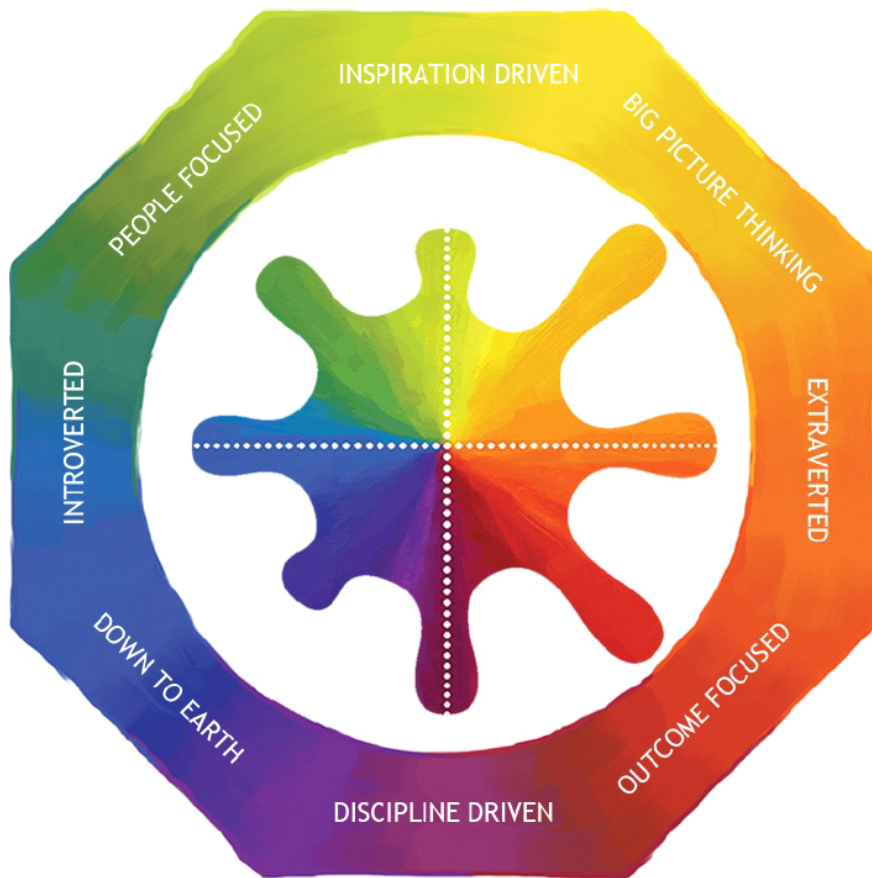
This paper proposes a new innovative measure of personality that measure both ends of the Big Five Factors separately in order to better understand the personality-performance relationship and hence improve predictive validity of personality measure. The integration of the “underlying”, “everyday” and “overextended” persona which is aligned to stable trait and situationally-based behaviours respectively, into one dynamic personality measure captures the individual’s natural preference, his everyday behavior and how he responds under pressure. Moreover, overextended persona addresses the personality research literature on the “dark-side” aspect of personality (Hogan & Hogan, 2001). The understanding of the dynamic ways that personality interacts together to impact on performance is crucial for the practitioner to improve prediction of work performance.

	Factor 1 Neuroticism	Factor 2 Extraversion	Factor 1 Conscientiousness	Factor 4 Agreeableness	Factor 5 Open to Experience
	HR/CR	IN/EX	DD/ID	PF/OF	BPT/DTE
Intense	.90				
Impatient	.88				
Concerned	.85				
Resilience	-.84				
Even-tempered	-.71				
Selfeffacing	.70				
Optimism	-.70				
Self-belief	-.58				
Observing		.89			
Measured		.89			
Sociable		-.82			
Demonstrative		-.81			
Intimate		.65			
Takes Charge		-.48		-.45	.41
Purposeful			.88		
Flexible			-.83		
Structured			.82		
Reliable			.82		
Spontaneous			-.76		
Adaptable			-.74		
Empathetic				.84	
Tough				-.78	
Accommodating				.75	
Logical				-.74	
Collaborative				.74	
Competitive				-.54	
Conceptual					.85
Imaginative					.84
Radical					.76
Practical					-.66
EvidenceBased			.42		-.57
Cautious			.41		-.52

Component loadings < .20 omitted; Component loadings > .40 in bold.

Table 1: Rotated components of PCA factor analysis of the Lumina Spark personality measure (N=2158). Figure 1 shows the Spark Mandala that has been designed to represent four of the Big 5 factors which are typically covered in developmental tools. The factors are ordered to form a circumplex where People Focused through to Discipline Driven broadly represent Digman's (1997) Alpha Factor while Inspiration Driven to Outcome Focus represent the Beta factor. Emotional Stability (Cool Reactor) and Neuroticism (Hot Reactor) is covered through optional extra questions and report sections using bar charts. The second half of this paper will consist of a 'live' demonstration of the Lumina Spark model components using a mat with the Mandala and card decks to bring the dynamism to live.

Figure 1: Spark Mandala showing four Bi-polar Factors in Circumplex Order



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T38c Paper 3

NEO and Criterion Validation of PAPI 3 Great 8 Totals

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Strand **Psychological Assessment at Work**

Psychological assessment practice requires accurate measurement tools that allow valid inferences to be made about past, present and future behaviour. The last 25 years have seen massive advances in the field of personality measurement with a recognition of the Big 5 personality factors as a succinct yet useable summary model of personality, and recognition of a hierarchical structure of the constructs. Digman (1997) found that Conscientiousness, Agreeableness and Emotional Stability formed a higher-order α factor while Extraversion and Openness formed a β factor. Musek (2007) demonstrated that these two correlate giving rise to the notion of a general factor of personality.

Kurz & Bartram (2002) extended the 'Big 5' into the 'Great 8' model by separating out Sociability and Need for Power aspects of Extraversion, Structure and Need for Achievement aspects of Conscientiousness, and Creativity and Analysis aspects of Openness. Bartram (2005) conducted a meta-analysis of personality data using the Great 8 constructs to model predictor-criterion relationships achieving impressive validity coefficients using multiple regression based weights.

Saville, MacIver & Kurz (2008; 2013) demonstrated how Great 8 composite scores can be created to compare the criterion-related validity of seven personality tools against a Global (three item scale) measure of overall effectiveness. The raw validity of the Great 8 Total predictor composites ranged from .17 for OPQ32i through .18 for 16Pf and HPI to .20 for NEO for established personality questionnaires with values of .28 (.49 when corrected for attenuation) Professional Styles version of Saville Consulting Wave and .32 (.57) for the complex Competency Potentials score composite. This paper outlines the construction and validation of comparable equations for the Sales and Leadership version of the new PAPI 3 personality questionnaire.

Study Design

In the development study N=210 managers and professionals completed a trial version of PAPI 3 and the NEO PI-R in English. In the standardisation validation study N=929 managers and professionals completed the Sales & Leadership version of PAPI 3 and a performance self-assessment on 22 competencies, and were rated by at least two others (external reviewers) on these.

Method

To develop Great 8 equations a number of data sources were utilised:

A. Expert judgement survey of the logical concordance between PAPI 3 and NEO scales

Bartram (2005) conducted an influential meta-analysis of personality and ability scale validity. The article published the exact equations used to calculate Great 8 composite scores from 24 OPQ scales with a double weight for the most central scale and a single weight for auxiliary scales. Saville, MacIver & Kurz (2008; 2012) emulated this approach to develop Great 8 equations for a range of substantial personality questionnaires including NEO.

Six Occupational Psychologists familiar with PAPI 3 and NEO completed a Logical Concordance rating. Results were averaged and inspected with view to creation of PAPI 3 Great 8 equations.

B. Correlations between PAPI 3 and NEO scales

Scale by scale correlations patterns (N=210) were inspected as well as correlations between NEO Great 8 composite scores with PAPI 3 scales to identify what PAPI scales ought to be at the heart of each Great 8 construct.

C. Correlations between PAPI 3 scales and external performance ratings

In the course of PAPI 3 standardisation participants were asked to nominate two reviewers to provide performance ratings on 22 competencies. For N=929 participant performance data from the first rater received could be matched to PAPI 3 data. A composite score was calculated by adding up the 22 competencies separately for Self and Other performance ratings.

Results

The expert judgements helped to identify broad areas of correspondence and clearly indicated which PAPI scales would be expected to correlate with each of the 24 NEO facets used in the Great 8 equations. Correlations with NEO Great 8 constructs and individual PAPI scales were a key source for deciding what PAPI scales should be used for Great 8 competencies. PAPI criterion-related validity analysis on N=929 showed that the highest raw validity was obtained for 'M Inspirational Motivator' at .27, followed by 'L Leadership Role' at .23 and G Work Focus at .20. Negative validity coefficients were obtained for 'W2 Need for guidelines' at -.20, 'N Need to finish a task' at -.12 and four other PAPI scales measuring aspects of 'Conscientiousness'.

Table 1 shows the existing NEO Great 8 mapping of Saville, MacIver & Kurz (2008; 2012) and the new mapping generated from the analysis described above.

- Leading & Deciding is based on Need for Power with suitable predictors in both tools.
- Supporting & Cooperating is related to Agreeableness but is designed to complement drivers of performance rather than being defined through lack of drive.
- Interacting & Presenting is based on the Sociability aspects of Extraversion with straightforward mappings.
- Analysing & Interpreting is difficult to cover in NEO and PAPI 3 with construct validation evidence suggesting the deployment of scales related to the rational processing of emotions.
- Creating & Conceptualising covers divergent thinking including revolutionary tendencies to break rules and conventions.
- Organising & Executing covers Structure aspects of Conscientiousness. An attempt to include Work Tempo had to be abandoned as construct convergence would have dropped below .45.
- Adapting & Coping covers the ground of Emotional Stability. Need for guidance has been weighted negatively based on criterion-related validity and construct concordance evidence.

- Enterprising & Performing tends to be the most valid construct and is covered well by both tools.

Table 1: Great 8 Equations for NEO (existing) and PAPI 3 (new) with **Double Weight** for 1st Scale

	NEO	PAPI
Leading & Deciding	Assertiveness Modesty (-) Competence	L Leadership role P Need to influence I Ease in decision making
Supporting & Cooperating	Altruism Tender-Mindedness Trust	S1 Social S2 Harmoniser M Inspirational motivator
Interacting & Presenting	Gregariousness Warmth Positive Emotions	B Need to belong to groups X Need to be noticed F N. to be upwardly supportive
Analysing & Interpreting	Openness to Ideas Compliance Openness to Feelings	R2 Conceptual E Emotional restraint U Resilience
Creating & Conceptualising	Openness to Actions Openness to Aesthetics Openness to Values	R1 Creative Z Need for change W1 Need for rules (-)
Organising & Executing	Order Deliberation Dutifulness	H Planner C Need to be organised V Persistence
Adapting & Coping	Vulnerability (-) Anxiety (-) Depression (-)	J Optimistic Y2 Tolerant of criticism W2 Need for guidelines (-)
Enterprising & Performing	Achievement Striving Self-discipline Activity	G Work focus A1 Competitiveness A2 Personal success

The Great 8 composite equations all match or exceed the .45 minimum threshold value for construct convergence evidence with a correlation of .61 between the two Great 8 Totals.

Table 2: Great 8 Construct Convergence across NEO and PAPI 3

	G8 Total	L & D	S & C	I & P	A & I	C & C	O & E	A & C	E & P
G8 Total	.608**	.330**	.503**	.328**	.394**	.386**	.352**	.547**	.376**
L & D	.491**	.714**	.291**	.269**	.049	.154*	.248**	.297**	.287**
S & C	.328**	-.051	.453**	.166*	.307**	.344**	.185**	.348**	.183**
I & P	.366**	.002	.410**	.543**	.191**	.234**	.049	.370**	.207**
A & I	.216**	-.035	.197**	.004	.523**	.391**	.078	.141*	.060
C & C	.145*	-.099	.159*	.076	.275**	.448**	-.079	.132	.095
O & E	.280**	.149*	.205**	.101	.089	-.137*	.571**	.131	.192**
A & C	.416**	.379**	.288**	.075	.302**	.219**	.111	.644**	.151*
E & P	.536**	.362**	.321**	.210**	.169*	.205**	.504**	.352**	.555**

The PAPI 3 Great 8 Total correlated significantly at .23 with 'Other' (external) ratings of overall job performance based on the average of 22 competency ratings, and .65 with a corresponding self-assessment of job performance. All Great 8 predictors correlated positively with other ratings of performance with significant correlations for Supporting & Cooperating (.25), Leading & Deciding (.21), Enterprising & Performing (.20), Adapting & Coping (.18), Creating & Conceptualising (.14) and Interacting & Presenting (.14).

Discussion

The results show robust construct convergence between Great 8 constructs measures through NEO and PAPI 3. Supporting & Cooperating and Creating & Conceptualising are less convergent while Leading & Deciding constructs correlate as high as .71.

The raw validity of .23 suggests that the Great 8 Total derived from PAPI 3 has robust validity across jobs, organisations and languages/cultures. The effect size of the simple personality scale composite is comparable to the raw validity of .25 for the Competency Potential Prediction score of Wave Professional Styles against a 36 item composite measure of overall performance reported by Hopton (2012).

While the validity of Conscientiousness has been shown to generalise the data suggests that need for Achievement aspects are more important than Structure aspects.

The data provides an evidence-based starting point for the creation of job profiles. In specific client settings job profiling and local validation should be used to fine tune assessment systems.

Key aspects of the Great 8 mapping process for PAPI 3 will be recreated interactively in the spirit of the 'Learning, Sharing, Impacting' theme of the conference to enable practitioners to undertake such an exercise with other tools.

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T39

Panel Discussion

Advances in Technology-based Testing: Revising the ITC Guidelines

Panel Chair: **Dave Bartram**, President, ITC and Chief Psychologist, CEB

Panellists: **Dr Iain Coyne**, University of Nottingham, **Rob Bailey**, OPP, **Ian Florence**, ETPG, **Prof John Rust**, University of Cambridge

Strand **Psychological Assessment at Work**

In July 2005, the International Test Commission (ITC) launched their International Guidelines for Computer and Internet-based testing. Aimed at test publishers, developers and users, the guidelines have become internationally recognised in highlighting good practice issues in computer-based and Internet-delivered testing and have raised awareness among all stakeholders in the testing process of what constitutes good practice. Although the Guidelines have been well-received and are making an impact both in research and practice, there is recognition that a rapid developing area such as Internet testing requires the need for regular updating of the Guidelines. For example, advances in the use of mobile devices, video game techniques, avatars and online monitoring or proctoring are not fully reflected within the current Guidelines. In addition, since they were published in 2005 we have seen the publication of the ISO Standard (ISO 10667) on Assessment Service Delivery: "Procedures and Methods to Assess People in Work and Organizational settings". This provides a potential overarching framework within which to locate international guidelines focused on more specific assessment issues.

In July 2014 the ITC undertook to start work on a revision of these guidelines, led by Dr Iain Coyne. This panel discussion is intended to inform the revision of the Guidelines and will consider issues the revised guidelines need to address. Among these issues are the following:

- What will testing look like in 10 years' time?
- Where will multi-media assessment, measurement in virtual environments and "gamification" lead us in the next 10 years?
- Can new technology help us to measure new things about people?
- What are the potential strengths and weaknesses of using social media data for testing?
- How will mobile technology affect testing?
- How do we manage the increasing demand from test users (managers, teachers, medics, parents) for easy to understand reports that make valid predictions?

- How do we encourage more cross-fertilization on testing developments between specialisms in psychological assessment?

The panellists include the original guidelines' authors (Coyne and Bartram) and others, all of whom have experience and expertise in the practice of computer-based and Internet delivered testing and who are well versed in the emerging research literature on this. They will each provide a brief statement of points they see as important and will debate current issues in Internet testing and those likely to emerge in the future. The session will encourage interaction and comment from the audience.

Ultimately, by understanding the issues which need to be incorporated into a set of revised guidelines, the ITC can ensure the guidelines continue to be an internationally recognised resource on good practice.

Format:

- Five-minute introduction from the Chair.
- Ten-minute presentations from the four panellists.
- 45-minutes for interactive discussion with the panel and the audience.
- Total 90 minutes

T40

Discussion

Careers in 21st century organisations: implications for individuals with Specific Learning Difficulty (SpLD)

Dr Michal Tombs-Katz, University of South Wales & **Dr Catherine Steele**, University of Leicester
Strand **Learning, Training and Development**

Organisations are responding to the challenges posed by external demands in a variety of ways, often engaging in continuous reorganisation of divisions as well as streamlining and rationalising processes (e.g., downsizing, cutting costs, introducing more efficient ways of working). Subscribing to continuous improvement of processes, they recognise that in order for them to survive in today's fast changing environment they must ensure that the workforce is up-dated and up-skilled. Consequently, they move towards empowering workers to manage their career, encouraging managers to act as facilitators of development and of continuous learning (Noe, Clarke, & Klein, 2014).

21st Century organisations thus no longer offer a "secure job" and expect employees to be accountable for their own development. Changes in work organisations have created new 'career realities' that focus on the individual and require them to take responsibility for their own career development (Kidd, 2002), however there has been little research into the reality of career self-management and no comprehensive taxonomy of the qualities necessary for effective career management is yet available. These changes demand a different skillset from employees, putting greater emphasis on communication skills, initiative and self-motivation, flexibility and adaptability; planning and managing own time, and team-work and collaboration. Employees who lack such skills, struggle to cope in today's organisation (De Vons & Soens, 2008) and the purpose of this roundtable discussion is to explore how those who are identified as having Specific Learning Difficulties fair in such environments.

As pointed out by Kirby & Kaplan (2003), the term 'specific learning difficulties' is not universally accepted and these are often referred to as hidden disabilities. SpLD or hidden disabilities are terms that are commonly used to refer to three problems including Dyslexia, Dyspraxia, and Attention Deficit Hyperactivity Disorder (ADHD). In addition, Autism Spectrum Disorder (ASD) commonly overlap with these learning and attention problems. According to recent figures provided by official bodies, these conditions are thought to affect 10% to 15% of the population (The Department for Work & pensions, 2014). Many people who have SpLD struggle to get appropriate training or education, struggle to find jobs, struggle to get accommodations in the workplace, or get jobs only to lose them within a short time. There are several possible reasons for this: lack of fit between skills and job requirements; social skills difficulties; systemic barriers resulting in lack of appropriate accommodations; and difficulty handling the learning experiences inherent in any job in today's world.

Most research in this area focuses on the transition between education and employment for those with SpLD (e.g. Cummings, Maddux & Casey, 2000) rather than on experiences in the workplace itself.

However, Goldberg, Higgins, Raskind and Herman (2003), have identified six success attributes for individuals with learning difficulties (self-awareness, proactivity, perseverance, appropriate goal setting, effective use of social support systems, and emotional stability/emotional coping strategies) that are not dissimilar to the strategies required for career self-management for all. This roundtable discussion will bring together academic and practitioner expertise in the fields of career planning and working with individuals with SpLD. The hosts will deliver a highly interactive discussion session. The discussion will start with a brief introduction of the issues that individuals with SpLD are facing now days in terms of employment. A brief explanation of what is meant by the term SpLD will be provided with an overview of employment figures. The hosts aim to produce a guidance document for organisations and consultants as a result of the roundtable discussion at the conference. It is envisaged that this would be made available via the DOP.

The majority of the discussion will be devoted to raising questions and opening up discussion and will consist of three main themes:

1. Career guidance issues for employees with SpLD (Retention)
2. Career guidance issues for job seekers with SpLD (Recruitment)

References:

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Submission Category: Learning, Training & Development

Submission Type: Roundtable discussion

Suitable for: Students, practitioners and academics alike are encouraged to join us for a highly interactive session.

Submission Requirements: Roundtable – We envisage this session to encourage active audience participation.

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Short Paper

Engage and Change: Occupational Psychologist's role in facilitating Corporate Responsibility

Dr Jan Maskell, Appreciative Learning, **Nadine Page**, Ashridge Business School

Strand **Leadership, Engagement and Motivation**

Introduction and purpose of the presentation

Organisations increasingly see that acting responsibly is not only good for society but can also deliver many organisational benefits. As well as the financial benefits of being a sustainable organisation, there are

many positive gains for the people element of organisations including: staff recruitment and retention; managing risk in supply chains and ensuring greater security and transparency; driving innovation and productivity; and opening up new markets. Corporate Responsibility (CR) is an area of business that is emerging, and many organisations are looking for how to improve their organisational citizenship. There are many ways in which Occupational Psychologists (OPs) can help organisations in their transition towards economic, social and environmental sustainability and ensure that responsible organisational practices become the normal way of doing business in the longer-term.

The purpose of this presentation is to showcase and discuss the role that OPs can play in supporting and developing CR professionals to embed sustainability in their organisation. The skillset of OPs means that they are suitably equipped to offer support in relation to, amongst others: developing an understanding of the cognitions and behaviour of people within the organisation; to better understand potential resistance; to effectively develop engagement throughout the organisation; to offer valuable and meaningful models and theoretical approaches supported by practical methods. These would ensure that CR professionals not only have sufficient understanding of the possibilities for change but are also able to influence decision makers and translate theory into good practice.

This presentation reports on an empirical study that sought to identify the current, near future and distant future areas of importance and challenge for CR professionals. By focusing on both the target areas and the challenges in a systematic way, we were able to compare and contrast how these align and also how they might change in the future. We used the theoretical framework defined in the 4E's model (DEFRA, 2011) to support our empirical findings and have adapted the original model to 6 dimensions (see Figure 1) in order to offer a more practical framework of pro-environmental behaviour change based on the insights of our empirical work. The presentation offers specific learning in the area of CR and through the inclusion of research and the newly adapted theoretical framework, the presentation offers the sharing of both theoretical and practical knowledge to professionals and organisations alike.

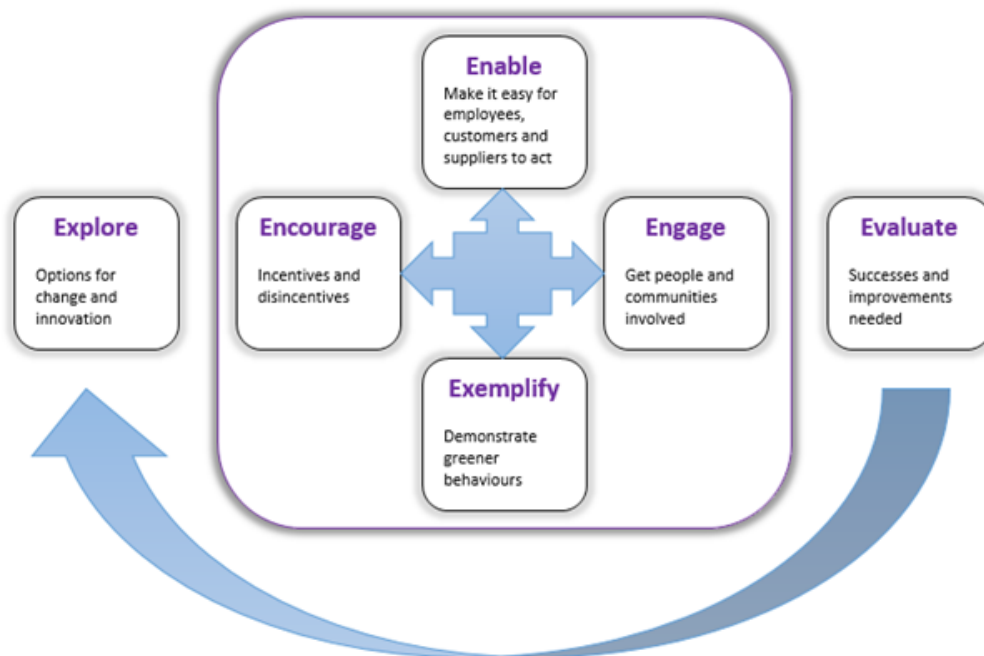


Figure 1: The 6E's model of pro-environmental behaviour change (adapted from Defra 4Es tool, Defra 2011)

Theories, models and research

In addition to the 6E's model outlined in Figure 1, in this presentation we also draw on a range of other psychological theories, models and research in our discussion of the role of OPs in supporting and developing the work of CR professionals. These are discussed in the following ways:

- Leaders and managers can **explore** where their employees, customers, suppliers and their community are in terms of their motivation to behave responsibly. 60% people will probably be at

the “pre-contemplation stage” in relation to change in the Transtheoretical Model of Behaviour Change (Prochaska, DiClemente & Norcross, 1993, Figure 2). We propose that by using the four central approaches defined in the 6E’s models, organisations can move people along the transition curve towards action.



Figure 2: Trans-theoretical model of behaviour change (Prochaska, DiClemente & Norcross, 1993)

- Thinking styles and decision making about pro-environmental behaviour. Organisational and managerial actions can **encourage and enable** automatic rather than reflective thinking (Sloman, 1996, 2002; Kahneman, 2011) as well as making responsible actions the default and considering opt-out rather than opt-in possibilities (Thaler & Sunstein, 2008)
- A combination of motivation (Ryan and Deci, 2000), goal setting (Locke and Latham, 2006) and feedback, both informational and social (Cialdini, 2004; Schultz, Nolan, Cialdini, Goldstein & Griskevicius, 2007) can **engage** and appeal to the complacent majority as well as the pro-active and negative minorities
- Making sustainable behaviour the social default involves understanding and influencing the social norms and using social cues to **exemplify** desired behaviour, and understanding people are constantly looking for social proof to guide their own behaviour Cialdini (2004)

Links with the main conference theme of Learning, Sharing, Impacting

Through specifically identifying the ways in which OPs can help the work of CR professionals, this presentation also shares the concept of CR as a vehicle for engagement more broadly. The application of psychological theories, models and research demonstrate the role that OPs can play in this emerging area. The 6E’s model, and the discussion of the other associated theories, is relevant for CR professionals, OPs, consultants and organisational change professionals, as well as any OD change project and anyone concerned about sustainability.

The potential impact of delivering CR in any organisation, with the assistance of OPs, can have impact on the engagement of employees with the issues of individual, local, national and global importance. This can mean a contribution to organisational performance in a range of environmental and social sustainability areas including reducing GHG emissions and the organisation’s carbon footprint, implementing environmentally- and people-friendly policies both within the organisation and across the supply change, ensuring fair trade, or developing a circular economy.

Relevance to the Leadership, Engagement and Motivation conference strand

The 6E’s model and process emphasises the participation and engagement of employees, customers, suppliers and the community in sustainability issues. This starts with the leadership of an organisation developing an appropriate strategy, policies and procedures, and continues with the management implementing these through employees. In essence, organisational citizenship both vertically and horizontally throughout the organisation.

Innovative aspects of the presentation

For OPs who deal with a range of interventions around the issues of employment, such as recruitment, performance appraisal, career development, coaching, and health and safety the notion of CR may be novel and the OD interventions that OPs could help with will be outside their experience. If organisations are to reach the international aspirations of the Intergovernmental Panel on Climate Change (IPCC), as

well as more local, national and personal targets (e.g., a zero carbon society and a three tonne personal carbon limit) then OPs can and should take a major role in helping organisations as well as individuals to take action to achieve this. In addition, this session might also prompt individual OPs themselves to consider their personal contribution to climate change and actions they can take.

How will this presentation be stimulating and useful for conference delegates?

The session will be conducted in a lively and interactive manner, using case study examples, models and theories that are interesting, evidence-based, relevant, theoretically grounded as well as practical and applicable. Delegates will be introduced to the 6E's model and encouraged to see this as a change model that can be applied to CR as well as to other situations.

What might the public find interesting about this presentation?

The alignment of OP theories, models and practices with the work of CR professionals will give this appeal to any organisation, leader, manager, employee, customer, supplier or member of a community.

Available materials

The slides and any material produced for this session will be made available and accessible to anyone. The session is based on a paper which will be published on the DOP website and available to anyone to download.

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T42

Short Paper

Learning to Learn: Informal Learning in an ICT Team

Victoria Roe, Manchester Business School

Strand **Learning, Training and Development**

Introduction

Over the past 30 years, workplace learning has been recognised as vital for commercial success by organisations and governments alike. However, many organisations do not recognise that formal training is just one workplace learning strategy. Formal training may be the first solution considered but other learning mechanisms can be equally effective.

"Informal learning" is characterised by Marsick, Volpe and Watkins (1999) as an unstructured and experiential form of learning, occurring whilst employees perform their role and led by the learner. They suggest that informal learning has always been the most pervasive type of workplace learning, due in part to peoples' ability to engage unconsciously in learning as a natural part of their role. Some estimates suggest that between 80-90% of workplace learning is informal in nature. Selection of informal learning methods may only be strengthened by a perceived decline in formal training expenditure (due to the economic downturn), as employees feel forced to create and lead their own learning opportunities.

The informal learning literature is scant and largely theoretical, reflecting a difficulty in conceptualising a fluid, sometimes unconscious process. Marsick, Volpe and Watkins, (1999) have developed a model that describes informal learning as a cyclical process, made up of a number of non-sequential stages that occur within the “context” of the organisation. The model suggests that workplace learning is usually triggered by an external jolt to the individual, leading to consideration of the recent experience and alternative solutions that may elicit a more preferable outcome. Learning strategies are used to understand and practice new ways of working, which are then assessed for efficacy and unintended consequences. The individual considers what they have learned and re-assesses their understanding of the initial experience. It is important to note that, because of the contextually embedded nature of informal learning, the organisational context around this process can exert a significant influence. Research has been done to investigate enablers and inhibitors of informal learning but a common theme throughout is that informal learning and its organisational context is specific to a workplace or profession, necessitating a closer look at individual organisations to make useful recommendations.

Research Questions

The informal learning model and other, related taxonomies have made important theoretical contributions in progressing our understanding but there are still unanswered questions. Are the steps described within informal learning models replicated by learners in organisations? Do experiences of informal learning differ between workplaces and professions, or between individual and team-centred learning? How can organisations effectively support their staff to increase knowledge and skills through informal learning? The study used a series of interviews within an ICT function to investigate three research questions:

1. How do ICT employees use informal learning in the workplace?
2. What do employees perceive as helping or hindering informal learning?
3. How could knowledge management be used and supported within ICT environments?

Learning, Sharing, Impacting

The study reflects the conference themes of learning, sharing, impacting by presenting findings focused on an emerging theoretical area that has real impact in the workplace. The research synthesises a number of theoretical areas (formal learning theory, informal learning theory, knowledge management) to draw attention to an often-ignored but critical method of workplace development, and to present clear guidance to organisations in their encouragement of informal learning. Understanding how organisations can best support their employees to learn and develop can promote the use of innovative learning methods, whilst also helping organisations and employees to work together to remove barriers to learning and recognise all efforts to increase workforce knowledge and skills.

Design

Methodology and Analysis

A qualitative methodological approach was used based on the emergent state of the literature and the philosophical stance of the investigating researcher and literature. Twenty semi-structured interviews lasting one hour were conducted using an interview schedule developed using a priori themes. Heterogeneous purposive sampling was used to recruit interview participants as it provided three main benefits: taking a diagonal slice through the organisation ensured all sub-groups were represented; the sample contained enough diversity; the researcher could identify participants that were likely to contribute valuable insights. Prior to the interviews the participants were given a short overview of types of informal learning to allow them time for reflection. The research was designed and conducted in accordance with the BPS Code of Human Research Ethics; ethical approval was granted by two members of the Organisational Psychology group at the supervising University.

The interviews were transcribed from recordings, then analysed using NVivo9. The template analysis technique was used to interpret the interview data; this method supported the inclusion of a priori themes but also allowed for further interpretation of the data within the specific organisational context. The iterative nature of template creation supported reflexivity by the researcher, who was part of the investigative process and a member of the team in question. An initial template was developed based on a priori themes and a sub-set of interviews. All data was then used to construct the final template, completed when the themes reached saturation point.

Results

A number of themes emerged from the analysis. Use of different informal learning strategies (RQ1) was largely informed by the trigger to start learning. Proactive (as opposed to reactive) learning was viewed more positively and was seen as essential to remain employable in an ICT role. Informal learning was seen as a key method for this proactive development. Different learning techniques were seen as complementary (e.g. observation followed by independent practice), where both aspects had to be present for successful learning. Despite the often individual nature of ICT work, emphasis was placed on collaborative learning techniques and the use of networks in broadening skills; learning this way provided benefits for all involved. Choice of learning method was also affected by whether the learning was proactive / reactive; the task drove the technique in reactive situations whereas individual learning preferences could be taken into account when learning proactively. Formal learning was useful in some technical learning situations, but was often supplementary to what could be learned in a more informal manner.

Various themes were identified when participants were asked to identify factors affecting informal learning (RQ2). Seven of the eight themes (“the team around me”, “management”, “the learning environment”, “role autonomy”, “clear learning goals”, “learning resources” and “personal factors”) contained both enablers and inhibitors of learning. One example is the learning environment: a learning culture can be developed by encouraging growth within roles, providing development opportunities and maximising learner accountability by asking for demonstrations of the learning in use. However, the ICT environment was presented as an inherently problematic place to learn, partly due to the time-bound, pressurised atmosphere which has little tolerance for mistakes. One theme, “fear”, was entirely negative, created in part by the poor learning environment. Learning by mistakes (referenced as a useful strategy) was not tolerated and fear led to a lack of documentation, driven by a disinclination to be associated with errors and perceptions that knowledge is power.

Knowledge management (RQ3) was seen as a positive support to informal learning, particularly with respect to sharing knowledge amongst the team. However, participants queried whether it was an achievable strategy; often the future vision of a “knowledge base” was far too time-consuming and required immediate resource that was difficult to justify. It was also felt that, without strong leadership by management, processes to maintain knowledge management systems would never be integrated into daily working practice.

Discussion

This innovative research focused on an underexplored and yet essential method of workplace learning. Informal learning was positively described by all interviewed and requires limited investment in resources or materials by organisations. Therefore, understanding more about informal learning, how it manifests itself in specific settings and how it can be enabled or supported can provide organisations with an entirely new offering within their learning and development strategy at minimal cost.

The research aimed to understand if current theoretical models of informal learning were replicated in a work environment and how organisations could encourage informal learning. All participants highlighted the importance of informal learning, both for self-progression and for completing work tasks, but did not necessarily feel that the current work environment promoted or rewarded this kind of learning. Participants felt that informal learning would provide individual and organisational benefits by delivering a more empowered, highly skilled workforce and, therefore, should be supported by their managers and organisation.

The informal learning models and taxonomies in existence provide a useful summary of the process but reflect a theoretical bias towards unplanned or incidental learning. The interview data revealed that informal learning is just as likely to be planned as unplanned, necessitating adaptations to current theory to fully illustrate the spectrum of informal learning within organisations, and provide guidance for those embarking on more deliberate, self-directed learning.

When investigating the kinds of informal learning techniques used, participants referenced the majority of techniques listed in Cheetham and Chiver’s 2001 taxonomy but attached specific importance to collaborative techniques. The relative importance of networks is reflected in the recent increase of organisational “communities of practice” to promote knowledge sharing. The findings of this and other research studies indicate that such collaborative learning acts as an enabler for future learning as well as a learning technique. Existing models are largely individual in focus but this emphasis on collective learning indicates that a team or group level viewpoint would be useful.

Participants also reflected on the importance of observation and practice, identifying that one without the other results in a sub-optimal learning experience. This finding reflects the common issue identified in the formal training literature as “training transfer”, suggesting positive outcomes associated with both types of learning (better transfer of skills, gains in productivity, higher quality of outputs) could be increased by provision of adequate opportunities to apply newly learned knowledge and skills.

Practical Implications

The study illustrates various opportunities for organisational support of informal learning. By understanding the process of informal learning and their specific organisational context, workplaces can improve the learning and development opportunities available to their employees.

- Recognise and promote the importance of informal learning: Help employees pursue independent learning (as well as formal training) by including this as a personal objective. Management can lead this by providing learning roadmaps whilst encouraging learners to take ownership of their own development.
- Create a positive learning environment: Encourage personal development and provide a safe environment for learning by trial and error.
- Promote collaborative learning: Where possible, cross-functional working should be used to increase collaboration and offer opportunities to identify future learning areas. Creation and use of learning networks (such as communities of practice) should be supported.
- Think about informal learning techniques and how they could be integrated with formal learning: Provision of adequate opportunities to apply new knowledge and skills is essential to support transfer of learning.
- Spend time considering how tools such as knowledge management will be used. How will the existing learning culture affect them? Are reasons for implementation and plans for integration with existing processes clear?

Hand-outs

- ☞ Informal Learning Model (Marsick, Volpe and Watkins, 1999)
- ☞ Taxonomy of Informal Learning Methods (Cheetham and Chivers, 2001)
- ☞ Summary of Enabling and Inhibiting organisational factors (Roe, unpublished)

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T43

Standard Paper

When is assessment not “Assessment”? - Maximising talent management outcomes by harnessing self-driven learning and an inclusive, employee-centred approach.

Richard Ogden, Quest Partnership Ltd

Strand **Leadership, Engagement and Motivation**

Context and How Our Paper Links to the Examples of Topics/Theme of the conference

As practitioners, this paper is very much about sharing our learning and experiences on a very rewarding and interesting project. We have received several professional/industry awards and recognition for our approach over the past 2 years.

This paper presents an approach to maximise the outcomes of an actual ‘emerging talent’ leadership development programme through taking an inclusive, employee-centred approach, encouraging a culture of self-driven learning.

Most organisations face challenges attracting, retaining and developing leadership talent pipelines as society and the world of work changes. Strategic talent issues include:

- a brain-drain as an aging workforce approach retirement;
- shifts in the employee psychological contract with their employers, to become much more consumer-focused;
- competition or so-called ‘war’ for talent;

- changes in social demographics, such as both partners/parents needing to work, rising student debt and house prices;
- a need to increase engagement amongst staff to create e.g. greater organisational citizenship and extra-role discretionary effort;
- avoiding demotivating employees who are not identified as ‘high-potential’;
- creating blockages in the leadership pipeline by cautiously recruiting people based on ‘readiness’ for a leadership role, rather than actual future *potential* –
- more besides....

We present ways our programme have addressed the issues above. This context links into many of the ‘Examples of Topics’ under Leadership, Engagement and Motivation.

We present evaluation data to demonstrate how we have had an impact on employee engagement, increased employee interest in leadership careers, accelerated the promotion and succession planning of leaders, enhance the visibility of emerging talent to senior leadership and other positive outcomes for the individual and organisation.

Potential - rather than ‘readiness’ right now – focus on drive and learning orientation

We draw on our experience from corporate interventions to illustrate how assessment processes that focus only on the current capability by taking a performance ‘snapshot’ of individuals ignores the key predictors of career prediction like drive, ambition and motivation.

We present a longitudinal approach to developing and accelerating the career paths of future leaders in their first few years of work experience or tenure in the organisation. Our approach harnesses more traditional assessments such as psychometrics and work-samples, but rather than using the exercises to assess the candidates, the candidates are assessed on what they *do with* the assessment information. Specifically, how effectively they *apply* the learning from them in the workplace.

Employees are invited to self-nominate to participate upon a 12 month programme based in the workplace that incorporates online assessments and a 1 day career workshop on career-development techniques and how to drive their own learning. Participants are then encouraged to choose between different leadership development streams. Outcomes are negotiated between company and individual, with transparent feedback and another opportunity always available.

Diversity – plurality and self-driven ‘authentic’ leadership

We argue that business must understand the need for a plurality of different types of leaders and that a one-size-fits-all approach to their development that also focuses on homogenous leadership traits is anti-diversity, anti-productivity and ultimately anti-competitive.

We argue that encouraging a self-driven, light-touch ethos is important to encourage truly “authentic” leadership which we link as vital to effective organisational culture and performance outcomes.

Online Platform Delivery: Assessments

A bespoke online portal was used to deliver workplace assessments, and the benefits and challenges of managing such a technical platform is discussed in detail.

The online portal enables and facilitates a process that is very much workplace-based, and engages local line management and HR colleagues across organisations. All actors develop their skills as talent leaders and cultural awareness of the need to manage and retain talent is promulgated through the business. Richard – this sentence referring to actors is a bit strange – might need to re-write?

Turning AC Processes on their Head

We also discuss the use of leadership development centres and how these can be revolutionised and turned on their head by telling participants exactly what will happen on the centre 3 months in advance. Participants are then encouraged to form action-learning sets in order to develop their skills prior to the development centre. Thus, the traditional model where the development planning and actions happen *after* the development centre is reversed. Again, we focus on underlying learning orientation and drive, rather than a ‘snap-shot’ assessment of readiness.

Setting people up to succeed

We convey how we explicitly train employees using brief workshops to understand how best to learn and develop, and how to increase their visibility within the organisation through using career-management advice and tips.

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Discussion

Have your say: What are the challenges and concerns you have working in the field of occupational psychology?

Dr Claire Hardy, King's College, London

Strand **Learning, Training and Development**

This session aims to discuss, share, and provide evidence of the challenges and concerns that psychologists face working in the area of occupational psychology both now and in the future. Attendees will have the opportunity to talk with peers about this topic in small group discussions. Each group will have a moderator to help facilitate discussion and develop a list of these concerns, which will be fed back to the overall group. These will be noted and prioritised as a group, which will then be fed back to the BPS's Division of Occupational Psychology (DOP) Committee and Workforce Planning Advisors Standing Committee (WPASC) who will develop appropriate action points to tackle these issues.

Preferred Session Duration: 1 hour (before the 'Five Business Lessons' session if both are accepted as each follow on from one another)

Timetable outline:

What	Who	Duration
Introduction and purpose of the session	[not included to maintain anonymity for reviewing]	10 mins
Small group discussions: <ul style="list-style-type: none">• <i>Introduce yourselves to your group and the kind of work you do</i>• <i>What are the challenges you have faced working in the field of occupational psychology?</i>• <i>What are your concerns about working in this field?</i>• <i>How do you think we can tackle these concerns?</i>	Everyone Moderators: XXX	30 mins
Feeding back and prioritising	XXXX	20 mins

- Physical requirements and materials needed:
 - Preferred room layout would be cabaret style
 - A3 sheets of paper and marker pens for each table
 - Computer, projector screen for presenting
- Number of attendees: ideal minimum would be 15, optimum would be 40, and maximum would be the capacity of the room allocated (if larger than 40). The greater the number of attendees the more evidence can be collected to inform the DOP Committee and the Workforce Planning Advisors Standing Committee and.

- Discussion Form: Roundtable discussion involving several tables for more intimate discussions to generate in-depth discussion and shared experiences, concerns and challenges, suggestions for overcoming these. Each table will have a moderator to help the discussion and make notes.
- Topics to be debated and main questions: see timetable above
- How and by whom will discussion be facilitated: Lead will be the submission author (a DOP Committee member and member of the Workforce planning Advisors Standing Committee), and moderators will be members of the DOP committee. Names have been removed to maintain anonymity for the review process.

- How does this session link with the main conference theme of **Learning, Sharing, and Impacting?** This session will allow peers to share their experiences of working in our discipline. This may present new or similar challenges and concerns, which can be both insightful and comforting to know others are experiencing or have similar views. From these discussions, key concerns and challenges will be generated and as group prioritised for the Workforce Planning Advisors Standing Committee and DOP Committee to focus on and impact through more targeted strategies and solutions based on these members' requests.

- Why is the submission appropriate for the particular strand you have chosen? There was not a clear strand for this session as it focuses on occupational psychology as a whole. I have therefore suggested 'Learning, Training and Development' as the discussion will be around the development of our discipline as well our own individual career development.

- What do you consider to be the most novel or innovative aspects of the ideas being presented? I think this session provides an excellent forum for people to share their experiences and views on the working life (both now and in the future) allowing us to create evidence-driven properties and actions to protect our future working life as occupational psychologists. To my knowledge, a discussion session like this will be the only one held at the conference and perhaps the first time at any DOP conference. It is important that members have the opportunity to speak their minds on this topic and engage with the relevant committees so that we can appropriately direct our actions and resources for safeguarding our discipline.

- Why do you think conference delegates will find the paper or session stimulating and useful? I think delegates will enjoy listening and sharing their experiences of working in our field. I also think it will be useful and stimulating to hear peers' concerns and challenges, which may be similar or different. These will provide some comfort as well as increasing awareness as to issues they may themselves come up against in the future.

- What might the public find interesting about your paper or session? I think the public may find it interesting to be aware of occupational psychologists and what we do, and the barriers that may be in our way from connecting more to the public or other interested parties.

- If any, what materials do you intend to make available to attendees and in what format? None intended on the day. Results will be seen in minutes of the next committee meetings when these will be discussed. An article sharing these discussion outcomes will also be submitted to OP Matters for all DOP members to read regardless of whether they attended the session/conference.

T45

Standard Paper

Working with Diversity: Defining and Assessing Intercultural Competence

Ali Shalfrooshan, Mary Mescal, Philippa Riley, a&dc (Assessment and Development Consultants)

Strand **Psychological Assessment at Work**

Introduction

With the process of globalisation rapidly accelerating in the 21st Century, employees in many organisations are experiencing more frequent intercultural encounters (Thomas & Inkson, 2004). As part of a strategy to adapt and survive in this new environment, organisations are becoming increasingly aware of the importance of developing intercultural skills (Rockstuhl, Seiler, Ang, Van Dyne, & Annen, 2011). These skills are relevant to expatriate work, managerial transfers and temporary work assignments, and to those who are working in environments that are culturally diverse.

The Challenge

A large Public Sector organisation based in London recognised that in order to work effectively within the community, recruitment decisions needed to take into account how well employees will work and support very diverse communities. London is currently home to over 42 communities where at least 300 languages are spoken and over 14 faiths practised, highlighting the importance of being able to work with diverse groups effectively. The organisation's employees are tasked with working very closely with members of the public who may vary in age, gender, sexual orientation, language, ethnicity, religion and disability. The organisation therefore wanted to recruit people who have the "confidence, empathy and capability to work, engage and deal with a wide range of different cultures."

The organisation recognised that an assessment could be incorporated into their existing recruitment process to help them identify individuals who had "intercultural competence" - those who have the potential to work effectively with diverse people and communities.

It was proposed that an online assessment tool should be added to the organisation's initial online screening stage for new applicants.

To achieve this, the organisation engaged a consultancy to define the core psychological constructs underpinning Intercultural Competence and design a suitable psychometric tool measure the preferences and attitudes that underpin this construct.

The Solution

The Intercultural Competence Assessment (ICCA) questionnaire was developed to assess an applicant's potential to work effectively across diverse communities. In order to deliver this, the development of a behavioural framework underpinning Intercultural Competence was a critical first step. Following this, the online questionnaire was designed and evaluated.

Designing the Behavioural Framework

The Behavioural Framework was developed using the following two interconnected stages:

1: Literature Review

A thorough review of the academic literature was conducted. Four useful models were identified from this review which are outlined below:

Cultural Intelligence: Refers to "an individual's capability to function effectively in situations characterised by cultural diversity" (Ang, Van Dyne, & Tan, 2011, p. 582). The Earley and Ang conceptualisation of the construct incorporates four components, which are: a "metacognitive" component, a cognitive component, a motivational component and a behavioural component.

Intercultural Competence: Is simply defined as "the ability to function effectively in another culture" (Gertsen, 1990, p. 341). Intercultural competence is theoretically composed of three components, including: an affective dimension which focuses on psychological factors; a cognitive dimension which focuses on how people categorise information from their external environment; and a behavioural dimension which refers specifically to communicative behaviour.

The Multicultural Personality: Work on 'The Multicultural Personality' has attempted to define the personality characteristics involved in working successfully in cultures with different norms and rules (Van Der Zee & Van Oudenhoven, 2013). This model has drawn on the 'Big Five' factors of personality, focusing on those facets and traits that are relevant to operating in this environment. The authors found four such traits, including openness, emotional stability, social initiative and flexibility.

Universal-Diverse Orientation: Is defined as "an attitude toward all other persons which is inclusive yet differentiating in that similarities and differences are both recognised and accepted; the shared experience of being human results in a sense of connection with people and is associated with a plurality or diversity of interactions with others" (Miville et al., 1999, p. 292).

2: Job Analysis

To establish the behaviours associated with intercultural competence, 20 interviews were undertaken with Subject Matter Experts within the organisation. Two separate methods were used in the interviews:

Critical Incident Technique, in which interviewees are asked to provide specific examples of effective and ineffective behaviour in relation to cultural competence

Repertory Grid Technique, in which interviewees are asked to compare and contrast effective and ineffective individuals in the role with relation to cultural competence

A content analysis was then carried out on the interview outputs. In total, **245** separate behaviours were identified.

Using the literature research and job analysis, these behaviours were then classified into six constructs by three Occupational Psychologists. The constructs identified were:

1. **Empathy**
2. **Relationship-Building**
3. **Open-Mindedness**
4. **Resilience**
5. **Flexibility**
6. **Orientation towards Learning**

Design of Assessment Tool

Once the constructs had been identified, items for the initial trial version of the questionnaire were written. Test items are presented as a series of paired statements with a neutral option in between. Participants must select which of the statements is most like them and, if they do not have a preference, they can select a neutral option.

162 paired statements were initially developed for trialling. Items were written drawing upon the supporting literature underpinning the construct and related scales and the behaviours identified in the job analysis.

Evaluation of Trial Data

Items were trialled with 296 employees. An item analysis of the trial data was undertaken and the final set of items identified. The following information was taken into account when selecting items: item facility (ie the mean rating of a given item), the distribution of responses across the rating scale for that item, item discrimination (the extent to which the item differentiates between test takers), and the correlation between the item and job performance ratings given by managers.

Based on these criteria, the final set of 60 items was chosen. The internal consistency (alpha coefficient) for the overall questionnaire was 0.79. The criterion-related validity of the questionnaire was assessed using managers' ratings of job performance in relation to the areas covered by the questionnaire. Data was collected from 200 managers. The correlation between the scores on the ICCA and the managers' ratings was modest but statistically significant ($r= 0.20$, $p<.001$), indicating that higher scores on the ICCA were associated with higher job performance ratings.

Subsequent Evaluation of the Intercultural Competence Assessment

To date, 15,130 candidates have been assessed using the ICCA. Further evaluation of the questionnaire has been conducting using this live candidate sample.

The alpha coefficient for the overall questionnaire was 0.81, indicating that internal consistency was closely comparable to the trial sample.

A construct validity study was also undertaken to examine the relationship between the ICCA and values scales used as part of Behaviour and Values Questionnaire (BVQ), which candidates also completed as part of the recruitment process. The results are shown in the table below.

	Overall Values Score	Integrity	Fairness and Respect	Collaboration	Professionalism	Courage	Service Orientation
ICCA Overall	0.27**	0.14**	0.35**	0.25**	0.13**	0.05**	0.26**

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Significant correlations were found between ICCA and Values scales from the BVQ. The strongest correlation was found between the ICCA and the Fairness and Respect scale from the BVQ. Conceptually, Fairness and Respect would be considered the scale most closely linked to Intercultural Competence.

A further construct validity study was undertaken to examine the relationship between the ICCA and scores on a Situational Judgement Test (SJT), which candidates also completed as part of the recruitment process. The SJT measures decision-making and judgment in relation to competencies and situations which are specific to the role within the organisation. The results are shown in the table below.

	ICCA Overall	Empathy	Relationship -Building	Open-Mindedness	Resilience	Flexibility	Orientation Towards Learning
SJT Overall	.36**	.14**	.18**	.27**	.17**	.22**	.31**

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

The scores on the SJT were significantly correlated with the ICCA scores. This suggests that the higher a candidate scores in the ICCA, the more likely they are to demonstrate effective judgement with regards to the job-related scenarios presented in the SJT.

Ongoing evaluation is currently being carried out on the Intercultural Competence Assessment. This includes further analysis regarding criterion-related validity and fairness. The results of this analysis will be available to share with the attendees at the conference.

Interactive Component

- Attendees will be given the opportunity to discuss in pairs what they believe is the definition of Intercultural Competence
- Attendees will be asked to discuss and identify the core attitudes and behaviours that underpin Intercultural Competence

Specific Questions outlined in Submission Guidelines (page 5).

1. *What are the main psychological theories, models and research underpinning the session?*

The main research is outlined in section above title "Literature Review"

2. *How do you see your proposal linking with the main conference theme of Learning, Sharing, Impacting?*
We see this as an opportunity for attendees to share what their understanding of Intercultural Competence is and what they believe the attitudes and behaviours are that underpin it. It also presents the opportunity for learning about the steps involved in designing an assessment of this nature. The impact of this type of research is useful not only for those working in the area of Occupational Psychology but any organisations who work in diverse or multicultural settings.

3. *Why is the submission appropriate for the particular strand you have chosen?*

Psychological Assessment at Work – We have outlined a rigorous design process to create an online assessment tool that is used in recruitment

4. *What do you consider to be the most novel or innovative aspects of the ideas being presented?*

The Assessment of a candidate's Intercultural Competence at recruitment stage is novel for most organisations. Many organisations may feel like construct of Intercultural Competence is something that they may need to consider with their own employees.

5. *Why do you think conference delegates will find the paper or session stimulating and useful?*

The topic of Intercultural Competence in the workplace is both interesting and relevant for many practitioners and organisations. This session will address the practicalities of designing suitable assessments and how they are applied in a real-life setting.

6. *What might the public find interesting about your paper or session?*

The public may find the behaviours and attitudes that underlie Intercultural Competence interesting. It may also influence people in how they think about their own work and how diversity and multiculturalism plays a role in it.

7. *If any, what materials do you intend to make available to attendees and in what format (eg printed hand-outs, electronic copies of the slides)?*

We will share printed hand-outs of the slides for attendees.

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T46

Standard Paper

The Evolving Workplace: the ARQ (Agile Readiness Questionnaire)

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Strand Work Design, Organisational Change and Development

Connectivity and digitalisation have revolutionised every other aspect of our working and social lives, the image of the office has lagged behind. While *Mad Men* and *The Office* may not provide us with recognisable stereotypes for our own workplaces, the appeal of a prestigious commercial property and the concept of a dedicated desk are surprisingly resilient. But this is odd, given the ease with which so many workplace tasks can be undertaken anywhere with an iPad or a smartphone. Sales staff have always known this; now their colleagues and even their managers are catching up.

This is especially relevant to the conference themes of learning, sharing and impacting. We are in a new and fast moving age where organisations must learn the newly evolving practices or go under, tied to exorbitant office rents and unnecessary commuting times. The newly agile worker will impact heavily on the performance of her organisation; the newly virtual office will similarly impact on her wellbeing and her output. The shared workspace and the shared open plan office in which you saw your team for more waking hours than you saw your wife is going the way of the stegosaurus. Instead, sharing has taken on new meaning in the age of Instagram, Twitter, Facebook, Whatsapp and Linked In.

We have chosen to submit this article to the Work Design, Organisational Change and development strand as we believe Agile working is going to underpin some fundamental changes in how organisations and the concept of work itself are redefined. The sharp distinction between home and work is already giving way to a more fluid construct, in which work is done in a place and at a time to suit the individual's while workplaces, if they survive at all, lose their geographical boundaries.

We believe that there is no instrument at present capable of identifying an individual's ability and readiness to work Agile. Most of the research has focused on the organisational practices which differentiate between more and less successful introduction of flexible working: for example, quality circles, team-working, suggestion schemes, induction, survey feedback, job security guarantees and so on. Less has been done on examining the predictive links between individual differences relating to personality, engagement and motivation, virtual management styles and strong performance and/or wellbeing. That is why we think Conference will be interested in the constructs and application of a questionnaire designed to assess this increasingly crucial concept.

We hope to stimulate some interesting debate with our professional colleagues and to arouse interest in the press. Occupational psychologists have a strong contribution to make to the evolving workplace, but not everyone is aware of what this contribution is. This psychometric instrument has its roots in the theories and expertise of our profession, rather than those of HR and management consultancy. It will help those who want to change their working patterns to evaluate objectively their ability to do so, as well as to enable them to seek appropriate support. Additionally, managers required to manage Agile or virtual teams may find discussion of the virtual management module of the questionnaire of particular interest, especially as the majority of those who report dissatisfaction with flexible working attribute this to poor management!

We will provide handouts and access for a free automated report for all Conference attendees who wish to login during the conference to see their own Agile Readiness profile.

Introduction to the research

"Agile" working covers a number of arrangements, some of which are regarded as beneficial for the employee, some of which prioritise the needs of the employer, and some which are seen as advantageous for both. Zeytinolu et al, (2009) identify two streams of literature reflecting these two distinct discourses. Kelliher and Anderson (2008) refer to this as a shift from 'flexibility of' to 'flexibility for' employees and Pocock et al, (2009) refer to the distinction between employer-centred and employee-centred flexibility. Fursman and Zodgekar (2009) discuss flexible work within the paradigm of optimal choices and emphasise the criterion of "quality" flexible work.

In the sense in which it is more commonly employed, Agile working refers to the employee adopting a flexible and responsive approach to the employer's needs, which might include working at different sites, travelling to clients, working out of the office some or all days of the week, hot-desking, altering

hours to suit different shift patterns and so on. The common factors here are the employer's convenience and the employee's willingness to be flexible and go where the work requirement is.

In its second sense, Agile working (often called "flexible working") refers to the employer's willingness to be responsive to the employees' needs, allowing them to work flexible hours, work occasionally or permanently at home, have access to a desk at different sites to suit their convenience and so on.

The two different interpretations of Agile may overlap. Thus, any study that focuses on the performance outcomes of a group of Agile workers without first differentiating their willingness to work Agile and the attitudes of their employers towards Agile may obscure these differences and draw premature conclusions.

Bergiel B Bergiel E and Balsmeyer P (2010) *Management Research News*, found four important factors determine whether or not an employer who wishes an employee to work Agile would be well advised to ask them to do so. These are: whether the role lends itself to Agile, whether the individual has the necessary resources to support Agile working away from a dedicated desk, whether they are temperamentally suited to Agile working and whether they are motivated to do so. Only by considering all four of these elements will a move to Agile working assure high performance, individual wellbeing and retention.

However, there is a growing body of literature highlighting the relevance of attitudes and personal qualities to work performance. In particular, employee engagement has been highlighted as an important component of successful flexible working. A series of studies carried out in the US at the Centre for Advanced Human Resource Studies (CAHRS) by Bradford Bell in 2012, which examined nine different companies, found that employee engagement was typically higher for those employees successfully working Agile than for employees working traditionally

Besides employee engagement, a pivotal element of successful flexible working has been identified as work/life balance. Flexible workers are more satisfied than their office counterparts with higher satisfaction levels, lower absenteeism and higher retention,.

This concept of psychological fit implies individual differences between employees, irrespective of the behaviour of the employing organisation, can affect the success of flexible working. Busch, Nash and Bell (2011) found that the competencies identified as most critical to flexible workers' performance were consistent across the research literature.

In a meta-analysis carried out in 2007 by Gajendran and Harrison, they found that flexible working was positively associated with lower stress levels, less turnover intent, higher performance and greater job satisfaction. They also found, somewhat counter-intuitively, that flexible working was positively associated with the quality of employee/supervisor relationships. However, the strongest mediator of success appeared to be the perceived autonomy and control of the employee's own working environment.

Methodology

The instrument was designed along the lines indicated by the available research, modified by questionnaires and interviews carried out in a large multinational client organisation. The instrument was given to a group of Agile and non Agile workers (N = 65) alongside standardised personality questionnaires and performance (appraisal) criteria. The constructs of the questionnaire correlated highly with similar constructs in the standardised questionnaires. Additionally, the volunteer Agile group was readily distinguished from the non Agile group in terms of their score on Agile Readiness, in favour of the former. Moreover, high Agile performers also scored high on Agile Readiness, whereas high performing non Agile workers did not. This suggested high levels of construct validity. After eighteen months, during which time the majority of the non Agile workers were persuaded to work in a more flexible manner, in terms of hours, geographical location, home working and other factors, a second performance measure was taken for the new Agile workers which correlated highly with the Agile Readiness score initially obtained and indicated good levels of criterion related (or performance) validity.

Brief discussion

In constructing this questionnaire, we aimed to show that a construct “Agile readiness” exists, comprises six distinct broad areas, and can be used to predict performance and highlight development needs, to the benefit of the individual and the organisation. Furthermore, we sought to show that the construct is not synonymous with generalised high level performance, but is closely related to the Agile working pattern. We also wished to examine the relationship between Agile Readiness and individual wellbeing, and the direction of causality, to establish whether high wellbeing predisposed an individual to consider Agile Working favourably, to whether Agile Working itself created greater wellbeing.

In a second draft of the questionnaire, we added a management module and an automated computerised graphical and narrative integrated report

The components of Agile readiness were based on six constructs which were intended to cover different aspects of the field. We hypothesised that commitment to the organisation and to the concept of working Agile would be relevant, so justified the inclusion of Engagement. We hypothesised that wellbeing would be relevant although we were unsure of the direction of causation, so included items related to stress within and outside the workplace, perceived symptoms of stress and self reported coping techniques. We included a group of personal strengths (personality attributes derived from the literature and from the original pilot data) and found that these contributed to the success of the instrument, correlating almost as well as Engagement with the measure of performance (for the Agile group). We also included a group of “virtual management strengths” as a separate management module.

We found sufficient evidence to justify the use of the Agile Readiness construct, based on the level of internal consistency of the whole instrument (.711); the strong and significant intercorrelations between the otherwise unrelated component parts, and the significant differences between the relationship of the Agile and non agile groups’ Agile Readiness scores with their independent performance ratings, which were predictive only in the case of the Agile group.

In summary, therefore, our study of the literature and the results from the ARQ concur in indicating that Agile working will be optimal in the presence of high levels of employee engagement, “virtual competence”, time management and planning skills, autonomy, resilience, responsiveness to change, self motivation and self discipline, communication and interpersonal skills, enthusiasm, mutual trust, as well as adequate resources and a good work/life balance. In addition, an organisation committed to furthering their employees’ careers and improving their wellbeing through support, resource provision and training will be more successful in introducing Agile to its working population. Furthermore, qualities enabling a manager with a virtual team to succeed are different from those predicating success in conventional management environments.

Further developments of the questionnaire, which now includes an Agile management module, and English, German and US versions, are discussed, and extended uses for the construct of Agile Readiness are suggested.

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Workshop

Developing work-life balance competence: the importance of context

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Strand **Well-being and Work**

Introduction

Work-life balance is increasingly recognised as a key occupational health concern by employers, more so than work-related stress (GRid, 2012). The wide-ranging benefits of holistic and context-specific work-life balance policies and practices for employee and family wellbeing, organisational effectiveness and society in general have been emphasised (Grant, 2014; Kinman & McDowall, 2014). But are UK employers getting work-life balance right? Recent evidence and statistics, such as the findings of the GRid survey highlighted above, might suggest "perhaps not". Many corporate work-life balance initiatives were put on the "back burner" when organisations faced the UK and global recession (Anderson & Lewis, 2013). Under current conditions, providing employees with initiatives to help them balance their work demands with responsibilities in other domains, beyond satisfying legal requirements, may be seen by organisations as a luxury that they cannot afford. There is evidence that long working hours in the UK continue unabated; the findings of a recent survey into working practices indicate that UK managers work up to an extra day a week in unpaid overtime (ILM, 2014). Smart phones and tablets can also increase work-life conflict by allowing employees to work anywhere and anytime, which can create unrealistic expectations of the availability of employees and their working capabilities. Poor WLB and limited opportunities for respite and recovery and "me time" takes its toll on the wellbeing of employees and is likely to impair job performance (Fritz & Sonnentag, 2005, McDowall, 2014).

So what can be done to get WLB right? Organisation-wide initiatives often fail (Ollier-Malaterre, 2010), as they do not take into account individual needs and preferences and those of their managers. Such needs are likely to differ, not only between employees, but also over the individual life span. To be effective, therefore, any approaches must encompass active recognition of individual differences and an adaptable approach to address them (e.g. Kalliath & Brough, 2008; Kossek & Lautsch, 2008). There is also evidence that the factors that engender work-life conflict are, to some extent, related to the characteristics of particular jobs and working environments. For example, the emotional demands inherent in the helping professions are likely to spill over into the personal domain manifesting themselves as emotional exhaustion, social withdrawal and compassion fatigue (Kinman & McDowall, 2014). Moreover, the long and often unpredictable working hours involved in police work can reduce the time available to engage in family life and leisure (McDowall, 2014). Finally, the lack of physical and psychological boundaries between "work" and "home" experienced by e-workers may mean that the work role is more salient which will impair work-life balance (Grant, Wallace & Spurgeon, 2013).

Work-life balance competence

There is a growing recognition that enabling employees to self-manage their work-life balance will not only have benefits for well-being and performance, but can also act as a "trigger" for culture change; in other words, to move WLB from the "margins to the mainstream" in organisations (Kossek, Lewis et al., 2010).

One way of accomplishing this is to help raise awareness amongst employees of the behaviours that help them manage the work-home interface effectively (i.e. that facilitate and enrich their non-working life) and those that threaten their work-life balance (i.e. that constrain their opportunities for recovery and impair their wellbeing and functioning). In this workshop, we will familiarise delegates with a competence approach which makes explicit the behaviours, knowledge, skills and abilities (KSAs) required for managing work-life balance effectively. We advocate a 'bespoke' approach to take account of specific job roles, organisational contexts and personal circumstances (e.g. what are the occupational risk factors for work-life 'spillover', how much scope is there for job flexibility? What other roles are people required to juggle outside work?).

Workshop objectives

Our objectives are to provide delegates with:

- a) A brief introduction to the concept of "work-life balance competence" drawing on KSA frameworks
- b) Hands-on experience in considering WLB using simple card-sorting tasks and check lists with input from three experienced facilitators, to consider both personal and professional aspects for future practice
- c) Opportunity to network with other practitioners interested in the field.

Workshop content

Following an introduction which sets out the above, we will facilitate delegates to work interactively in small groups on a card-sorting and ranking task to identify overall priorities and then identify and review effective work-life balance knowledge, skills and abilities gathered from previous research. Due to the tight timeframe, this workshop provides a 'taster' for some of the work we are currently doing, rather than a full and comprehensive introduction. The objective is to help individuals to identify priorities for activity and/ or reflection both in terms of broader domains (e.g. particular aspects about work or personal life in general) and also what identify the behaviours that would be positive or damaging in the context of particular organisations and/ or teams.

The broad time-table for our workshop is:

Introduction: 5 minutes (including a warm-up exercise to encourage discussion and debate)

An overview of recent research and how this can inform practice: 10 minutes. The objective is to provide delegates with input from research conducted by the facilitators and others, such as work-life balance competence in the police, social work and e-workers.

Setting up group work: 5 minutes. We will divide delegates up into small groups depending on their own research and practice interests, and provide relevant case studies.

Practical exercise: 20 minutes. Delegates will undertake a card-sorting task and review in small groups, and record their outputs, as well as completing simple self-check lists.

Review: 10 minutes. We will review reflections from the groups.

Next steps and close: 10 minutes. We will close the workshop by discussing next steps to identify goals and actions to take competence framework/s forward into practice or research. Delegates' progress and queries will also be followed up and discussed using discussion threads on the new DOP website.

Materials provided

We will provide delegates with:

- a) E-copies of relevant publications authored by the work-shop presenters
- b) "Card packs" with relevant behaviours to enable the card sorting task
- c) Simple check lists and pro formas for recording outputs
- d) A reading list with further suggestions.

Why this submission links to the conference theme

The workshop facilitators welcome this opportunity to share knowledge gained from a clear and accessible synthesis of decades of WLB research. The presentation will draw extensively on the facilitators' own research on work-life balance with a range of occupational groups with diverse work-life balance needs. The overall objective is to provide delegates with practical tools for research and practice, as WLB is a growing concern, but practical intervention models and initiatives are still sparse. There is a particular need to develop work-life balance interventions that do not impose a "one size fits all" approach and embrace diversity and difference amongst the workforce. The use of competencies has a long history in other aspects of OP work, such as assessment and selection, but their application to more holistic contexts such as health and well being or WLB is still under-utilised.

Who our workshop will appeal to

Our workshop will appeal to experienced OP practitioners but who are however relative 'new-comers' to work-life balance issues and want to expand their tool-kit. It will also appeal to practitioners and researchers from other fields of OP more generally, as our approach is evidence based and will include an update on cutting edge research. Finally, the practical component is also to be of interest to those delegates who have not yet had the chance to work practically with a competence-model approach, as there will be hands on vicarious experience.

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Short Paper

Organizational climate for innovation: A tale of two countries

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Strand **Work Design, Organisational Change and Development**

Introduction/Research Objectives

It is often argued that today's economic business environment is both highly competitive and changing at a rapid rate, and key to organizations survival and success is the ability to innovate (Goktan & Miles, 2011). One of the reasons that innovation has been a key focus is due to its relationship with organizational performance and competitive advantage (Rubera & Kirca, 2012). Furthermore this link has been replicated in different cultural contexts (Gunday, Ulusoy, Kilic, & Alpan, 2011; Tellis, Prabhu, & Chandy, 2009). Even in SMEs where resources may be scarce and pursuing innovation may be costly, it has been demonstrated that an innovation orientation benefits organizations (Rosenbusch, Brinckmann, & Bausch, 2011). Importantly for Occupational Psychologists is the key role that psychological factors can play in fostering organizational innovation.

Research has demonstrated that organisational climate plays a vital role in fostering appropriate conditions for organisational innovation (Ekvall, 1996; Hülshager, Anderson, & Salgado, 2009; Hunter et al., 2007; Isaksen, Lauer, Ekvall, & Britz, 2001; West & Anderson, 1996). Moreover climate is more strongly related to innovation than other factors such as training (Birdi, 2007). Hunter et al's meta analysis found strong support for climate predicting creativity across samples, performance criteria, and settings (Hunter et al., 2007).

The current research examines key dimensions of organizational climate that have been related to organizational innovation (Hunter et al., 2007; Mathisen & Einarsen, 2004). These broadly fall under the

areas outlined by Amabile et al. (1996) of commitment, freedom, support, resources and reward systems. However, little research has examined the relationship between climate and innovation across national cultures, despite the relationship between national culture and organizations having a fairly long history in organizational research (Dorfman, Javidan, Hanges, Dastmalchian, & House, 2012; Smith, 2010). Specific relationships between models of national culture and organizational innovation has received little attention (Anderson, De Dreu, & Nijstad, 2004). Two cultures were chosen (UK and Finland) which were similar on four out of five of Hofstede's dimensions of national culture, only varying substantially on masculinity, with Finland demonstrating a more feminine culture and the UK a more masculine culture

The research above leads to the following hypotheses:

Hypothesis 1. There will be distinct dimensions of organizational climate for innovation

Hypothesis 2. The key dimensions of organizational climate will be replicated across both national cultures.

Hypothesis 3. The key dimensions of organizational climate will be associated with organizational innovation in both cultures.

Hypothesis 4. There will be a more positive climate for innovation in less masculine cultures (Finland) than more masculine cultures (UK).

Hypothesis 5: Overall Finland (as a less masculine culture) will report higher levels of organizational innovation in comparison to the UK (a more masculine culture).

Design/Methodology

Organizational Climate

To measure organizational climate the Dolphin Index measure (www.dolphinindex.com) was used. This is an established measure which was developed from Ekvall's (Ekvall, 1996) initial measure of organizational climate and assesses the key dimensions of organizational climate for innovation (Mathisen & Einarsen, 2004). The measure assesses 13 dimensions of organizational climate relevant to organizational innovation. These are (Alpha reliabilities in parenthesis, UK then Finland) commitment (.815, .786), freedom (.784, .714), idea support (.845, .844), positive relationships (.781, .817), dynamism (.784, .761), playfulness (.836, .845), idea proliferation (.764, .753), stress (.833, .808), risk taking (.768, .774), idea time (.819, .771), shared view (.798, .739) and pay recognition (.883, .867), work recognition (.885, .864).

Organizational Innovation

To examine the level of organizational innovativeness all participants completed a single item organizational innovation measure. Participants answered the question, "This organization is innovative" on a five point scale from "strongly disagree" to "strongly agree". This style of omnibus question has been used frequently in research (Isaksen & Lauer, 2002).

Participants

Participants included 3606 participants who reported being British and working in the UK and 1036 participants who had reported being both Finnish and working in Finland. The UK participants were drawn from over 300 different organizations, the Finnish participants were drawn from over 59 different organizations.

Results

Assessing the model of organizational climate for innovation In order to assess hypotheses 1 and 2, the measure of organizational climate was analysed through the use of principal components factor analysis in both cultures separately. This assesses how well the data fits to the proposed 13 dimensions model (hypothesis 1) across both cultures (hypothesis 2). Results demonstrated a similar factor structure across both countries.

Perceptions of climate and organizational innovation

To examine the relationship between the perceptions of organizational climate and the level of perceived innovativeness of organizations (hypothesis 3), correlations were conducted separately for both samples. The results show a significant relationship between all dimensions of climate and perceived organizational innovativeness (all p 's < .001). Even with Bonferroni corrected p values (.0038) these all remain significant for both samples. This relationship is positive for all dimensions apart from stress which demonstrates a negative relationship to perceived organizational innovativeness.

Difference between the UK and Finnish organizations in their organizational climates

To examine whether there are differences between the perceptions of organizational climate in the UK and Finland (hypothesis 4) a multivariate analysis of variance (MANOVA) was conducted, with the independent variable as country (UK and Finland) and the dependent variables the 13 dimensions of organizational climate. The MANOVA demonstrated a significant overall difference between the UK and Finnish samples (Pillais Trace = .153, $F(13, 4628) = 64.461$, $p < .001$, partial $\eta^2 = .153$). Tests of between subjects effects demonstrate that all dimensions apart from Commitment demonstrate significant country differences in overall mean scores (Table 5), but the effect size for most of these effects is negligible or small. Only two effects (stress and dynamism) demonstrate higher than .3 Cohen's D effect size, with none above .4. In r terms, no effect size is larger than .2 and therefore can all be considered small effects. These results demonstrate a high degree of similarity across the two cultures, however it appears that the Finnish sample rate their organizations as having slightly more dynamic and slightly less stressed organizational climates than in the UK.

Masculine culture and innovation

To assess hypothesis 5 that more masculine cultures (UK) would be less innovative than the less masculine cultures (Finland) an independent t-test was conducted using the perception of organizational innovation as the outcome. Finland scored significantly higher (mean = 3.38, sd = 1.04) than the UK (mean = 3.10, sd = 1.04) in terms of organizational innovation, $t(4640) = 7.64$, $p < .001$, cohen's D = .27. The hypothesis was supported but the effect size indicated that this was a small effect.

Conclusions

Overall the key findings of this research demonstrate that the distinctions between supportive, challenging and rewarding environments are clear in both the UK and Finnish organizations. Individuals who perceive their organizations as more supportive, dynamic, and rewarding also perceive their organizations as more innovative. Furthermore, cultural values (in particular low levels of masculinity) seem to have a small but noticeable impact on organizational culture for innovation. As most managers state that innovation will be one of their top three drivers for growth (Barsh et al., 2008), this work clearly has practical benefits to organizations. Organizations should aim to encourage environments that are supportive for fostering innovation, and the key features and impacts of these environments seem to be stable across the different national cultures studied.

What are the main theories/models?

This research draws from two main perspectives. These are theories of organizational climate related to organizational innovation (e.g., Ekvall) and theories of National Culture (e.g. Hofstede)

How do you see your proposal linking with the main conference theme of Learning, Sharing, Impacting?

This research fits with the theme of sharing, providing clear research evidence for the importance of psychological climate in workplace innovation.

Why is the submission appropriate for the particular strand you have chosen?

The research presented clearly focuses on organizational climate, which is an element of work and organizational design.

What do you consider to be the most novel or innovative aspects of the ideas being presented?

It is the first study which has examined the structure of organizational climate in these two cultural contexts. Furthermore, it links key aspects of organizational climate to theories of national culture.

Why do you think conference delegates will find the paper or session stimulating and useful?

I think it will demonstrate evidence of the importance of organizational climate in relation to organizational innovation, which is a key driver in many organizations. Furthermore, it will support the robust nature of organizational climate in relation to organizational innovation across national cultures.

What might the public find interesting about your paper or session?

The public may find it interesting to understand the psychological and group process that influence organizational innovations and plays a key role in terms of why some organizations are more innovative than others.

If any, what materials do you intend to make available to attendees and in what format (e.g., printed hand-outs, electronic copies of slides)?

Electronic copies of slides and reference list.

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T49

Standard Paper

Personality without borders: do questionnaire languages and smart-phones bias results?

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Strand **Psychological Assessment at Work**

Introduction

With increased globalisation and use of internet technology affecting workforce mobility and online access to psychometrics, there is greater demand for psychologists and test-providers to perform multinational and multilingual personality assessment. It is not enough to assume that assessment in one language will be equivalent to another: there are linguistic, cultural and psychological reasons why results might differ. Similarly, as mobile devices become a major route to internet services, it would be risky to assume that putting a personality instrument on a smart-phone app will yield personality measurement equivalent to administration of the same assessment over a website.

Support for the equivalence of multilingual personality measurement has been found for several questionnaires, e.g. Bartram (2008). This current research was necessary to establish that equivalence can be found also in the 16PF questionnaire, rather than assume the research of others generalises to the 16PF; it was also important for a specific reason: the nature of 16PF questions is somewhat different from many other questionnaires, which are often more simple in the phrasing of their items. An example of the more idiosyncratic items for the 16PF is: "In dealing with people, it's better to: A. 'put all your cards on the table'. B. ? C. 'play your hand close to your chest'". Such an item creates a greater challenge for translators to create a strictly equivalent item in the new language.

As for the medium of questionnaire administration, only recently have the first studies of equivalence in web vs. smart-phone administration been published, e.g. Illingworth et al (2014). This current research was done to establish whether or not these are generalisable findings.

Established methods for evaluating equivalence are:

- Differential Item Functioning (DIF) to check that individuals who have the same level of a particular trait will answer the questions in the same way, irrespective of a supposedly irrelevant factor (e.g. language or medium in which the test is presented)
- Analysis of scale level differences (i.e. not just at the item level)
- Confirmatory Factor Analysis (CFA) to check invariance in the factor structure across test versions.

In addition to researching equivalence, the findings were compared to other differences that can be expected in personality data; these are differences between genders, ethnic minorities and whites, and people of different occupations. If differences are found to be greater between languages or nations (either through measurement bias or genuine personality variation) than those found between occupational groups, then this would render a questionnaire unsuitable for international use (particularly recruitment), as any attempt to recruit for occupationally relevant traits could be overwhelmed by bias associated with the languages or nationality.

As the intention of this work was to lead to an international norm group for the 16PF, for this to be ethically viable, the following hypotheses would need to be met:

1. Any DIF between languages will not affect measurement substantially at a scale level
2. Differences in the means of the individual traits, between languages, will mostly be of small effect size
3. The language differences will be of a similar size to ethnic and gender differences
4. The differences in means for the languages will be smaller than the differences found for different occupational groups
5. The results of web and mobile administration of the 16PF will be equivalent

The innovative qualities of this work were to: evaluate a personality questionnaire with more complex items than some already studied; explore the differences between mobile and web administrations; and, compare the language results with a range of other demographic and occupational differences, in order to give a clear comparison and context for the size of each difference.

Method

Language Equivalence Study

The analysis was at 3 levels: item level (DIF, using the lordif package in R); scale level (t-tests); factor structure level: with Exploratory Factor Analysis (EFA).

Questionnaire administration was online, collected via client use of the 16PF, mostly assessing working age managers/professionals who were applying for jobs. From this data, sets of 500 people were ‘randomly’ chosen, with the following constraints: for each language sample N=500, 50% female, 50% male, with proportional representation of ethnic minorities, where possible.

Data from the UK English questionnaire was used as a benchmark for the DIF analysis. This is because UK and US questionnaires differ by only a few words and both have used as the source for translations into other languages.

Mobile vs. web study

Data were collected from public users of a short form of the 16PF (62 items), who completed the questionnaire for free and voluntarily to learn more about their own personality. The questionnaire was available via a website and via a smart-phone app (for both iPhone and Android). 330 individuals were selected from app users and 330 from web users; samples were balanced to each include 165 men and 165 women.

Results

Languages

Significant DIF was found in a high number of items for each language; for example 30% of items when comparing UK vs. US data, and 62% for UK vs. Sweden. These two comparisons are presented here as examples, due to little space to explore all language results. The US and Sweden, are chosen as they represent different ends of the differences found. However, once the effect size of the DIF was estimated in lordif, a very different pattern was found: very few items showed DIF big enough to have created a practical effect at the scale level.

Language	DIF		Effect size of mean differences				Mean sten difference
	Significant	Practical	None	Small	Medium	Large	
US	55/185 (30%)	0/185 (0%)	7	5	4	0	0.27
SE	114/185 (62%)	15/185 (8%)	1	12	3	0	0.37

Table 1: Example language results

T-tests showed many significant differences in mean scale scores across languages; however, again, effect sizes (Cohen’s d) were mostly small. When all language data were pooled to create an international norm group, stens for each language could be calculated. Following this, it was possible to see how much, on average, each language differed from the mean for all languages. The average difference from the mean was 0.33 stens (the Standard Deviation is approximately 2 stens on the 16PF traits). The average sten differences for each language from the international mean were as follows: UK 0.22; US 0.27; DK 0.29; NE 0.33; FR 0.34; NO 0.35; DE 0.35; SE 0.37; IT 0.38; ES 0.42.

Exploratory Factor Analysis of 16PF data normally produces an approximation of the Big Five factor structure. However, as the samples were mostly managerial and professional applicants, the data showed a pattern of more socially desirable responses. This meant EFA produced factors grouped more by socially desirable traits than the Big Five. The plan to use Confirmatory Factor Analysis to fit the Big Five model to each language will be replaced in the near future by a different CFA approach: looking for invariance in the relationships between traits.

Mobile vs. web study

DIF: Only 4 items were flagged for significant DIF between web and mobile administration; however, when looking at effect size, none show practically meaningful DIF. (See Table 2)

T-tests: There were 5 significant differences; however, effect sizes are small. (See Table 2)

Demographics: there was a clear age difference between web (average age 30 years) and mobile phone users (average age 25 years).

Completion rates differed substantially across the two platforms: 8.7% on mobile phones and 55.2% on the web.

Factor	Items with sig DIF	Items with practical DIF	Mobile phone mean	Web mean	Sig mean difference (p value)	Effect size (Cohen's d)
Privateness (N)	1	0	6.47	6.05	0.01	0.25 = Small
Openness to Change (Q1)	1	0	6.86	6.74	-	-
Abstractedness (M)	2	0	7.18	6.84	0.02	0.25 = Small
Emotional Stability (C)	0	-	4.42	4.75	0.03	0.26 = Small
Sensitivity (I)	0	-	5.63	5.94	0.01	0.22 = Small
Vigilance (L)	0	-	7.09	6.46	0.00	0.42 = Small

Table 2: mobile vs. web administrations

Other comparisons

Gender and ethnicity showed comparable levels of difference to the languages (gender: 33% significant DIF items, 0.36 sten score difference on average; ethnicity: 23% significant DIF items, 0.33 sten score difference on average). Occupational differences showed the largest mean differences between groups. For example, GP and Neurosurgery trainees showed an average sten score difference of 0.51, applicants vs. general population group (gender balanced) showed a difference of 0.61 stens, police and IT (all male) showed 0.81 average difference in sten scores.

Discussion

All hypotheses were supported.

The results for the mobile phone vs. web administrations were clear: an absence of DIF indicates that any differences found in the means of each group were due to the sample, not bias in the measurement properties of the media.

As for the languages, the results were more mixed. They suggest that there is DIF present. Content analysis of the questions suggested translation and cultural issues had a part to play in the DIF (e.g. in one item of the Swedish translation an archaic word was used, and a Swedish cultural norm to follow rules caused higher scores on Rule Consciousness items). However, effect size estimates suggest that DIF has little practical effect at the scale level, as observed both in lordif results and in the t-test results. When compared with demographic and occupational data, it is clear that language differences are no greater than gender or ethnicity differences, and are smaller than differences between occupational groups.

Limitations

The data came from a recruitment sample – with a clear social desirability signature in the trait scores. This is both a limitation (as the results cannot be said to generalise to a general population sample), but also a benefit, as the application of this work will be the assessment of individuals in international recruitment campaigns. Additionally, the analysis was limited to an EU/US sample; however, preliminary analysis suggests that Traditional Chinese, English for South African and English for India versions show less variation than some of the European languages. This analysis will be complete within 2014.

Conclusions

Knowing a person's job is likely to tell you more about their personality than knowing their nationality, gender or ethnicity. Asking people to complete personality assessments on mobile phones or the web appears to make little difference to the measurement, but mobile phone completion rates are lower and this format currently appeals more to a younger age group than web administration.

Interactive elements for the standard paper format

The first interactive elements would be hypothesis generation from the audience. What national and occupational personality differences might they expect to see between given pairs – e.g. Spanish and British, IT and Police? What issues would delegates expect with mobile phone administration of personality questionnaires? The second interactive element would be to give people a basic understanding of DIF

analysis in IRT. This would be facilitated by an explanation, followed by handouts showing Item Characteristic Curves, which delegates would answer questions about; handouts would also include example questions: some likely to cause DIF and some not, which the delegates would need to evaluate. Slides will be available on request.

Additional information:

This presentation's link to the conference theme of Learning, Sharing, Impacting, is primarily through 'Impacting' – the research aims to encourage equivalence work by other test providers, to inform test users of the need to check that the instruments they use are equivalent and fair. It is likely to be of interest to applied Occupational Psychologists because of its direct application to international and online personality assessment. It may be of interest to the public who seem to be intrigued by national differences and occupational stereotypes. Additionally, use of mobile phones is commonplace in the lives of the public.

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T50

Short Paper

An analysis of time adjustments in ability tests amongst candidates with disabilities

Dr Rachel Owens, Dr Alexandra Livesey & Mathijs Affourtit, CEB

Strand **Psychological Assessment at Work**

The 2010 Equality Act has altered the recruitment experience for the more than nine million people living with disabilities in the United Kingdom. With this protection, candidates with disabilities are now empowered to disclose their disability and request adjustments in both recruitment and in the workplace, without fear of discrimination, in order to be assessed fairly against their non-disabled peers. As part of this, employers and Talent Management companies are striving to improve best practices within recruitment and assessments. This is an ongoing process, and research within this area is only just beginning. However, there is already a wealth of information gathered through online testing and demographic data, analysis of this will help future research agendas to grow and encourage both employers and talent management companies to consider their approach to this area. One consideration this paper examines is the rate of disability disclosure and requests for adjustments.

There are a myriad of adjustments and best practices than can be offered to candidates with disabilities, however one of the most commonly requested is for a time adjustment, usually for 25-50% on top of the standard time limit. This paper presents data from a variety of sources that looks at requests for timer adjustments within ability tests. Only one type of adjustment is considered here due to time constraints and the limitations of technology capturing other adjustment scenarios. Using a large sample of archival online testing data (N=4000+) taken over a period of 3 plus years, the paper looks at the trends and where possible answers questions including, but not limited to:

- Over a three year time period what percentage of ability tests have had timer adjustments applied to them?
- Is there a difference between the frequency of timer adjustments requested across different ability tests?
- Is there a difference in gender when requesting timer adjustments?
- Are there differences between ages when requesting timer adjustments?
- Is there a difference between cultures when requesting timer adjustments?
- Is there a difference across countries when applying timer adjustments?
- Is there a difference between industry sectors when requesting timer adjustments?
- Within one large US client what are the disclosure rates of disability?

The authors will then conclude the paper by inviting discussion on these findings and practical implications for the research before finishing with an open discussion on where to take the research next. The research is in progress, thus the results cannot be shared here but will be presented in a variety of formats including graphs, tables and text.

What are the main psychological theories, models and research underpinning your session?

Disability and its impact on an individual going through the recruitment and development process has largely been ignored up until the 2010 Equality Act came into being. We know that individuals with disabilities can make extremely good employees: disabled candidates are more likely to stay in a job for longer compared to their non-disabled peers (Office of Disability Employment Policy, US) and disabled employees show more loyalty than non-disabled employees (Rutigliano, O'Connell, Lavin, & Nishii, 2014). The US Campaign for Disability Employment have also pointed out that by being more inclusive towards disabled talent, business not only benefits from an increased pool of talent and thus higher levels of competencies, but that they end up with more creative and innovative business solutions. We also know that despite being a large minority (it has been estimated between 10-20% of a given population), various studies have found that only around 2-3% of candidates or employees disclose a disability (Nishii, Bruyère, & von Schrader, 2014; O'Connell & Rutigliano, 2014). Factors which may increase likelihood of disclosure include having a more apparent disability and being male (Nishii et al., 2014).

Beyond this, all we can draw upon at this stage is the educational literature which looks at the nature and impact of timer adjustments on school examinations. For example, Sireci, Scarpati and Li (2005) reviewed the literature on providing reasonable accommodations in school and university based exams. Although they concluded that there is contradictory evidence of the validity of reasonable accommodations due to the array of accommodations reported and the heterogeneity of the students in the samples used, they found that extending exam time generally improved the performance of all students, irrespective of whether they had disabilities or not. However, students with disabilities tended to exhibit relatively greater increase in scores with additional time over their non-disabled peers. Similar research within occupational settings has not yet been conducted (or if it has, it has not yet been published), however, it is possible that candidates requesting extra time may rely on these past experiences (from school and college) to inform employers of how much extra time they need. Indeed, current best practice dictates that following disclosure, candidates discuss their needs with recruiters and provide suggestions for their own appropriate adjustments.

How do you see your proposal linking with the main conference theme of Learning, Sharing, Impacting?

Learning

We are looking at a whole new area of knowledge which is as yet largely unknown. We currently collect data on candidates who request adjustments for their disabilities but have only just begun to study it. All knowledge we have had until now is largely anecdotal and this represents one of our first quantitative forays into this area. We are looking at a large dataset (from March 2010 up until July 2014) of data for candidates taking either our Verbal or Numerical Reasoning timed ability tests who have also requested time adjustments and have analysed it across a number of factors including country, test type and gender. Understanding what factors impact upon time adjustment requests (beyond the presence of a disability) will help inform best practice.

Sharing

This paper presents interesting insights into a group that represents a large portion of the population. Any knowledge that we have regarding an important area such as inclusivity in psychometric testing should be shared with and dispersed throughout the academic and research community. One of the biggest obstacles facing those with disabilities in the workplace is ignorance. We believe the DOP conference is the perfect opportunity to reveal some of what we have learned and get some expert thought and feedback.

Impacting

Knowing about particulars to do with disability and reasonable adjustment allows us as test developers to better understand how disabled candidates experience our tests. In turn this allows us to continue to improve our processes, as well as better support our clients and members. This affects disabled candidates by providing them with tests which are more inclusive, giving them a fairer and more positive experience in the recruitment and development process. This will also impact upon employers and recruiters by informing best practice guidelines when it comes to working with disabled talent.

Why is the submission appropriate for the particular strand you have chosen?

The strand we have chosen is *Psychological Assessment at Work*, specifically in regards to diversity and inclusion. Our submission is appropriate for this strand in that we are investigating the use of reasonable adjustments, used to allow for fairer testing of people with disabilities, when completing psychometric

assessments. The overarching aim of our research programme is to improve the experience of disabled candidates, who are a large but disadvantaged group in the employment and recruitment space. In 2011, there were over 9.5 million people living with a disability in the UK (Office for National Statistics, 2011). Among this group we may have up to five million individuals of working age who would like but cannot find work. In 2014 this number can only be growing.

In this submission, we are focussing on the most common (as least anecdotally) reasonable adjustment that is requested for psychometric assessments in the UK, timer adjustments (i.e. extra time). To date, there is little evidence on which to base this adjustment. We are presenting data from the last four years to show how often requests for timer adjustments are granted and to identify trends such as where are requests for adjustments. We will be looking at the data we have across two of our most commonly used timed ability tests, Verbal Reasoning and Numerical Reasoning.

What do you consider to be the most novel or innovative aspects of the ideas being presented?

1. There is no literature on the impact of timer adjustments in occupational settings. While researchers within education have had some level of focus on the impact of reasonable adjustments within school examinations, we are among the first to consider the impact of for some time but testing is central to what we do in this field.
2. The size of our data is substantial; it covers more than 4,000 individuals from over 15 countries.

Why do you think conference delegates will find the paper or session stimulating and useful?

We think the conference delegates will find our paper stimulating and useful for a number of reasons.

1. Finding out ways to make psychometric tests better is important to the delegates at this conference. Many psychometric tests have been developed with limited thought of inclusivity and developers are in a constant state of reassessing what makes their tests good and effective, and also improving reliability and validity. Testing is a good way to find the right people for jobs, however, when a score on an ability test is not indicative of a person's ability (e.g. if performance is influenced by an outside factor such as disability) this threatens the integrity of the test and makes it less useful. Our paper speaks to this issue by acknowledging the way we accommodate people for a test that was not designed with their diversity in mind.
2. It deals with a large group of candidates. Between 10-20% of any given population has a disability. In the UK there may be up to 5 million people with disabilities looking for work.
3. It looks at the current state of timer adjustments and how it differs across ability tests and countries. Best practice guidelines vary across countries meaning reasonable adjustments may not be granted consistently.

What might the public find interesting about your paper or session?

This paper will be of interest to a large portion of the public including anyone with a disability or who has a member of their family with a disability, anyone in the recruitment industry and anyone who is an employer or manager. Between 10 and 20% of people living in the UK have a disability making this area directly relevant to them. Young adults and children going through the education system are becoming empowered to disclose their disabilities at exam time in order to ensure a fair experience when it comes to their being tested. This means there is a growing population of empowered candidates who very reasonably are going to request adjustments from their recruiters and employers so that they are treated fairly in the recruitment and development process. People involved in the recruitment process, as well as employers, are already impacted by this and will continue to be in the future.

If any, what materials do you intend to make available to attendees and in what format (e.g., printed hand-outs, electronic copies of slides)?

We intend on making the electronic version of our slides available for conference attendees.

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T51

Standard Paper

Motivation and Age: is it the same across countries?

Dr Alexandra Livesey, CEB, **Dr Ilke Inceoglu**, Surrey Business School, University of Surrey, **Prof Jesse Segers**, University of Antwerp / Antwerp Management School, Belgium & **Mathijs Affourtit**, CEB Strand **Leadership, Engagement and Motivation**

The following document answers the submission questions. The first section describes the main study and details the theory, research questions, method, results and discussion points. The document then answers any submission questions not already answered.

Study summary and Question 1.

Several studies (e.g. Inceoglu, Segers, & Bartram, 2012, Kooij, de Lange, Jansen, Kanfer, Dijkers, 2011) have shown consistent relationships between age and work motivation. For example, older employees place more importance on intrinsically rewarding aspects of work life (e.g. following personal principles, having autonomy) and less importance on extrinsically rewarding and very resource intensive job features (e.g. competition, career progression). Motivation is defined here as stable trait-like tendencies to be motivated by specific aspects of the work environment or outcomes (similar to 'motive tendencies': Kanfer, 2009; Scheffer & Heckhausen, 2006).

Relationships between age and work motivation have mainly been examined cross-sectionally, but the pattern of relationships has been predicted and explained by specific psychological processes and attributes that change at different stages of the life cycle, and factors such as the work environment, societal culture and norms (Kanfer & Ackerman, 2004; Warr, 2001). Cultural values differ across countries (e.g. Hofstede, 2001) and they are suggested to influence norms, self-motives (e.g. self-efficacy) and dispositional work motivation (e.g. achievement motivation) by encouraging individuals to express or follow certain motives (Erez, 2008). Therefore, the question arises whether relationships between age and work motivation are consistent across different cultures.

Research on relationships between age and work motivation has been pre-dominantly based on UK, US and Northern European samples. Cultural values and work contexts could influence the relationship between age and work motivation, acting as moderator. Although demographic change is of global concern, very little research has been carried out. Inceoglu, Segers, Bartram and Vloeberghs (2009) found in Northern European countries the negative relationship between age and career progression motivation was moderated by membership in countries with different retirement policies (early vs. late exit): the negative relationship was less strong in late exit countries compared to early-exit countries, where early retirement is encouraged.

Little research has also been conducted specifically focusing on the transferability of motive constructs: do they mean the same across different cultures and are people motivated by the same things at work? A few studies have examined the comparability of McClelland's motives across cultures, which seem to apply across cultures but show some differences (e.g. Pang & Schultheiss, 2005). A study conducted with managers in 24 countries (van Emmerik, Gardner, Wendt, & Fischer, 2010) revealed small relationships between aggregated measures of Hofstede's culture dimensions and McClelland's motives. Byrne et al. (2004) examined the factorial structure of a broad, multi-faceted conceptualization of achievement motivation including; competitiveness, fearlessness and confidence in success across three samples (US, Israel and Germany). Their results indicated the achievement motivation construct and its sub-facets were construct equivalent. Understanding whether motivation constructs are interpreted the same way in different cultures, is a prerequisite before investigating relationships with age. The objective of this paper is to examine the equivalence of motivation constructs across 22 country samples and to explore whether relationships between age and work motivation are consistent across countries. To our knowledge no such study has been conducted to date. The current study is an extension of a study examining 17 country samples in a smaller data sample.

Method

This study was based on data (N=77,722) collected with a comprehensive motivation questionnaire (MQ; SHL, 1992, 2002) in 22 countries from 2006 to 2012. The MQ measures stable, trait-like work motivation by focusing on a range of motives that are relevant in a work context. These are assessed through 18 scales and 144 items (8 items per scale).

Results

The results presented below are from the initial study (17 countries). The current paper's larger sample and number of countries allows for the additional completion of a multilevel analysis which will directly examine the pattern of relationships between age and motivation across the 22 countries, thus providing an increased area of discussion for the proposed paper.

Firstly, it is important to establish whether the motivation constructs are equivalent across countries. To accomplish this, the pattern of scale inter-correlations across language/country versions was compared using structural equation modelling (SEM). Most matched samples sizes used for this analysis ranged from 500 to 600. Model fit was good for all paired language versions, indicating that people interpret the motivation construct in a similar way across countries. The age variable, consisting of five groups, was correlated with the MQ scales using the whole sample to examine if there were overall relationships with age. Correlations were small but eight exceeded an r of 0.10 (see Table 4). The highest correlations were found for Autonomy ($r=0.26$) and Progression (-0.21), indicating that older employees were more motivated by having freedom to decide how to do their work, and less motivated by opportunities for career progression. The pattern and magnitude of correlations was overall in line with previous findings (Inceoglu et al., 2012; Kooij et al., 2011).

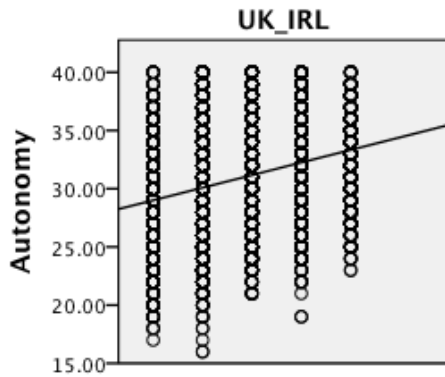
To examine age differences across countries, univariate analyses were carried out with each of the MQ scales as the dependent variable, age categories as fixed and country as random effects, testing the interaction between the two terms. These analyses were re-run by controlling for gender as a covariate.

As sample size was large, effect sizes are reported for each of the scales using partial eta squared. The effects of age were very small (all < 0.008). A reason for the small effect size might be the fact that sample sizes varied across countries. In countries with smaller sample sizes the extreme age groups are likely to have been less populated and reliable. As gender differences have been observed in motivation, the analysis was repeated but with gender as a covariate to control for its influence on the results. When comparing scores of men and women in the overall data set, there are indeed differences on several motivation scales, but these are small.

When adding gender as a covariate to the univariate model (again with age as a fixed effect and country as a random effect), the pattern of results is very similar. Across the two analyses effect sizes correlate 0.99, 0.99 and 0.97 for age, country and the interaction effects respectively. Relationships with gender are larger than with age, reaching a small effect size for seven scales.

In addition to these analyses, the pattern of results was also examined through graphs for each of the 18 MQ scales. These figures illustrate that the pattern of the relationships between age and the motivation scales is fairly consistent, but that the absolute values differ, illustrating the effect of country (an example of one of the figures is seen below). In some cases very small interaction effects can be seen. Older employees are less motivated by opportunities for career progression and training, but place more importance on having autonomy compared to younger employees. These findings are in line with previous results (e.g. Inceoglu et al., 2012). These results will be confirmed through the ongoing multilevel analysis currently being conducted.

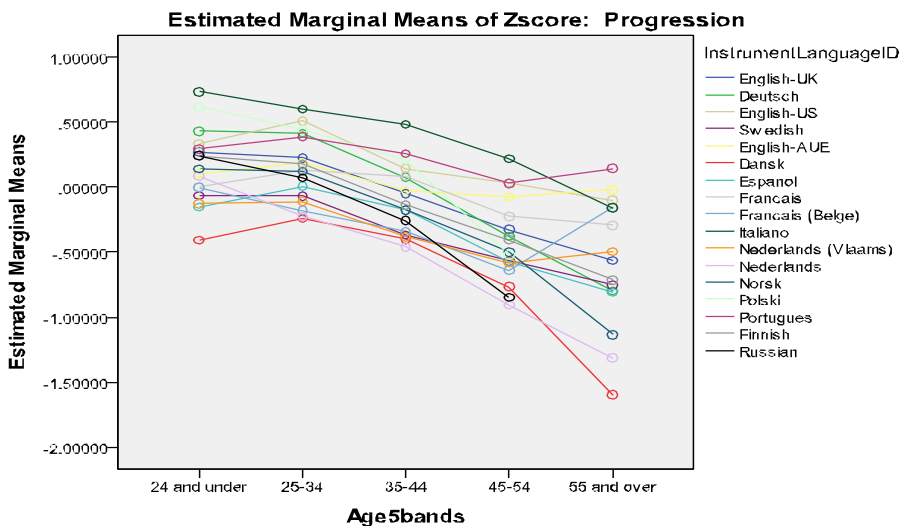
Figure 1. One of the MQ scales Autonomy with Age on the X axis and Motivation Y axis for UK and Ireland Sample



Discussion

Across the whole sample age correlated with several motivation scales, showing relationships in direction and magnitude that are similar to previous research (e.g. Inceoglu et al., Kooij et al., 2011). Older individuals (55+ years) perceived intrinsic job features (e.g. personal principles, having autonomy) to be more motivating than younger employees and extrinsic and resource-intensive job features as less motivating (e.g. career progression). When considering country in the analysis, these patterns were still consistent across the 17 country samples but the age effects were very small. The impact of country was larger than the effect of age, and the interaction between the two was only observed in a few cases with small effect sizes. Results were also very similar when controlling for gender in the analysis. Plotted as graphs the results clearly showed, however, that differences on the motivation scales reached around one effect size when comparing the highest and lowest scoring groups. The graphs also supported the finding that the pattern of results was consistent with previous studies and that the pattern was generally quite similar across countries. In some cases weak interactions were found. Evidence from the multilevel analysis may confirm these findings.

Figure 2: Progression by age plotted when controlling for gender



Covariates appearing in the model are evaluated at the following values: Gender Merged Biodata Demographics = 259.35

Non-estimable means are not plotted

Practical Implications

These initial results support the assumption that the relationship between age and motivation holds across several countries but that employees differ in terms of their absolute motivation. This is likely to have several reasons: a direct effect of culture and values (through norms) but also response bias and styles, which have been observed to vary across countries (He & van de Vijver, in press). These preliminary results are based on cross-sectional data, so they might reflect some universal generational differences and some influence of changes in the adult life cycle. Regardless of that, for current employers it is an important finding that employees of different age groups tend to be motivated by different outcomes and features at work and that this is consistent across countries. It is also important to know that employees of

the same age groups are motivated by the same job features and work outcomes across countries but differ in terms of absolute levels. This has implications for Human Resource Management, especially in global contexts, and policymaking. It is important however to consider an employees' motivation individually as the variance within each age group is larger than between age groups.

Questions 2, 3 & 4.

The paper proposed links with the main conference theme of Learning, Sharing, Impacting through examining cultural equivalence in motivation as well as drawing conclusions about motivation and its relationship with age. Sharing this knowledge with policymakers and HRM executives working in global organisations, may allow international policies to be developed centering on how employee motivation and thus employee satisfaction and retention can be increased. Within the Leadership, Engagement and Motivation strand, this paper allows a new aspect of motivation in the work space to be explored and provides the first evidence that the relationship between age and motivation has construct equivalence. In an increasingly global market with employees working in multiple countries for the same organization, insight such as this is likely to be valuable. To our knowledge, no other studies have examined this interaction and thus we provide the first research on which to base further research in this area. As part of the proposed submission, we would open the presentation with a question "How do we think age would be related to motivation at work across cultures?" By inviting open discussion about this topic we would then draw up hypotheses within the presentation that could be addressed by the study outlined above. After a brief introduction to the study we would spend 5 minutes on this open discussion.

Questions 5 & 6.

It is hoped both conference delegates and public will use the results of the study to promote discussion on the practical implications for global HRM. As companies strive to streamline policies and incentives for employees across the globe, evidence promoted by this study may encourage HRM professionals to have confidence comparing, motivating and rewarding employees from differing cultural backgrounds. From a public perspective, knowing what motivates individuals at work appears to change overtime, irrespective of their cultural background may encourage self-reflection on career aspirations and what drives them for success. For delegates working with global organizations, taking empirical evidence back to their clients that may help to drive new strategies for promoting employee engagement and motivation would be a positive outcome from attending the session. We would finish with a 10 minute discussion of the study. Possible questions would include "How else can we interpret the paper's conclusions?" and "What are the practical implications of the results?".

Question 7.

Electronic versions of the presentation would be available.

T52

Standard Paper

Meeting Effectiveness – Changing Behaviours to Release Productivity

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Strand **Work Design, Organisational Change and Development**

Introduction

This paper outlines development of a successful organisational change initiative aimed at improving and promoting meeting effectiveness in a global corporation. The work is based on two related research studies conducted over a period of three years in response to high reliance on meetings. Study 1¹ was comprised of two stages which focused on the assessment of current levels of meeting effectiveness within the organisation and development of good practice guidelines. At Stage 1 levels of satisfaction with various elements of practice were assessed and the most and least commonly experienced problems were identified using questionnaires, with key aspects further explored in interviews. This analysis led to identification of strengths, weaknesses, opportunities and threats related to management of meetings and recognised a number of existing internal strategies and tools. In order to drive development of the guidelines, and to establish the requirements of future users, two workshops were organised (Stage 2). These were focused on identifying key areas for inclusion (also based on Stage 1 above), their level of detail, and the most appropriate format for the information to be presented in. Based on data gathered at Stage 1 and 2, the Meeting Effectiveness Toolkit (MET) was developed – a set of short, good practice documents for independent and/or collective use. These were evaluated by internal employees and further improved before their final release.

Study 1 also identified the need for a process to help teams demonstrate best practice in their meetings. As a result, Study 2 commenced with creation of a five-step framework to guide teams through the process of making positive changes to their meetings, following a measure – review – act – measure - review cycle. Previous initiatives provided some key lessons: teams needed more support to identify weaker areas and make changes in everyday work-life; there needed to be more focus on challenging poor behaviours to embed good behaviours; all team members should be jointly accountable for improvements. Theories of organisational change were reviewed to understand the key elements for inclusion in the process. Classic models (Kotter (2002); Schein (1996); Lewin (cited in Schein)) illustrated that the team must reach collective agreement that current processes are sub-optimal, motivating members to work together to learn and apply new, improved ways of working.

Supporting materials were designed using the outputs of Study 1: a questionnaire for meeting evaluation (based on the Meeting Effectiveness Questionnaire items categorised into themes); a series of interventions based on good practice meeting guidelines (MET), and a series of trackers to record quantifiable benefits associated with changes made (such as time or cost savings). The completed framework was introduced to organisational teams as the “Challenge Process”. Study 2 details the results of a number of Challenge Process pilots implemented across the organisation, facilitated by the researcher. This paper demonstrates practical application of change models and good meeting guidelines within an organisation, using a structured approach that was evaluated to understand benefits derived from its use. Sharing effective methods to embed positive change can help practitioners design further successful interventions aimed at changing team processes, and support development of the change and meeting management theory. This study has been placed within the Organisational Change strand as a successful example of investigative research resulting in a practical group intervention focused on changing team behaviours. By highlighting small, iterative changes to existing working methods, the process contributed to meaningful increases in team productivity, delivering real impact for the teams and organisation in question.

Study 1

Methodology

A thorough review of meeting literature was conducted in order to drive the development of the study and the measures used: the Meeting Effectiveness Questionnaire (MEQ)² and the Meeting Type Questionnaire (MTQ)². Convenience and snowball sampling techniques were used to identify 51 meetings (377 attendees) on which the analysis was based. MEQ was distributed at the end of each meeting to all its attendees. In order to better understand the context, in which the meetings took place, 50% of them were also fully attended by the researcher (in the remaining 50% the researcher joined the end of the meeting only). MTQ was later sent to the meeting chairpersons for collection of additional meeting-specific information.

MEQ was formed of background information questions (e.g., chairing, taking minutes, attendance type and length) and two assessment parts. Part 1 was comprised of 19 specific and 2 general questions related to various aspects of meeting practice rated on a 5-point satisfaction scale with a N/A option. Factor analysis conducted on these items identified four subscales, all with Cronbach's alpha scores of above .75: Meeting Organisation and Structure (.82), Meeting Attendance and Discussion (.76), Meeting Outcomes (.88), Meeting Facilities (.79). All subscales were found to be positively and significantly correlated at the 0.01 level (with effect sizes ranging from .177 for Meeting Facilities and Meeting Outcomes, to .578 between Meeting Attendance and Discussion and Meeting Outcomes). Part 2 included a list of 34 problems and attendees were asked to select those that occurred in the meeting they had just attended. Attendees were also asked to rate how effective the meeting was in comparison to other meetings in the series. MTQ was used to identify the most common meeting formats, purposes and documents used. These were provided in a list format for the chairperson to select as appropriate (there was no limit on the number of items chosen).

In order to enhance the understanding of the findings and further explore the key areas, 10 one-to-one, semi-structured interviews were conducted. The questions were divided into two sections looking at individual experiences of chairing and attending meetings, respectively. All data were treated confidentially and anonymously.

Results

The findings from the analysis were extensive, providing an in-depth understanding of the current organisational practice, effective and ineffective behaviours, numerous strategies already in use, and improvement opportunities. The overall assessment of meetings was satisfactory at both individual and meeting levels; however, there were a number of areas that were consistently identified as weaker across different assessment methods. These included aspects related to attendance of key stakeholders at meetings and their individual roles and responsibilities, and meeting punctuality. Whilst the effect that these factors had on the effectiveness of meetings would vary depending on the situation, these were often linked to individual behaviours that, with appropriate guidance, could be improved. A number of solutions and strategies were developed to address these aspects. These were incorporated into good practice guidelines (MET) amongst other selected areas. Lessons learnt from the evaluation of MET (based on 9 participants) led to further improvements to the guide and provided the foundation for development of the Challenge Process, aiming to facilitate smooth implementation of the guidelines into day-to-day organisational functioning.

Study 2

Methodology

Convenience sampling was used to recruit 31 Challenge pilot teams who evaluated 51 different meetings. The researcher and team leader set dates for the Challenge and discussed possible meetings for inclusion. Following an introductory briefing, surveys were distributed via email for submission to the researcher. All data were treated confidentially; ratings and comments were collated and presented as one set of pre-Challenge (Time 1) results to the group. Average scores for each theme (Purpose, Attendees, Planning, Processes, Participation, Technology and Facilities) were linked to suggestions for improvements (particular interventions were also highlighted). The team discussed the findings and set objectives for making improvements to the meeting. Participants then applied changes to the meeting(s) in question, followed by completion of the survey towards the end of the defined timescale. The post-Challenge (Time 2) data were summarised and used to conduct a final review where additional qualitative feedback was also gathered by the researcher. In addition, 14 semi-structured interviews were conducted with a series of team-leaders who had been Challenge participants in order to obtain in-depth data relating to perceptions of the Challenge Process and recommendations for future organisational use.

Results

At the time of writing, Time 2 evaluation was still in progress for a number of Challenges. The available data from participants who provided a Time 1 and Time 2 meeting survey was analysed using a paired sample t-test. The results showed a significant difference between Pre and Post-Challenge scores in five of the seven themes (Purpose, Attendees, Planning, Processes and Participation). In particular, Purpose ($t = -5.84(85)$, $p < 0.01$) and Processes ($t = -6.43(85)$, $p < 0.01$) showed an effect size higher than .6 ($d = 0.78$ and $d = 0.65$ respectively). The results demonstrate that ratings in these five areas are significantly higher after completing the Challenge Process. An independent sample t-test was carried out where participants had only provided a Time 1 or Time 2 survey (due to lower response rates at Time 2 or a change in meeting attendance patterns). Four of the seven themes (Attendees, Planning, Processes and Technology) showed a significant increase between the scores of Time 1 and those at Time 2, supporting the paired sample results. Participants were also asked to provide a best estimate of quantifiable benefits obtained as a result of changes made to meetings. Whilst not all participants provided this data, there were some small but noticeable time gains associated with Challenge use (particularly related to meeting punctuality and focus).

Discussion

The Study 2 results provide encouraging support for use of the Challenge Process to improve meeting effectiveness. The paired-sample t-test results show that significant increases in demonstration of best practice can be obtained if the team collectively identify areas for improvement and implement change. It is interesting that Technology and Facilities were the only areas to show non-significant changes. It may be that meeting attendees have less control over these elements and can therefore make less improvement, whereas behaviourally-focused change such as promoting equal participation levels are easier to influence. Attendees that did not participate in the Challenge Process from start to conclusion (independent sample t-test) identified a significant positive change in four key areas but not in Purpose or Participation. This may be explained by the fact that changes to required attendees or meeting management (processes) are more easily observable by sporadic attendees, whereas changes to clarity of meeting purpose or level of participation involve more subtle, long-term shifts in meeting behaviour.

Feedback from Challenge participants was positive. All interviewees and reviewers said the process had provided a valuable opportunity for reflection, allowing them to stop and consider what could be improved. A structured framework gave teams the opportunity to set goals and legitimised the challenging of behaviours that fell below agreed standards. Some suggestions for improvements to the process were gathered at review sessions and within the interviews which will be used in future iterations of the process.

This applied research has identified some positive recommendations for both researchers and practitioners. Use of a formal framework to support teams to improve their meetings can result in real changes in meeting effectiveness. Gathering feedback from all attendees (anonymously if possible) can help ensure proposed changes are fully representative. Where possible, all team members should be involved in making and assessing the efficacy of changes, embedding good behaviours by sharing accountability for running productive meetings and challenging one another when appropriate. Managerial support for use of the process is important; a managerial goal to improve processes is seen as positive encouragement for everyone to invest some time in optimising meetings, leading to real time savings across teams. Future topics for investigation include further development of methods to track quantifiable savings associated with improved meeting behaviours, and further research to understand factors that may influence application of the Challenge Process.

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T53

Short Paper

Police officers' promotion opportunities and intention to leave the police

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Strand Well-being and Work

Introduction

In a recent survey of police officers in England and Wales, 48% of officers did not believe that they currently had sufficient opportunities to move up through the rank (Police Federation of England and Wales, 2014). An HMIC report published in July 2014 similarly recognised that "future prospects for recruitment, promotion and progression based on the current workforce plans are extremely limited" (HMIC, 2014, p. 35). It is important to understand the impact that this lack of promotion opportunity has on individual police officers and on the Police Service as a whole. We therefore sought to investigate whether a perceived lack of promotion opportunities increased officers' intention to leave the Police Service. Moreover, in order to better understand and support officers who were unable to attain promotion to the next rank, we also looked to establish why promotion opportunities might influence officers' intention to leave.

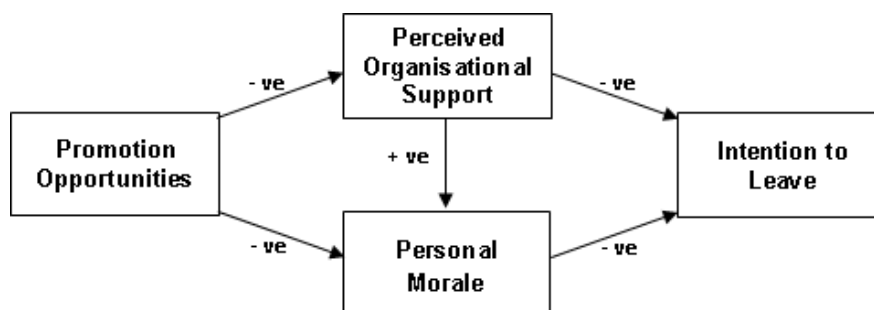
Eisenberger et al. (1986, p.301) have argued that perceptions of organisational support form the basis of a social exchange relationship between an employee and their employer. When an organisation is perceived as being supportive and committed to employees, the employees reciprocate through associated attitudes such as intentions to remain (Wayne et al.1997). Therefore, we first investigated whether a lack of promotion opportunities was associated with an erosion of the exchange relationship. If police officers are unable to move up through the ranks due to a lack of promotion opportunities, they may be more likely to experience a lack of reciprocity within their exchange relationship with the Service, and thus more likely to leave.

We also considered whether lack of promotion opportunities impacted upon psychological well-being at work (i.e. personal morale). Morale is associated with the "energy, enthusiasm, team spirit and pride" that people experience within their organisation (Hart et al. 2000, p. 2000) and is considered a significant predictor of turnover intention (e.g. Langkamer and Ervin 2008).

Finally, we examined whether a combination of these factors might provide the best explanation of the relationship between police officers' promotion opportunities and their intention to leave the Police Service. Recent research has suggested that there may be a serial indirect relationship between

promotion opportunities and turnover intention, mediated by perceived organisational support and morale in sequence (Jackson et al 2012; Allisey et al. 2014). Consequentially, we looked to test both simple and serial mediation models, presented in Figure One below.

Figure One: Indirect Relationship between Police Officers’ Promotion Opportunities and Intention to Leave the Police Service



This paper provides a timely insight into police officers’ intention to leave the Police Service in light of HMIC’s recent recognition of the future challenges faced regarding promotion and progression. It is therefore of considerable relevance to members of the public, who are ultimately affected by any loss of experienced police officers. However, by simultaneously testing two potential mediators in the relationship between promotion and intention to leave this research also contributes further to theory; in particular by contrasting and combining a social exchange perspective with a psychological well-being at work perspective to understand why promotion opportunities might significantly predict intention to leave. It is for this reason that we submit this paper to the “Well-being and Work” strand. Furthermore, the findings presented are likely to have considerable benefit for practitioners; most specifically in professions such as the police, where few, if any, alternative employers exist. In these circumstances the link between promotion opportunity and turnover intention cannot be explained simply by workers leaving to continue their career progression at another organisation. This paper consequently links clearly to the “Impacting” theme of this year’s conference, having the potential not only to develop a better theoretical understanding of police turnover, but also to use this understanding to effectively support police officers in their already challenging role, so that these officers can continue to effectively serve the communities in which they work.

Design

Sample and Participants

Data were collected from police officers in each of the 43 police forces in England and Wales. The survey was accessible to officers online and was publicised both centrally and locally through Joint Branch Boards. Checks were performed on the data to eliminate any police staff responses and responses where there were noticeable inconsistencies between answers. In total, 32,606 responses were collected, representing a response rate of 25.7%

Measures

Promotion opportunities were measured in two ways. First, officers were asked to indicate whether they had passed the relevant exams but had not been promoted because of a lack of positions. Second, officers who had not applied for promotion were asked to indicate their reason for not applying; amongst these reasons included satisfaction with their current rank, not feeling ready for promotion and a lack of opportunities at the next rank. 38% of officers said that they had either not been awarded, or had not applied for, a promotion due to a lack of opportunities at the next rank.

Personal morale was measured using a one-item measure, with officers asked to rate their personal morale on five-point Likert-type scale ranging from Very Low to Very High. Focus groups conducted with officers indicated that their perspective on personal morale corresponded with a theoretical conceptualisation of morale discussed above. The one-item measure was therefore considered appropriate in the current study.

Perceived organisational support was measured using four items taken from Eisenberger et al.’s (1986) scale. Items included “The Police disregards my opinions when making decisions that affect me” and were measured on a five-point Likert-type scale ranging from Strongly Disagree to Strongly

Agree.

Intention to leave was measured by asking officers to indicate what their intentions were with regards to staying in the Police Service. Officers were provided with four options, "Stay until Pension Age", "Stay at Least Two Years", "Leave within Two Years", and "Currently Seeking Alternative Employment". In the current analysis, the last two responses were combined to create a single intention to leave variable and were compared to all other responses.

Results

A simple logistic regression analysis was first performed to determine the effects of promotion opportunity, personal morale and perceived organisational support on the likelihood that police officers would leave the police service. The logistic regression model was statistically significant ($\chi^2(8) = 98.15, p < .001$) and explained 23% of the variance in officers' turnover intention (Nagelkerke $R^2 = 0.225$). Odds ratios indicated that officers who perceived there to be a lack of promotion opportunities were 38% more likely to leave the service ($\text{Exp}(B) = 1.38$). For each unit increase in perceived organisational support, officers were 32% less likely to leave the police service. For each unit increase in personal morale, officers were 63% less likely to intend to leave.

The mediating effect of personal morale and perceived organisational support on the relationship between opportunity for promotion and intention to leave was subsequently explored further. This analysis indicated a significant indirect effect of opportunity for promotion on intention to leave through morale ($B = 0.29, p < 0.001, 95\% \text{ CI}, 0.25, 0.31$) and perceived organisational support ($B = 0.10, p < 0.001; 95\% \text{ CI}, 0.08, 0.12$). The direct effect of promotion opportunities on intention to leave however remained significant with the inclusion of the mediators within the regression model ($B = 0.33, p < 0.001; 95\% \text{ CI}, 0.25, 0.40$), indicating that morale and perceived organisational support partially, rather than fully, mediated the relationship between promotion opportunities and intention to leave.

Pairwise contrasts of the indirect effects of opportunity for promotion on intention to leave through morale and perceived organisational support highlighted that the specific indirect effect through morale was significantly larger than through perceived organisational support ($B\Delta = 0.19, p < 0.001, 95\% \text{ CI}, 0.15, 0.22$). Additional analysis indicated that a serial mediation effect was also significant, with a significant indirect effect of promotion opportunity on intention to leave through perceived organisational support and morale in sequence ($B = 0.15, p < 0.001$). Pairwise contrasts found that the serial mediation model was of a significantly greater magnitude than a simple indirect effect of promotion opportunities on intention to leave through perceived organisational support ($B\Delta = -0.05, p$

< 0.001). However there was no significant difference between the serial indirect effect and the simple indirect effect of promotion opportunities on intention to leave through morale ($B\Delta = 0.02, \text{ns}$).

Discussion

The present research emphasises the importance of personal morale and perceptions of organisational support in explaining the relationship between police officers' promotion opportunities and intention to leave the Service. However whilst both factors appeared to play a role in the indirect relationship between promotion and turnover intention, we found that an erosion of the exchange relationship between an officer and the Service had a weaker mediating effect in isolation than either officers' psychological well-being alone or in combination with organisational support. By analysing these mediator variables together we have therefore been able to examine their relative impact and shed more light on why a lack of promotion opportunities may prompt a police officer to wish to leave the Police Service. In particular, these results highlight the importance of officers' psychological well-being as a mediating variable in this relationship.

The results have notable practical implications for the Police Service. For instance, they indicate that attempts to influence the perceived exchange relationship between officers and the Service, for example by taking actions to manage officers' expectations or ensuring that decisions are made in a procedurally just way (e.g. Moorman et al. 1998) may not in themselves be sufficient to prevent officers from wanting to leave when they do not perceive sufficient opportunities for promotion. Such actions in themselves may not take into account the more notable impact of promotion on officers' psychological well-being. Instead individual forces may be advised to consider ways to put in place psycho-social support mechanisms specifically focussed on countering the negative effects on personal morale of a lack of promotion opportunities for the 38% of all police officers affected by poor promotion prospects.

Although there are some limitations within the current research, such as the adoption of a single item to measure personal morale and a focus on turnover intention rather than actual turnover, this study provides a good foundation from which to further develop both theory and practice in regards to police turnover.

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T54

Short Paper

Staying “Switched on” During Non-Work Time: Reviewing Consequences for Employees

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Strand **Well-being and Work**

Today most white-collar employees have the possibility to use information and communication technologies (ICTs) to perform work-related functions outside the physical workplace. Many individuals use this opportunity to stay “switched on” during non-work time despite not being contractually obligated to do so. Although such self-initiated ICT use for work-related purposes during traditional non-work time (henceforth, *ICT use* for short) is currently a hotly debated topic, both in research and popular press, comparatively little is known regarding the outcomes of such behaviour for employees.

There are mainly two opposing perspectives regarding ICT use which Jarvenpaa and Lang (2005) labelled the *Empowerment/Enslavement Paradox*. On the one hand, ICTs can facilitate job autonomy and work-life balance as they enable employees to work anywhere-anytime; such flexible work arrangements are usually considered positive for employee well-being (Day, Scott, & Kelloway, 2010; Nixon & Spector, 2014).

However, theories of job demands highlight the potential negative impact of ICTs on well-being (Day et al., 2010; Nixon & Spector, 2014). Recovery theories also stress the necessity to psychologically detach from work during non-work time in order to recover and to feel energetic on the following day (Meijman & Mulder, 1998; Sonnentag, Mojza, Binnewies, & Scholl, 2008). Hence, ICTs are not uncommonly called an “electronic tether” to work.

The evidence-base for the one or the other perspective is however inconclusive. There are several reasons why this might be the case. Firstly, the research field on ICT use is emergent. A frequently cited first study in the field was published in 1992 by Venkatesh and Vitalari and it was not until recent years that the field

has picked up pace. Secondly, the research so far has been inconsistent and disconnected with many studies taking different approaches and conceptualisations of ICT use. Studies which build on previous approaches and results are the exception rather than the rule. Therefore, there is a clear need to synthesize the existing evidence to determine what we know and what we do not know regarding the potential outcomes of ICT use taking a rigorous approach. This paper thus aims to answer the following research question using a systematic review approach (Petticrew & Roberts, 2006): *What are the consequences of self-initiated ICT use for work-related purposes during traditional non-work time for office-based white-collar employees?*

This timely review on ICT use is to our knowledge the first one which is conducted using the systematic review approach. This approach aims to gather as much literature on the topic as possible to give an up-to-date and complete picture as opposed to previous, rather incomplete and biased reviews.

Main psychological theories and models. The psychological theories and models which are predominantly used as theoretical framework in the reviewed research are theories on role conflict, especially Border/Boundary Theory, models on recovery from work including the concept of psychological detachment, and models on job demands and resources such as the Job Demands-Resources Model or the Conservation of Resources Theory.

Method

Search strategy. We drew upon four different literature sources to identify relevant studies: Scientific databases, conference proceedings, hand-searching key studies' references and contacting key authors regarding material in press. The searched databases covered the fields of psychology, business and social sciences; searched conference proceedings included conferences in both occupational psychology and business.

Inclusion criteria. To be included, a study had to fulfil seven inclusion criteria: (1) Published in English; (2) published from 1992 onwards and retrievable by May 2014; (3) publication type: journal article, book chapter, dissertation or conference paper; (4) empirical data is reported (both quantitative qualitative); (5) population: employed working adults who are (6) office-based employees with regular working hours; (7) relevance to the research question.

Data extraction and critical assessment. After identifying relevant studies through sifting the search results by title and abstract, we read the full papers and extracted relevant information using a data extraction form. The studies' methodological quality was further critically assessed using a set of predefined criteria. The critical assessment served to weight the significance and validity of studies' results in the subsequent synthesis.

Data synthesis. As the applied measurements of ICT use were highly heterogeneous, a quantitative synthesis was not viable; we therefore chose a narrative synthesis approach.

Key Findings

Sixty-three studies were identified as relevant to the research question. The applied research designs were: 35 quantitative, 22 qualitative and six mixed-methods. Overall, most of the reviewed studies were of intermediate methodological quality (65.1%), whereas 28.6% were of high quality. Reviewing the relevant literature, four main subject areas of consequences associated with ICT use were identified. However, it should be noted that these different areas are highly interrelated (e.g., work-life balance and individual well-being).

Individual-related consequences. The consequences of ICT use on the level of the individual employee covered mostly negative outcomes in terms of increased stress, reduced health, impaired recovery and negative attitudes towards ICTs. A few studies, however, identified positive outcomes such as reduced stress resulting from increased job resources and an increased sense of a mind at ease.

Workplace-related consequences. Several studies identified consequences of ICT use on the workplace level. Positive outcomes were job autonomy, enhanced self-reported performance, prestige among colleagues, improved work attitudes and reduced work load. However, negative consequences for workplace-related aspects were frequently identified as well; not uncommonly within the same study. These negative consequences were concerned with increased work load, decreased autonomy, enhanced

perceived pressure to use ICTs, diminished work attitudes and role issues at work (e.g., role overload or role ambiguity).

Consequences for the work-life interface. Consequences of ICT use for the work-life interface were amongst the most common examined consequences. Negative consequences of ICT use mostly stem from blurred boundaries between work and private life causing spillover and conflict. In particular, work-family conflict was the most often identified consequence of ICT use. Only few studies were concerned with potential positive effects; they stated the flexibility to meet family responsibilities as main benefit of ICT use which impacts the employee's perceived work-life balance.

Consequences for time management. The implementation of ICTs in the working context has changed our temporal understanding of work and non-work time. In support, many studies stated the growing extension of working hours as consequence of ICT use. Working more hours contradicts the notion of a flexible, smart working tool as which ICTs are commonly advertised. Similarly, several studies concluded that, although the employee is flexible to attend to family commitments, the overall amount of time which is actually spent with one's family and with engagement in self-related activities is reduced by ICT use.

Hypothesised reasons for the reported contradictions will be discussed in the session.

Discussion

ICTs have become an integral part of the working environment. However, research on its consequences for the employee lags behind these fast-evolving technologies. This systematic review is therefore needed to determine what is known so far and what remains unknown. This is seen as a first step which should enable researchers to identify gaps in research, which in turn is supposed to enable the advance of the research field.

Limitations. There are some limitations relating to the reviewed studies which might have influenced this systematic review. Firstly, as the research field on ICT use is emerging, an agreed conceptualisation or definition of the phenomenon is lacking so far. This complicated the literature search and a very broad approach had to be applied to identify in as many relevant studies as possible. Despite this broad approach, relevant literature might not have been identified. Secondly, the inconsistent conceptualisation and the associated differences in the measurement of ICT use also complicated the synthesis of results. This renders the proposed associations and interpretations hypothetical. Another limitation is that the presented findings predominately base on cross-sectional studies and accordingly, no causal directions can be established. Lastly, reviewed studies mostly applied self-reported measurements only. That renders their findings highly subjective and vulnerable to self-distortion.

Implications. Overall, this systematic review illustrates the inconsistency of the research field; many questions remain unanswered. However, one important answer which was yielded through this review is that ICT use has the potential to be both beneficial *and* harmful. Organisations need to be aware of this and should refrain from rashly implemented one-size-fits-all approaches which, for instance, merely block every employee from receiving e-mails during non-work time. Such approaches undermine the flexible character of ICT use which is its key benefit. Therefore, every measure to improve the handling of ICT use within an organisation needs to be flexible and individual-oriented.

Conclusion. Our findings show a trend towards negative consequences of ICT use for employees, especially regarding their private life and well-being. However, they also point to some potential benefits which calls for more research on distinguishing between beneficial and harmful ICT use.

Relevance for conference delegates and public. At the DOP Conference 2014, a workshop used the case study of Volkswagen restricting access to work-related e-mails during non-work time as starting point for a discussion about evidence-based practice in the field of work-life balance. Although seeing the necessity of explicit e-mail policies, the workshop participants also acknowledged the necessity of flexibility in the workplace.

This controversy illustrates the relevance of this systematic review for both conference delegates and public. As no one truly knows the effects of ICT use, many people rely on observations and narratives in popular press. This gives us a rather entangled than untangled picture of the current situation. Without clear evidence-based knowledge on the consequences of ICT use for work purposes during non-work time, we are unable to take full advantage of ICTs' potential.

Relevance for chosen strand and conference theme. This paper is highly relevant to the *Well-being and Work* strand as it extensively reviews the outcomes of ICT use for the individual employee. In so doing, an impartial approach is taken considering both positive and negative consequences and the contextual factors around them. Thereby, this paper aims to shed light on whether ICT use increases or decreases employee well-being, both directly and indirectly.

This aim further illustrates the paper's link to the main conference theme *Learning, Sharing, Impacting*. Before we can effectively impact ICT use in terms of maximising the benefits and reducing the personal costs, we need to learn about the phenomenon, create a solid evidence-base, share our findings and thereby build on each other's research. Sharing the results of this systematic review should lay the foundation of integrated future research going beyond describing towards making an impact on employee well-being.

Available Material on Request

We are happy to provide the delegates with an electronic copy of the slides and the full bibliography of the systematic review.

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T55

Short Paper

More than a page turner ...

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Strand **Psychological Assessment at Work**

Introduction

Over the last 20 years test administration in employment contexts has become predominantly automated. The possibilities this creates for using advanced test scoring and more complex test structures are beginning to be taken up (Luecht and Sireci, 2011). However there has been less use of the possibilities of technology in item design. We are still using our advanced technology to do the equivalent of turning pages for test takers. The multiple choice item format (MC) designed for ease of scoring is still king. An example of where technology has been used to good effect include video vignettes in situational judgement tests. Some authors have created demonstration tests with moving stimuli or 3d displays but most tests still consist of static text.

This paper describes the results from the development of a new numerical reasoning tests that takes advantage of technology to move away from a pure MC format. The question format uses familiar word questions relating to tables and graphs of data, but two answer formats are used. Half the questions use a traditional MC approach, the other half have a constructed response answer format (CR) where respondents must write in their own answer. The real world typically does not present a series of options to

questions like 'how many items are likely to be sold next week?' or 'what will be the impact on profits if exchange rates change?' Berg and Smith (1994) found differences in ability to interpret line graphs when measured using MC and CR methods.

Presenting a set of responses can affect what is measured by an item. For example a set of options might indicate the order of magnitude of the correct answer; working out the last two digits of the answer may be enough to select the correct response. In some cases reviewing the response set without reading the item stem may provide clues to the correct answer. While some respondents may read the question and work out the answer without reading the options, most will review the options first and respondents who are test wise and use the structure of the item to respond –may be able to improve their scores substantially. Comparing MC and constructed response item to open questions could provide some indication of what is being measured.

This was an exploratory study looking at three questions:

1. Do CR items have similar psychometric properties (difficult and discrimination) to MC items. Martinez (1991) found CR items to be harder and more discriminating.
2. Do CR items measuring the same construct as MC items? Simkin and Kuechler (2005) suggest this is not always the case.
3. Are CR items as efficient as MC items? If CR items take longer to complete any advantage may be lost in increased testing time.

Method

144 numerical reasoning items were selected from a larger set written by two experienced item writers. Approximately half were in MC format with between 3 and 12 responses although the majority had 4 or 5 responses. The remainder were presented as CR items with numerical answers. Items were administered in 4 forms of 36 items. In addition a fifth form of 21 items was created with some items from each form to allow the calibration of the whole bank using item response theory.

A total of 1348 respondents each completed one form of the test. Respondents were volunteers recruited through a number of channels. They completed the tests as practice for selection tests and in return for feedback and a small monetary incentive.

Results

Items were scored and calibrated using item response theory. A two parameter model was found to best fit the data. Two items were removed from one form because there were no correct answers. Overall the item pool performed well with all test forms having a reliability over 0.80 except the short form Z at 0.77. Table 1 shows the results by test form. Reliability for the CR items exceeded that for the MC items for each test form. Because of the different numbers of items in each form, the Spearman Brown prophecy formula was used to convert the observed reliability values to the equivalent for a 36 item test. The mean and median reliability for CR items is 0.88. The results are lower for MC items at 0.81 and 0.80 respectively.

Table 1: Reliability by form and item type

Form	All items			CR Items			MC Items			N response s
	Mea n	SD	Reliability	N items	Reliability	Correcte d Reliability	N items	Reliability	Correcte d Reliability	
A	20.7	6.6	0.877	20	0.832	0.90	16	0.725	0.86	194
B	19.6	6.5	0.854	19	0.786	0.87	17	0.692	0.83	366
C	23.5	5.7	0.825	15	0.740	0.87	21	0.675	0.78	213
D	12.2	5.5	0.817	15	0.754	0.88	19	0.656	0.78	156
Z	10.6	4.0	0.773	11	0.709	0.89	10	0.519	0.80	420

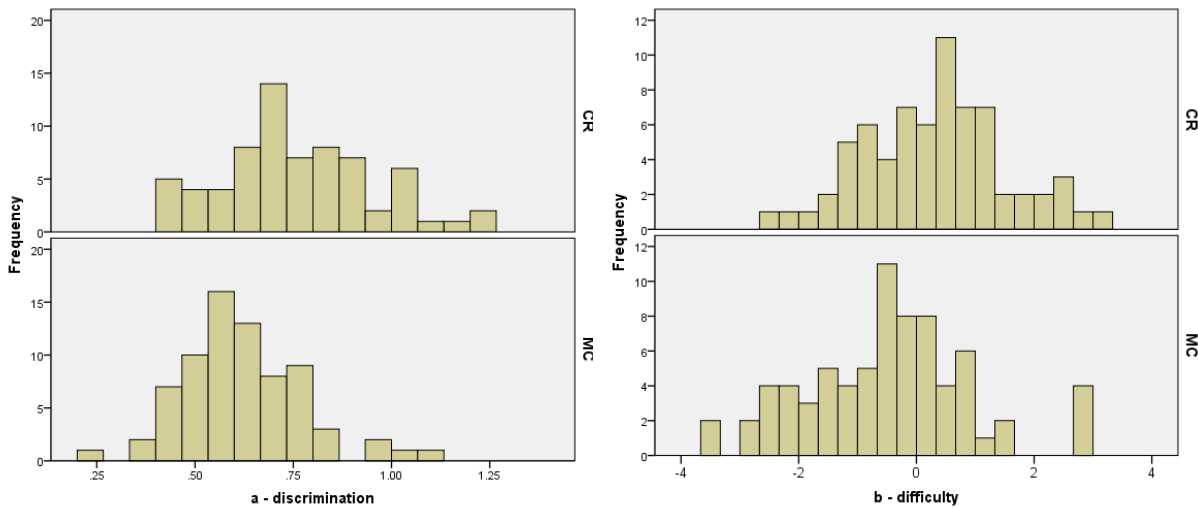
The overall reliability figures may mask differences in item performance. For example the CR items may perform better overall only because there are fewer poor items. Table 2 shows the average **a** (discrimination) parameter and **b** (difficulty) parameter from the IRT estimation of the total item set.

Table 2: Item parameters by item type

	Mean a	sd a	Mean b	sd b	Number of items
CR items	.76	.19	.32	1.2	69
MC items	.62	.15	-.50	1.4	73
All items	.69	.19	-.10	1.4	142

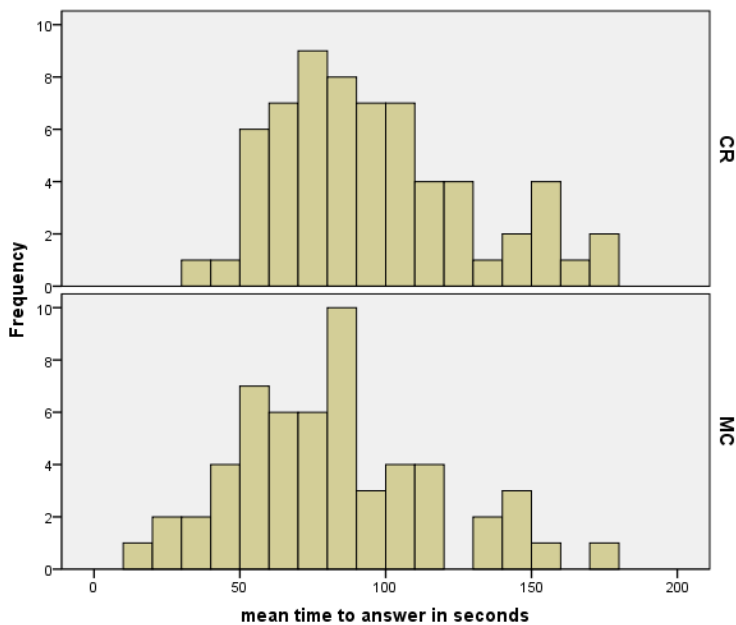
The average **a** value was higher for CR items consistent with the higher reliability. This difference was statistically significant ($t=4.7$, $df=140$, $p<0.01$). The difference in **b** values was also statistically significant with CR items being substantially more difficult than MC items ($t=3.7$, $df=140$, $p<0.01$). The average percentage correct (*p* value) for the CR items is 44% whereas the average *p* value for MC items is 60%. Figure 1 shows the spread of **a** and **b** values. While there is a range of values for both MC and CR items, CR questions are more likely to have higher discrimination parameters and to be at the more difficult end of the spectrum.

Figure 1: Distribution of **a** (discrimination) and **b** (difficulty) parameters for CR and MC items



While these results show that CR questions have higher reliability and include a higher range of difficulty, it is possible that they are measuring a different construct. To examine how close the constructs were, the IRT theta scores were computed separately for CR and MC items. The correlation between the two sets of scores was 0.69. Correcting for test length using the Spearman Brown prophecy formula results in a value of 0.81. This is a little lower than the internal consistency reliabilities but would be considered a good value for alternate form reliability across test forms. An item level factor analysis showed a large first factor accounting for between 15-20% of the variance across the different forms. A second factor accounted for 5-6% of the variance, however after rotation there was no relationship with item type for either factor. Both factors showed a greater relationship with item difficulty.

Figure 2: Distribution of item times in seconds for CR and MC items



The last aspect considered was the time to complete items. The average time in seconds to answer a CR item was 15 seconds more than for an MC item (97 versus 82 seconds). This difference was statistically significant ($t=2.4$, $df=118$, $p<0.05$) however the standard deviation for time taken was 34 seconds for both types of item and therefore a 15 second difference represents less than half a standard deviation. Figure 2 shows that there were more CR items with longer latencies and few very quick items, however the range of values is quite similar for both types of items.

Conclusions

The results show that CR items can be effectively used with MC items in a numerical reasoning test. In this study the CR items performed better in terms of discrimination although they tended to be a little harder and take longer to complete confirming the results of Martinez (1991). There is sufficient overlap in the distributions of item parameters to select CR items that have similar difficulty and completion times to MC items. The potential of CR items is that they better represent the type of numerical reasoning in the workplace where the answer will generally be unknown. They also control guessing behaviour since in most cases the number of options will be infinite.

Further work is needed to verify the validity of CR items but the initial results here suggest they are very closely related to the MC questions which have good criterion related validity. It is also possible that some of the results found here are question specific. The CR questions happened to be better than the MC ones. A current study is looking at this by converting some CR questions to MC ones and vice versa to verify whether similar trends can be found with identical question content.

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Notes

A pdf version of the paper will be supplied for circulation

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Short Paper

University or the University of Life?

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Strand **Learning, Training and Development**

Introduction

This paper investigates the difference work experience versus having a degree has on how effectively people perform at work. It uses summary data from multiple raters' perspectives (boss, peer, report) of people's overall effectiveness and behavioural effectiveness across key areas.

Many young people and organisations alike see a University education as a stepping stone to a good job and an improvement in job opportunities. For employers, those with University degrees should be better equipped for fast-track progression through the organisation. Graduates are expected to have the necessary technical skills from their subject discipline and be able to demonstrate broader skills such as team-working, critical-thinking, problem-solving and communicating information (Lowden et al., 2011). However, as highlighted by the National Institute of Adult Continuing Education (NIACE) in 1998, employability may be better understood as a social construct. The attitudes and values seen as beneficial may be highly contextual – what are appropriate values in investment banking may be much less so for those who work in a healthcare environment.

Getting the right young talent into organisations and increasing retention to enable young talent to be developed into future leaders is essential to creating a sustainable pipeline for future growth. The ability of recruiters to spot potential and the skills of learning and development teams to retain that potential are crucial to return on investment. It is clear that an organisations ability to accurately define and measure potential is a competitive advantage (Silzer and Dowell, 2013).

Whilst the specific skill sets that organisations are looking for will undoubtedly vary from one organisation to another, there seems to be some agreement that the concept of employability centres on the development of communication, numeracy, information technology and learning 'how to learn' (Mason et al., 2003). Nearly all line managers agreed that a degree was a good indicator of the individuals 'potential to carry on learning as the job progresses'.

The move towards apprenticeships, early careers recruitment and higher-level apprenticeships leads us to increasingly question what factor can compound an individual's ability to perform in the job role more; degree or work experience? Can years of experience at the 'University of Life' teach all the skills needed to succeed in today's fast-paced organisations? Does work experience have more or less impact on someone's effectiveness than their degree status?

In order to gain an understanding of what benefits those with a degree can bring to an organisation, we consider how effective those with a degree are in comparison to others without a university based education and whether the value of work experience can equip an individual to be effective in different ways.

Design and Methodology

The work performance of N=2,584 individuals were rated by their colleagues (typically, bosses, peers and/or reports; Total N=21,720) using the Wave Performance 360 questionnaire. These individuals were selected from a larger sample based on appropriate biodata they provided.

The questionnaire measures 12 behavioural sections (each covers 3 dimensions) and 3 areas of overall effectiveness.

To study the value of having a degree and work experience on work effectiveness, individuals were split into groups in terms of their reported highest qualification (81% sample response) and years of work experience (96% sample response). The details for the groups are provided in Table 1. The groups were recoded into '0' and '1', as shown in the middle row of the table.

Table 1. Information for the groups formed in terms of reported highest qualification and years of work experience.

Groups	Highest Qualification		Years of Work Experience	
	Non-degree holders	Degree holders	Less than 10 years	10 or more years
Recoded Value for Analyses	0	1	0	1
Sample Size	501	1,591	450	2,033

For each construct measured in the questionnaire, an aggregated score from all raters was calculated for each rater group (Boss, Peer and Report) within an assessment, then a combined score aggregating the group scores.

Point-biserial correlations were run between the recoded variables, and the 12 behavioural sections and 3 overall effectiveness areas. The correlation coefficients obtained highlight how different areas of performance are related to having a degree or more work experience. A shortfall of the point-biserial correlation is that there is a limit to the maximum correlation. In this case, as the proportion of the recoded values for highest qualification and work experience are similar, this helps to ensure the comparability of correlations for both highest qualification and work experience with other variables.

A series of multiple regressions were then conducted to investigate the incremental validity that work experience has over having a degree on work performance, and in reverse, the incremental validity that having a degree has over work experience on work performance. ANOVA's were also conducted but are not presented here due to limitations of space.

Results

Table 2 presents the results from the correlations between the Performance 360 constructs and the two variables – degree and work experience – respectively. In terms of overall effectiveness, Applying Specialist Expertise and Accomplishing Objectives is related to both having a degree and work experience. Although Demonstrating Potential correlates with having a degree, it correlates much less and negatively with work experience. Breaking the data down into several different bands of years of work experience and applying ANOVA demonstrates that this is likely to be explained by the fact that individuals with over 20 years of work experience are rated lower on Demonstrating Potential.

For the behavioural sections, the highest significant correlations found with having a degree are Evaluating Problems ($r=.15$), Creating Innovation ($r=.13$) and Structuring Tasks ($r=.11$), yet Building Relationships, Giving Support, Providing Leadership and Driving Success do not correlate significantly with having a degree.

The highest significant correlations for any behavioural sections with work experience are Providing Leadership ($r=.19$), Driving Success ($r=.15$), Communicating Information ($r=.15$) and Creating Innovation ($r=.15$). In contrast, Building Relationships and Giving Support show no significant correlations with work experience.

The results of multiple regressions provide evidence for the incremental validity for both variables over the other. Work experience shows incremental validity over a degree, when it comes to Communicating Information, Providing Leadership, Showing Resilience and Driving Success; whereas having a degree gives incremental validity over work experience in Evaluating Problems. Some other constructs, e.g. Creating Innovation, Structuring Tasks, Applying Specialist Experience and Accomplishing Objectives, can be equally benefited from having a degree and work experience. Detailed results will be presented during the session.

Table 2. Correlations between Wave Performance 360 constructs and the two variables – degree and work experience.

		Highest Qualification (Non-degree v Degree) N=2,092			Years of Work Experience (<10 years v ≥10 years) N=2,483		
3P Leadership Model	Performance 360 Constructs	r	Sig. (2-tailed)	r (Lower Bound 95%CI)	r	Sig. (2-tailed)	r (Lower Bound 95%CI)
	Overall Effectiveness						
	Applying Specialist Expertise	.13	**	.09	.18	**	.14
	Accomplishing Objectives	.08	**	.03	.13	**	.09
	Demonstrating Potential	.13	**	.09	-.04	*	-.08
	Behavioural Sections						
Professional	Evaluating Problems	.15	**	.11	.11	**	.07
	Investigating Issues	.08	**	.03	.08	**	.04
	Processing Details	.07	**	.03	.11	**	.07
	Structuring Tasks	.11	**	.07	.13	**	.09
People	Building Relationships	-.01		-.05	.01		-.03
	Giving Support	.02		-.02	.03		-.01
Pioneering	Providing Leadership	-.03		-.07	.19	**	.15
	Driving Success	.04		-.01	.15	**	.11
	Communicating Information	.08	**	.04	.15	**	.12
	Showing Resilience	.05	*	.01	.14	**	.10
	Adjusting to Change	.07	**	.03	.09	**	.05
	Creating Innovation	.13	**	.09	.15	**	.11

Discussion

The analysis of the data shows that both having a degree and work experience offer value in terms of overall effectiveness at work. Individuals with a degree, on average, receive higher performance ratings than those without. However, different aspects of work performance are affected by having a degree versus work experience. The result for Demonstrating Potential indicates that those with the greatest number of years of work experience are rated lower on Demonstrating Potential, perhaps as they have already reached the highest peak or plateau in their career.

Degree holders within our sample received higher performance ratings than their non-degree counterparts in Evaluating Problems, Processing Details and Structuring Tasks. These three areas all fall within the 'Professional' section of Saville Consulting's 3P Leadership model. This suggests that one key benefit of employing a degree holder is the individual is more likely to be skilful across these 'Professional' areas and in job roles that require more specialist or technical knowledge. It is not possible to discern from this data whether this is a consequence of development gained while doing a degree, or simply that those who are better at 'Professional' areas are more likely to commence a degree. Nevertheless, when considering the selection criteria for professional job roles, a candidate's degree status is likely to be more relevant. However, we would argue that the level of prediction afforded by selecting someone with a degree alone is not strong enough given the evidence of the validity of aptitude tests (Salgado and Anderson, 2003). Therefore, to select the most intellectually able graduates, it is important that aptitude tests are used.

Providing Leadership and Driving Success correlate with work experience but not with degree status. It is likely that the ability to perform well in these areas comes from experience gained in the job, or that it is a result of leadership effectiveness gained from being given specific leadership responsibility as opposed to taught at university. These areas sit within the 'Pioneering' section of the 3P Leadership model and those high in these areas tend to be leaders who are good at driving change and growth.

Neither Building Relationships nor Giving Support show any significant correlations with degree status or work experience. These areas fall within the 'People' style of leadership, a leader who can relate to people across a wide range of teams or functions. The results suggest that effectiveness in these behavioural areas is perhaps either to some extent innate or developed earlier in childhood. Recruiters requiring an individual to be high on these areas should consider assessing these skills through measures such as personality or behavioural assessment in order to gain an accurate picture of all round performance.

The outcome of this research shows relatively modest correlations of having a degree and work experience with effectiveness at work. The link with experience is relatively short lived in that after 10 years work experience, the link to performance of more years work experience largely evaporates. Therefore, to look for staff with some experience or a degree may provide some benefit in recruitment, but the addition of other assessments are clearly required to get a better, more rounded forecast of who will be successful at work.

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T57

Short Paper

Having 'me-time' to recover from work –quality over quantity?

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Strand **Well-being and Work**

This mixed-method research examined the effects of "me-time" on work-family balance and wellbeing. A qualitative diary study elicited people's definitions and perceptions of me-time and informed a second study where an opportunistic sample of 344 professional participants (151 male, 186 female) completed a survey measuring the quality of me-time and quantity of me-time as a facilitator of work-family balance, wellbeing and engagement at work and home. Quantity of me-time experienced varied greatly from 15 to 300 hours over a four week period. Overall, the research found that quality me-time enhanced work-family balance, wellbeing and engagement at work.

Introduction

The concept of "me-time" is much debated in popular parlance, and usually lamented by its absence, but not well understood from a psychological perspective. Whilst time-based factors have long been acknowledged in work-family research as contributing to experiences of conflict (Greenhaus & Beutell, 1985) little is known about what individuals do to experience me-time, what factors contribute to conducive experiences and how these experiences may be associated with work and non-work outcomes. To

address this gap, this mixed-method research examined the effects of “me-time” on work-family balance, wellbeing and engagement at work and home. We conceptualised the experience of time to replenish loosely upon Hobfoll’s (1989) Conservation of Resources which holds that individuals strive to actively preserve their resources. Such personal resources have been shown to enhance work family enrichment and wellbeing which in turn may be linked to engagement. We set out to investigate a) how me-time is experienced and what its defining features are, b) how these aspects can inform a quantitative investigation of how me-time links to other concepts such as engagement and work family balance.

Study One

A qualitative diary study (Study One) with a purposive sample of 18 professional individuals (mean age 44, 9 males and 9 females) explored people’s perceptions of me-time over a period of time to capture the fluidity and potential changes, using a number of open ended questions about quality, quantity, well being and work-family balance. The diary contained eight questions relating to the research aims which explored the participants’ experiences of me-time, its quality and quantity and its effects on work-family balance, well-being and engagement with work and home respectively. The questions were written open-ended and included an explanation of certain phrases to aid the participants’ answers (Symon, 2004).

We used thematic analysis to code the findings showing that relevant experiences differ by whether they are solitary, group-based, and further differentiation with respective focus for instance on health or personal development, or whether these are seen as ‘routine’ or ‘indulgent’. Physical me-time appears particularly beneficial: *“I feel like I’ve done something worthwhile and that work is less intrusive.”*

Study 2

This coding frame then informed a second study (Study Two). An opportunistic sample of 344 professional participants (151 male, 186 female) completed survey containing a number of validated measures, including Work-family Conflict (Netemeyer, McMurrin and Boles, 1996), Work-Family Enrichment (Carlson, Kacmar, Wayne and Grzywacz, 2006). Work Engagement (Schaufeli, Salanova, Roma and Bakker, 2002) Family Engagement (Rothbard, 2001) and Life Satisfaction. It also contained bespoke questions to investigate the differences between quality of me-time and quantity of me-time rated retrospectively over the preceding four weeks.

Selected Results

Quantity of me-time experienced varied greatly from 3 hours per week to 50 hours per week self-reported over a four week period. Quality of me-time was rated as average by 42%, good by 40%, 8% as very good, 9% as poor and 1% as very poor.

The bivariate correlations are detailed in Table 1.

	1	2	3	4	5	6	7
1. Work Family Conflict	-						
2. Work Family Enrichment	-.176**	-					
3. Family Work Conflict	.295**	-0.079	-				
4. Family Work Enrichment	0.061	.465**	-0.013	-			
5. Work Engagement	-0.001	.530**	-.148**	.281**	-		
6. Life Satisfaction	-.125*	.378**	-.134*	.368**	.471**	-	
7. Me Quality Over 4 Weeks	-.250**	.228**	-0.077	.207**	.171**	.319**	-
8. Me Time Hours over 4 Weeks	-.202**	0.035	-0.107	-0.036	-0.012	0.018	.137*

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Overall, Me Time Quality had stronger associations with the variables of interest than Me Time Quantity, the highest correlation was with Life Satisfaction, for Me Time Quantity the only significant correlation was with Work Family Conflict.

As further exploratory analyses, we investigated if the effects of me-time are indirect, in other words mediated, rather than direct, using Process Software (Hayes, 2012). In particular, we were interested if me-time acts as a buffer between work-family conflict and positive experiences work engagement. For instance for Work Engagement, there was no direct effect but an indirect effect for Me Time Quality within a

95% confidence interval, indicating that a positive experience of Quality Me Time buffers the effects of Work-Family Conflict.

Discussion

Me-time does not have to be solitary and can indeed involve others, but is more beneficial if it entails activities which are chosen freely by individuals. Overall, our research found that quality me-time enhanced work-family balance by reducing work-family conflict and enhancing work-family enrichment. In other words – if people take time out to recharge their batteries AND experience the time taken out as “high quality”, this reaps benefit for their own psychological well being, but also for their employers as they are more likely to be vigorous. We recognise the potential limitations, as our sample was professional and UK based; experiences may vary in different contexts. Nevertheless, the results suggest that we need to understand both the implications of quantity of me-time further (e.g. is there a ‘minimum replenishment time’?) and also quality to help individuals’ recovery, given also the transient effects of holidays.

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T58

Short Paper

Enhancing resilience in early-career social workers: evaluating a multi-modal intervention

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Strand Well-being and Work

Many studies have found that social workers experience high levels of job-related stressors that have been linked to a range of negative outcomes such as compassion fatigue, secondary trauma and burnout (Jack & Donellan, 2010;). Sickness absence and attrition rates are also high (Barham & Begum, 2005; CWDC, 2011; it has been estimated that the average “working life” of a social worker is eight years and the primary reason provided for leaving the profession is work-related stress (Curtis et al., 2009). Although employers have a legal and moral duty of care to safeguard the wellbeing of their staff, it is widely recognised that social workers need to enhance their resilience in order to manage the emotional demands of the work they do (Munro, 2010). Emotional resilience is also identified as a key competency in the Professional Capability Framework for Social Workers (College of Social Work, 2012).

Emotional resilience has wide-ranging benefits. It can help social workers manage the complexities of the work as well as adapt positively to stressful working conditions (Collins, 2008; Grant & Kinman, 2014). Little is known, however, about how resilience may be enhanced in social work contexts. Research conducted by Kinman and Grant (2011) and others has identified several psychosocial resources which underpin resilience and wellbeing in social workers and other helping professionals. These include emotional literacy, reflective ability, “accurate” empathy, self care and compassion and psychological flexibility as well as support from managers and co-workers. This research has informed the development of a “toolbox” of interventions to help social workers enhance these competencies and resources in order to foster resilience and wellbeing (Grant & Kinman, 2014).

Based on this research, the team has been commissioned to train groups of social workers in techniques to enhance their emotional resilience and wellbeing. Training has been delivered to staff working in several local authorities across England and Scotland over the last three years. While this has been very well received, it is crucial to systematically evaluate the effectiveness of the training in groups of social workers that might be considered at particular risk. The present study evaluated a training initiative designed to develop protect wellbeing and enhance resilience in newly-qualified social workers employed in children’s services. This branch of social work is widely considered particularly emotionally challenging (Littlechild, 2005). Key personal resources (i.e. as emotional self efficacy, compassion fatigue and satisfaction, self

compassion and psychological flexibility) that have been previously linked with resilience and wellbeing in the research outlined above were also assessed.

Method

The study utilised a repeated-measures wait-list controlled design. The training intervention was delivered on three separate days over a period of two months supported by a series of self-directed activities designed to consolidate learning. A wait-list protocol was utilised with Group 1 receiving the intervention and a control group (Group 2) being trained after the data collection was completed. An online survey was used to obtain the from both groups at three time points: (a) two weeks before the first training session; b) one week after the final session and c) eight weeks after the final session). There were 25 participants in the study group and 31 in the control group. All participants were in their first year of qualified practice. Both groups were similar in terms of demographics and prior work experience.

Training in a range of techniques was provided over three days. The following sessions were included: peer support and coaching; goal setting and personal organisation; self knowledge, coping skills and stress resistance; cognitive-behavioural techniques; mindfulness and relaxation; and developing critical reflection skills.

A series of well-validated scales was utilised to assess the study variables: emotional self efficacy (the extent to which an individual is able to perceive and manage emotions in self and in others, use emotions to facilitate cognitive processes and understand emotional complexity) (Kirk et al. 2008); aspects of compassion (self compassion, compassion satisfaction and compassion fatigue) (Neff, 2003;Hudnall-Stamm, 2009), and psychological flexibility (Bond et al, 2008). Resilience was assessed by a measure developed by Wagnild & Young, 1993) and psychological distress by the Perceived Stress Scale (Cohen et al. 1983). At Times 2 and 3, participants were also asked to evaluate the different elements of the training sessions and the extent to which they were perceived to be useful.

Findings

Levels of study variables did not differ significantly between the study group and the control group at Time 1. Following the intervention programme, emotional self efficacy ($p<.001$), self compassion ($p<.01$), compassion satisfaction ($p<.01$) and psychological flexibility ($p<.001$) increased significantly between Times 1 and 2. The overall level of resilience increased and psychological distress decreased over the study period (both $p<.01$). These gains were generally maintained at Time 3, but levels of self compassion reduced slightly over time ($p<.05$). Some evidence was found that participants who reported low levels of emotional self efficacy at Time 1 tended to benefit less from the intervention. Analysis of the data provided by the control group showed that the levels of most study variables generally remained stable over time, but overall levels of psychological distress and compassion fatigue increased ($p<.01$) and self compassion decreased ($p<.05$) between Times 1 and 3.

Participants evaluated all of the training sessions positively at Times 2 and 3. Overall, early career social workers found goal setting, cognitive behavioural techniques and peer support the most useful in helping them manage the stress of practice. Although mindfulness was considered the least useful technique, almost three-quarters of the sample (75%) reported that they found it useful or very useful. Some difficulties were identified by participants at Time 3 (two months after the final training session) in terms of finding the time to invest in their self care and practice the strategies learned. Several participants also indicated that they required more support by their managers and senior colleagues to help them accomplish this.

Discussion and implications

Although based on a small sample, the findings of this study suggest that a short, multi-modal intervention can enhance the resilience and psychological wellbeing of newly-qualified social workers working in children's services. Overall levels of several personal resources and competencies previously found to underpin resilience and psychological health in social workers and other helping professionals generally improved and these gains tended to be maintained at two months following the final training session. The finding that emotional self efficacy and psychological flexibility increased following the intervention is particularly promising, as these resources has been previously found to be strongly related to both resilience and psychological wellbeing in social workers and other helping professionals Brinkborg et al. 2011; Kinman & Grant, 2011). There was also evidence that the interventions might help newly-qualified social workers foster self compassion as well as compassion satisfaction. No benefits emerged in terms of compassion fatigue, but the mean score for the sample was fairly low.

The urgent need for interventions to protect the wellbeing of social workers was highlighted by the finding that levels of psychological distress, self compassion and compassion fatigue reduced over time in the control group. Research is currently underway to evaluate the impact of the individual components of the intervention, such as peer coaching programmes and mindfulness practice, in samples of social workers. The implications of resilience and the qualities that underpin it for service user outcomes will also be examined.

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T59 DOP AGM

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Friday 9 January 2014

F01

Standard Paper

The Role of Business Models in the Success/Failure of Stimulating Organisational Change – a Case Study of Telehealth in the NHS

Helen Hughes, Rebecca Pieniasek, Lucy Bolton, Lauren Beaumont, Prof Chris Clegg & Duncan Ross, University of Leeds

Strand **Work Design, Organisational Change and Development**

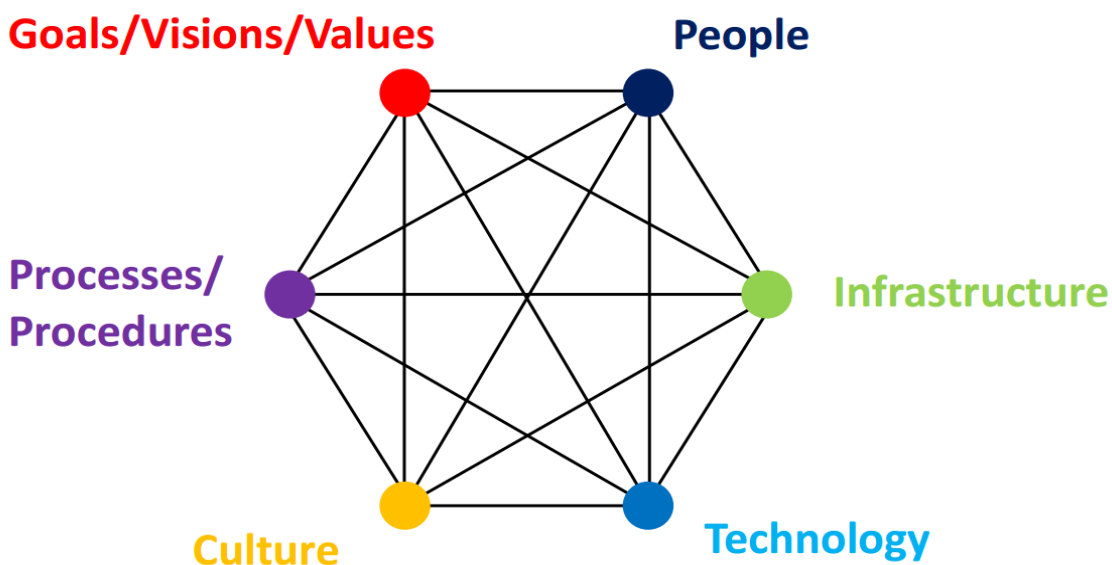
Technology has advanced in useful ways. However, whilst for example the finance industry has incorporated e-banking, the National Health Services (NHS) has yet to adequately adopt Assisted Living Technology (ALT) to help provide healthcare. The NHS could better adopt technologies in a range of ways, for example robotic surgery, email communication between physicians and patients, online prescriptions and appointment booking, symptom monitoring. After all, this would likely improve the efficiency and quality of services. More homecare would be possible – a saving grace given that a growing ageing population living longer with health conditions, will equate to future care demands outweighing available resources and budget.

It is thought that, at least in part, the lack of ALT uptake in the NHS is due to a void of suitable and sustainable business and organisation models that deliver ALTs. We defined a business model as “a blueprint which describes a service, by its intended value for the customer and the provider, providing an architecture for the delivery of that service” (Bouwman, De Vos & Haaker, 2008; also see Kasper, van Helsdingen, & Gabbott, 2006; Zeithaml & Bitner, 1996).

Business models are more than a financial case but the very architecture by which services are delivered. They include the blueprint of a service offering and also the architecture for the means of delivering that value. In the context of telehealth the customers are the patients and the NHS is the provider. The overall value of a telehealth service is the ability to deliver care (including reducing health care costs, improving health outcomes, and quality of life). The service architecture (including organisational aspects like people and processes, the technology and finances) is the way of creating, capturing and delivering this value.

In the past, service architecture was regarded as a set of linear processes, yet this does not give credence to the multifaceted nature of complex work systems. Hence we used the hexagonal socio-technical framework (Clegg, 2000; Davis, Challenger, Jayewardene & Clegg, 2014) to understand this architecture. We considered both the social and technical facets involved in telehealth provision in an integrated way (see figure 1).

Figure 1: *The hexagonal socio-technical approach (Davis et al., 2014)*



In order to mainstream telehealth (i.e., for a change to occur), six organisational components need to be aligned.

1. The *people* need the skills, knowledge, experiences and attitudes to stimulate telehealth delivery.

The people need to be:

2. Guided by organisational *goals*, metrics and targets which support telehealth;
3. Working within an organisational *culture* which enables (not inhibits) telehealth;
4. Working under *processes and working practices* which promote telehealth delivery.
- 5-6. Using *technology and tools* (telehealth) and *physical infrastructure* to deliver telehealth.

Research objectives:

1. Define and describe instances of telehealth provision in Yorkshire and the Humber (phase 1a).
2. Explore current business models for delivering telehealth (phase 1a).
3. Understand the barriers and facilitators of telehealth (phase 1a).
4. Use scenario planning to design effective business models for delivering telehealth (phase 1b & 2).
5. Develop a toolset to guide stakeholders in the design of effective business models for the provision of telehealth.

Research Design/Findings

Phase 1a

146 60-minute, semi-structured interviews were conducted at four NHS sites which provide tele-health. Participants included patients (n = 39), front line staff (n= 80), senior managers, carers (n = 2), and commissioners and business partners (n = 25). The hexagonal socio-technical framework informed the design of a template analysis which guided data analysis.

Firstly, it was found that all sites provided telehealth in the same way; following the pathway: referral, installation, monitoring, removal, storage, through to maintenance. Secondly, exploring each of these processes enabled construction of a detailed picture of the telehealth business and organisation models used at each site. Three of the four sites had purchased-based models, which limit flexibility over choice and volume of equipment, create risk of obsolete equipment, incur variable equipment repair costs and receive poor on-going support from manufacturers. It was perceived such a model could not achieve telehealth mainstreaming. One of the sites had recently incorporated a flexible leasing arrangement business model, but the scheme was too new to be evaluated.

Thirdly, there were major barriers to mainstreaming telehealth; these were coded under each of the six socio-technical factors. For example, under 'goals' there was a lack of shared telehealth rational and agreed objectives; lack of agreed telehealth metrics and limited evaluation. Under 'people' there was, for example, enduring legacy of negative experiences; and increased workloads.

In contrast, the following aspects were seen as telehealth enablers:

Champions - all sites featured individuals who are knowledgeable and enthusiastic about telehealth.

Clear referral procedures - all sites resourced telehealth services outside of the clinical role, assisting front line clinical staff to use telehealth.

Clear selection criteria - to select suitable telehealth users.

Range of telehealth equipment - to enable more people to use telehealth.

Step-down options - to ensure users do not become dependent on telehealth.

Phase 1b

Two workshops were conducted at the four sites, each comprising approximately 20 participants (representing all stakeholder groups). A scenario planning methodology (see Axtell, Pepper, Clegg, Wall & Gardner, 2001; Hughes, Bolton, Clegg, Beaumont, 2014) was used to evaluate existing and new ways of delivering telehealth. Current provision of telehealth was explored – the 'as is' (i.e., the design of the equipment, or how the equipment is used, and the business models for telehealth), compared to several alternative ('to be') scenarios which participants generated.

Workshop 1 aimed to:

1. Design success criteria by which to judge business model success.
2. Prioritise issues that would make a difference to improving delivery of telehealth services.

Firstly, there were five criteria by which to judge the success of a business model:

Qualitative patient outcomes (e.g., greater quality of life for patients and carers and improved patient confidence).

Patient health outcomes (e.g., improved compliance with care plans; greater knowledge of health condition).

Cost (e.g., reduced hospitalisations; reduced GP and outpatient visits).

Clinical practice changes (e.g., telehealth as a case management tool; using telehealth data more widely).

Integrated telehealth equipment (i.e., integrating equipment into patients' lives, ensuring it is flexible, portable and lightweight).

Secondly, using the barriers and enablers identified in phase 1a, participants were asked to rate their priorities for change. The overarching issues were categorised into the following themes:

People and users

Equipment and technology

Operational practices

Organisation and business model - issues relating to equipment procurement and overall service design.

Goals and vision.

Workshop 2 aimed to:

- Gather participants' opinions on different characteristics of potential telehealth service provision, and to model different service designs using scenario planning.

Participant groups were formed around the priority of change issues identified in workshop 1. They followed hand-out guidance and performed scenario planning to model their current service provision/business models, and then two alternate scenarios in accordance with the issues their group had been given. After all scenarios had been modelled, participants ranked them against the success criteria produced in workshop 1.

Participants typically modelled incremental changes to the existing telehealth service (e.g., creating step-down options and improving clarity around the degree of clinician and user contact); probably because these changes had clear boundaries. Where groups tried to tackle larger issues, relating to telehealth rationale and the overall telehealth care pathway (including commissioning, the evidence base for telehealth, and equipment possibilities), they struggled to deal with uncertainties and unclear boundaries.

Characteristics of potential telehealth delivery ("dilemmas") were gathered from the data. For example these consisted of: small scale versus large scale delivery; in-house resourcing versus out-house; fully-integrated service versus stand-alone service; individual consumerism (based on user's individual budgets) versus institutional based commissioning. Following the workshops, the researchers clustered the different dilemmas and produced four alternate business model futures for mainstreaming telehealth:

'*Central hub*' - the commissioning of a central technology hub that offers a range of standardized ALT services to a large number of users;

'*Thousand Flowers*' - individual care provider organisations commission small scale applications of ALTs for specific user groups;

'*Navigating Networks*' - an e-based network to help individual users navigate a selection of ALTs using personal health budgets to purchase;

'*Laissez Faire*' - letting the open market and individual consumerism drive development, use and acceptance of ALTs.

Phase 2a

Aims:

1. Evaluate the theoretical impact of four different futures/business models for mainstreaming NHS telehealth.
2. Identify a preferred telehealth business model.

During two workshops with key stakeholders considering staff and patient perspectives, scenario planning methodology and SWOT analysis was used to consider the strengths, weaknesses, opportunities and threats of the four business models. Practical constraints limited the number of participants and caution was noted regarding the generalizability of results.

Interactive element (15minutes):

We will briefly demonstrate scenario planning with attendees. They will use it to assess the four business models from an NHS-user, healthcare professional, or industry supplier perspective (depending on their background).

Results:

Whilst all futures had strengths and weaknesses, the preferred option was a hybrid. The use of '*hub central*' would incorporate statutory and standardised provision for ALTs within selected clinical care pathways for identified patients. It would provide structure and support to the delivery so front-line clinical staff would be freed up, alongside ensuring equity in access to healthcare. Coupled with this, an '*ALT e-network*' would deliver a range of self-monitoring and healthy life style interventions, made available to users through prescriptions and personal budgets. End-users who can and want to navigate their own care choices would have the opportunity, thus enabling a stepping down from intensive models of care to more proactive health maintenance.

This hybrid encompasses the need for the business model to include 'business to business' markets (technology suppliers selling to bulk purchasing businesses in the NHS/local authorities) and 'business to customer' markets (suppliers selling direct to individuals/family members striving for prevention and self-management of health conditions) (Down,Hope & Death, 2013). Phase 2b aims to help companies identify which market they currently do, and want to, fall into.

Phase 2b

Industries' (technology suppliers) views on the four futures and the preferred hybrid model will be consulted. Three workshops will be conducted in Autumn 2014 (ready for results to be presented in January 2015). Workshop design will mimic that in phase 2a.

Conclusion

This project explored telehealth services as part of a socio-technical work system and has achieved holistic insights to the spectrum of interplaying issues within the delivery of telehealth services. Barriers and enablers of telehealth services have been identified, and as a result of occupational psychology, progress has been made towards a business model which appears in theory to be a useful mechanism for mainstreaming NHS telehealth.

Cross-learning can be taken from the outputs: including a toolkit (systems diagnostic and scenario planning tool) which aims to allow organisations to take a socio-technical approach to the development of change (including new technology implementation). Additionally, the project provides a means of evaluating and improving business models. Finally, we hope the paper is refreshing for NHS service-users who relish improved quality and frequency of healthcare.

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F02 OPPIP Working Group Session
Public policy, NHS culture change and OP evidence
Convenor: Louisa Tate, *Cubiks*

Strand: **Well-being and Work**

The Occupational Psychology in Public Policy DOP working group (OPIPP) has prepared a report to build on both the Francis and Berwick reviews that were commissioned in response to the events at the Mid-Staffordshire NHS Foundation Trust. These reviews concluded that significant culture change is necessary to improve patient safety in the NHS, and the OPIPP report seeks to put forward an Occupational Psychology perspective concerning how best to implement the recommended changes, bringing together contributions from a number of prominent Occupational Psychologists.

This session will explore the key themes and recommendations that have come out of the report, which cluster around three broad areas: Staff recruitment, engagement and empowerment, Leadership and management and Embedding and sustaining culture change. These will be discussed both in relation to the NHS context, but also the broader applicability of the recommendations. There will also be an opportunity for discussion around what this means for policy and influencing as well as for Occupational Psychology and Occupational Psychologists and their practice more generally. It is intended that this will be a very interactive session involving both audience discussion and the participation of a number of the report authors.

F03

Standard Paper

Using SJTs for Values-Based Assessment in the Care Sector

Dan Hughes & Ali Shalfrroshan, a&dc

Strand **Psychological Assessment at Work**

Introduction

Recent scandals, such as the failings at the Mid-Staffordshire NHS Trust, Winterbourne View private hospital and Hillcroft nursing home, have led to an increased focus on employees' personal values and attitudes in healthcare and social care organisations. One of the specific recommendations arising from the public inquiry into Mid-Staffordshire NHS Trust was that "Healthcare employers recruiting nursing staff...should assess candidates' values, attitudes and behaviours towards the well-being of patients and their basic care needs" (Francis, 2013). Similarly, the sector council for social care in England has noted that "Above all, social care workers should hold the values of social care and there needs to be a movement from a competency based recruitment to a values-driven approach" (Skills for Care, 2011). Occupational Psychologists can play a key role in supporting organisations in this sector to select employees who are likely to demonstrate care and compassion towards patients and service users. This has the potential to make a real impact on people's lives.

Situational Judgement Tests (SJTs) have been identified by healthcare and social care organisations as an assessment method which could provide an early indication of whether someone's personal values, attitudes and behaviours are aligned with the values needed in the sector. Meta-analysis has shown that SJTs can be useful predictors of performance and are correlated with personality traits (McDaniel, Whetzel, Hartman & Grubb, 2007).

While personal values are deep-rooted beliefs held by individuals that are not directly visible, it is generally recognised that personal values influence decision-making and behaviour (eg Fritzche & Oz, 2007; Homer & Kahle, 1988). SJTs are multiple choice tests which measure judgement and decision-making in a range of realistic work situations, and therefore could provide a 'window' into an individual's personal values.

Purpose of Session

In this session, the authors will share their experiences of developing three separate values-based SJTs in partnership with different organisations in the care sector:

- **Project A:** A freely available video-based SJT designed to present a realistic picture of work in social care and early years' roles and enable job seekers to test their own values, attitudes and other attributes against the characteristics needed by employers and those using care services.
- **Project B:** An online SJT with 4 alternative forms, designed for general use across a range of clinical and non-clinical healthcare roles (eg nurses, healthcare assistants, doctors, other clinical professions, managers and administrative staff) to help to screen potential and future employees against expected values and behaviours.
- **Project C:** An online SJT to assess the values and attitudes of applicants for facilities services roles in hospitals, eg porters, cleaners, catering staff and maintenance staff.

In the session we will:

- Explore the context and drivers for the development of each SJT.
- Discuss the different ways these SJTs have been applied to support values-based recruitment.
- Explain how we designed the SJTs with a specific emphasis on values, and the challenges associated with this.
- Evaluate how well these SJTs have worked and share lessons learned from these projects with session attendees.

The session will be interactive, with several opportunities for attendees to discuss key issues relating to these projects.

Session Outline

1. Background and Context

To begin the session, we will explore the drivers for an increased focus on values-based recruitment in healthcare and social care. Attendees will be asked to discuss what types of values they think are important for roles in this sector. We will share the different values frameworks that we worked with for these projects, and explore the common themes between them.

2. Developing Test Content

We will then outline the approach we took on these projects to generate situational content for the SJTs. A key challenge in values-based recruitment is that, compared to competency models, values frameworks tend to be more broadly defined. We found that a critical step is to work with job experts to obtain a shared understanding of what each value looks like in terms of practical day-to-day behaviour. In particular, we used the initial part of expert workshops to explore the values and build a shared understanding, before then asking experts to identify actual incidents where they saw these values demonstrated. Session attendees will be asked to review some example scenarios and indicate which value they most closely relate to.

When designing SJTs, there are a number of considerations in terms of the format and how they are presented (Weekley, Ployhart, & Holtz 2006). We will discuss some of the different formats we explored, specifically with the idea of creating SJTs that tap into values. For example, although it is generally recommended that knowledge (or "Should do") instructions are used in high-stakes selection contexts as they remove the issue of faking (Lievens, Sackett & Buyse, 2009), behavioural tendency (or "Would do") instructions correlate more strongly with personality traits and therefore may be more reflective of an individual's values.

Another design consideration is the format of the scenario. For Project 1, we developed video-based scenarios with professional actors on the basis that this was more realistic and would require test-takers to evaluate the emotional responses of the characters in the scenarios. We also developed multiple questions per video scenario to provide more immersive situations to try to make test-takers feel more involved.

A third factor we particularly considered in the design process was the feedback format. In Project 1, as this SJT was intended as an open access self-selection measure, we built in immediate feedback to the

test-taker after each response, along with overall feedback around the values framework at the end of the test. For the high-stakes SJTs in Project 2 and 3, we wrote some broad development tips relating to the values being measured to encourage test-takers to reflect on their past experiences and behaviour. For Project 2, we also developed structured interview questions around each value to support subsequent recruitment interviews.

3. Refining the Test and Establishing a Scoring Key

For this part of the session, we will share the process that was used in these projects to refine the test content and define a scoring key that test-takers could be scored against.

All of the SJTs underwent a detailed review by organisational stakeholders to ensure there was agreement that the scenarios were reflective of the values intended and that the content was fair to all test-takers (ie no technical jargon was used and no specific experience should be required to respond).

The SJTs were then trialled with job experts to establish a scoring key. The sample sizes completing the scenarios in each test were:

- Project A: n=29-32
- Project B: n=26-31
- Project C: n=31-32

The scoring keys were developed based on the expert sample consensus. Refinements were made to some scenarios based on expert input where consensus was lower than preferred. Job incumbent samples were also used to evaluate scenario difficulty and support the decision whether to drop certain scenarios from the final tests, as well as creating an initial norm group for comparison. The following samples completed each test:

- Project A: 1563 pilot trial participants (potential applicants and job incumbents)
- Project B: 312 job incumbents and students
- Project C: 214 job incumbents

4. Evaluation and Lessons Learned

The SJT for Project 1 went through several months of piloting before formally going live in March 2014. Numerous social care employers and careers advisors were involved in the pilot. 87% of employers reported that the SJT increased their confidence in making 'right first time' selection decisions. 75% of employment advisers also reported that the SJT had helped to improve perceptions of careers in care. So far over 3,500 people have now completed the SJT and received feedback about how well their actions align with the critical values for the sector.

The SJTs for Projects 2 and 3 are currently in their initial pilot stages undergoing evaluation. We will report on any subsequent outputs from their evaluation in the conference session.

The session will finish with an interactive discussion about how effective the SJT assessment method is for values-based recruitment and what alternative or supplementary methods could be employed as well.

Responses to Submission Questions

Responses to each question set out in the DOP 2015 Submission Guidelines (page 5) are provided below.

8. *What are the main psychological theories, models and research underpinning the session?*

Several models posit that personal values influence an individual's behaviour (eg Fritzsche & Oz, 2007; Homer & Kahle 1988). The development of the SJTs was informed by research into the impact of different design factors on SJT measurement (eg McDaniel et al 2007; Weekley, Ployhart & Holtz, 2006; Lievens et al, 2009).

9. *How do you see your proposal linking with the main conference theme of Learning, Sharing, Impacting?*

This session provides an example of how Occupational Psychology can have a real impact on people's lives, by helping to ensure that new recruits in the care sector have the right personal values and attitudes. We will also share our experiences of designing values-based SJTs with attendees and encourage discussion and debate around the topic during the session.

10. Why is the submission appropriate for the particular strand you have chosen?

The session is focused on a specific method of psychological assessment at work – Situational Judgement Tests – which has become increasingly popular in recent years.

11. What do you consider to be the most novel or innovative aspects of the ideas being presented?

The application of SJTs to try to assess values, and some of the specific design features of the SJTs we developed. For example, presenting video scenarios with multiple questions to create a more immersive experience in Project 1 and providing instant feedback.

12. Why do you think conference delegates will find the paper or session stimulating and useful?

Understanding how SJTs can be used as a tool for values-based recruitment, and hearing about our experiences of developing these tests and the lessons we learnt.

13. What might the public find interesting about your paper or session?

The need for workers in healthcare and social care to demonstrate care and compassion is very topical following recent scandals in this area. The session provides some examples of how Occupational Psychology can help to address this challenge.

14. If any, what materials do you intend to make available to attendees and in what format (eg printed hand-outs, electronic copies of the slides)?

We will provide printed copies of the slides for attendees to take away at the end.

15. How will you ensure that at least 10 minutes of the session is interactive?

We will include several interactive discussions/exercises during the session. Attendees will initially discuss what values they think are important for workers in healthcare and social care. They will undertake an exercise with some example scenarios to identify the primary value each scenario taps into. Towards the end of the session, attendees will be encouraged to discuss how well SJTs work for values-based recruitment and consider what other methods could be useful for this.

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F04

Short Paper

From innovation potential to environmental behaviours: a bilingual cross-cultural study

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Strand **Leadership, Engagement and Motivation**

1. Objectives

This currently on-going study (end date: 25th September) considers the relationship between potential innovativeness factors and intentions to engage in pro-environmental work behaviours (recycling, reduced computer use, eco-initiatives) through the mediation of the theory of planned behaviours constructs (attitudes, subjective norm and perceived behavioural control). It also considers the influence of French and British national culture on the theory of planned behaviour constructs related to pro-environmental behaviours. This research therefore relates to the ability of organisational members to learn new behaviours in order to modulate their impact on the environment (also called organisational citizenship behaviours for the environment).

2. Theory

This study is based on Ajzen's (1991) theory of planned behaviour, Rogers' (1995) innovation diffusion theory, Patterson's (1999) innovation potential and Hofstede's (2001) cultural dimensions. The theory of planned behaviour (Ajzen, 1991) has shown that an individual's pro-environmental behaviour is mainly predicted by their intention to perform these behaviours (Bamberg & Moser, 2007), this intention is in turn explained by three factors: attitude, subjective norm and perceived behavioural control. Application of this framework to workplace pro-environmental behaviours has permitted the successful prediction of recycling (Greaves, Zibarras, & Stride, 2013; Laudenslager, Holt, & Lofgren, 2004; Tudor, Barr, & Gilg, 2007) and energy savings (Greaves et al., 2013; Laudenslager et al., 2004; Zhang, Wang, & Zhou, 2014) along with more general change of practice in the restaurant industry (Chou, Chen, & Wang, 2012). This framework has been used in one study (Chou et al., 2012) in combination with the innovation diffusion theory (Rogers, 1995) in order to acknowledge how research on innovation adoption can be of use to understand engagement in pro-environmental practice.

The theory of innovation diffusion (Rogers, 1995) considers the technical, organisational, interpersonal and individual factors that lead to the creation and adoption of new technologies and practices. Our study mainly focuses on the individual factors: Rogers (1995) considers that the individuals most likely to adopt a new practice have a more favourable attitude towards change and are more risk taking. These elements can be subsumed under personal innovativeness, defined as the proclivity to introduce or apply novel practices and technologies with a beneficial intent (Goepel, Hölzle, & Knyphausen-Aufseß, 2010). Personal innovativeness has been shown to predict adoption of new technologies and practices in the IT industry (Jackson, Yi, & Park, 2013) through the mediation of the theory of planned behaviours constructs (attitudes, subjective norm and perceived behavioural control). This study aims at applying this combinatory framework to the adoption of pro-environmental behaviours and expanding it through the inclusion of the innovation potential model (Patterson, 1999) as a basis for personal innovativeness. This model entails four factors involved in workplace innovation: motivation to change, challenging behaviours, adaptation and consistency of work style. These four factors are expected to predict engagement in workplace pro-environmental behaviours (recycling, reduced computer use, and eco-initiatives) through the mediation of attitudes, subjective norm and perceived behavioural control.

As this research is conducted across France and Great Britain, another source of influence on pro-environmental behaviours to consider is the contrast between French and British culture. Hofstede (2001) defined cultural dimensions as a set of beliefs, values and preferences that are common to the members of

a same culture. French culture has higher collectivism (individuals are more influenced by their social group), higher power distance (hierarchy and leader authority are stronger) and higher uncertainty avoidance (uncertain situations are perceived as more threatening) than British culture (Taras, Still, & Kirkman, 2012). Collectivism has been found to be related to a stronger compliance to group norms (Cialdini, Wosinska, Barrett, & Gornik-Durose, 1999) and stronger attitudes towards green behaviours (Culiberg, 2014). Additionally, French individuals have been shown to have stronger environmental concerns than British ones (Franzen & Vogl, 2013). The French part of the sample is therefore expected to have stronger attitude and stronger subjective norm than the British sample. On the other hand, high power distance and uncertainty avoidance have been found to hinder the emergence and facilitation of innovative processes within organisations (Hofstede, 2001; Mumford & Licuanan, 2004). The British part of the sample is therefore expected to have stronger perceived behavioural control than the French part of the sample.

3. Contribution to practice

This research brings understanding towards the factors underlying engagement in environmental practice at employee level. There has indeed been a call for further exploration of the individual determinants of sustainable behaviours (Ones & Dilchert, 2012). By understanding how innovation potential factors can be related to environmental practice, this research gives useful insight for the selection and development of environmental champions within companies, the facilitation of sustainable practice adoption for employees and the inspiration of green innovations.

This research also highlights how cultural differences can affect the drivers of sustainable practice. As there is a need to understand how perceptions of pro-environmental behaviours may be culture-dependant (Ones & Dilchert, 2012), this research may bring findings that helps intercultural collaboration regarding those behaviours. Since environmental policies become widespread among multinational companies, the training of a culturally diverse workforce towards environmental behaviours must include an awareness of the impact of cultural dimensions.

4. Contribution to science

This research is the first attempt to transfer the relation between personal innovativeness, the constructs of the theory of planned behaviours and the adoption of new practice from the domain of information technology to the domain of sustainable behaviours. It also introduces the relation between innovation potential factors and behavioural intention through the mediation of the constructs of the theory of planned behaviour.

This research is also the first cross-cultural application of the theory of planned behaviour regarding sustainable workplace practice. It is in that sense the first comparative research assessing the constructs of this model along with innovation potential factors in two languages (English and French).

5. Research Design

This study is a cross-sectional design with a sample of 125 adults in the working population. The sample involves organisational members from French and English organisations. The Innovation Potential Indicator (Patterson, 1999) and the scales for environmental attitudes, subjective norm, perceived behavioural control and green behaviour intentions are administered through a Qualtrics Web survey. Additionally, demographic information (age group, gender and company industry type) from the participants are also collected.

Work environmental attitudes, subjective norm and perceived behavioural control and green behaviours intention are measured by 7-points scales. The green behaviour intention scale's items are adapted from past studies on recycling (Tudor et al., 2007), energy savings (Greaves et al., 2013), and also include the eco-initiatives items from Paillé and Boiral's (2013) scale of organisational citizenship behaviour for the environment. Environmental attitudes, subjective norm and perceived behavioural control scales items are drawn from past studies on recycling (Tonglet, Phillips, & Read, 2004; Tudor et al., 2007) and energy savings (Greaves et al., 2013; Zhang et al., 2014) and items specifically considering eco-initiatives are designed following Ajzen's (2006) guidelines for building questionnaires applying the constructs of the theory of planned behaviour.

To ensure the semantic compatibility of the French and English version of the questionnaire, the procedure for psychological questionnaire translation and adaptation is followed (Hunt & Bhopal, 2004): it involves the construction, comparison and synthesis of two parallel French translations, followed by a back translation and comparison to the English original version and concluded by a confirmation of the French version by a French monolingual member of the working population.

Participants are recruited via contact made with either the Human Resources or the Environment departments of French and British organisations. Snowball sampling is also employed to gather participants from the general working population. Individuals and organisations taking part in the research are sent a mail providing the address of the web-survey along with a paper presenting the research. This paper

clarifies the aim of the study to ensure their informed consent, it also explains that they can withdraw from the study if they wish to and that the storing of their data complies with the Data Protection Act (1998). Before the hypotheses are tested, the data undergoes item analysis and confirmatory factor analysis to ensure that the research model is reliable and valid. The mediated relationship between innovative potential and green behaviours intentions is computed using Baron & Kenny's (1986) four-step approach in combination with Structural Equation Modeling through the software AMOS. ANOVA is conducted to compare attitudes, subjective norm and perceived behavioural control between French and English employees.

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F05

Standard Paper

Perceptions and misperceptions about burnout: Implications for burnout prevention in mental health workers

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Strand **Well-being and Work**

Background

Burnout has long been a problem in mental health workplaces and remains so despite much research and considerable knowledge of it amongst professional employees. This paper will address this paradox by outlining the findings of a study on mental health workers' perceptions and beliefs about burnout.

The paper will discuss how human perceptual processes appear to encourage mental health workers to minimise recognition of, and response to, burnout. Attribution Theory and related theories from social psychology suggest beliefs and perceptions have a strong influence on behaviour, including self-care and preventative behaviours. Despite good *objective* knowledge of work stress, workers may misperceive their own vulnerability and continue working to the point of emotional or physical exhaustion.

As the first study to systematically and empirically investigate the influence of perceptions and beliefs on workers' responses to burnout, the findings presented in this paper suggest a new perspective on burnout prevention. **Learning** how perceptions about stress and burnout in the workplace can impede prevention can assist organisations and professionals in **sharing** responsibility for addressing the problem, **impacting** burnout prevention efforts, and in turn, work productivity and engagement.

The findings are likely to be applicable to many sectors and organisations affected by burnout and work stress. Therefore this presentation may be of interest to researchers and managers interested in the nature of burnout, its manifestation in specific occupational groups, changing public and workplace perceptions of burnout, or the phenomenology of stress and burnout. Additionally, the general public may find this paper applicable to their own experiences of burnout or work stress regardless of occupational category.

Method

This study was qualitatively, phenomenologically driven as it sought to understand how individuals make sense of burnout. Fifty-five mental health workers returned an open-ended questionnaire on their beliefs, attitudes and perceptions about burnout and how these might impact upon their ability to maintain their wellbeing at work. Additionally, 12 participants were interviewed in-depth. Occupational groups investigated included mental health nurses, psychologists, mental health occupational therapists, social workers, psychiatrists and counsellors.

The questionnaires were analysed using thematic analysis. An inductive approach to data analysis was taken where the assigned codes were derived from the participants' own language and responses. As the first step in this contextual approach a sample of 20 questionnaires were used to develop a series of codes for each item number. Data analysis was complemented by NVivo 9.

Participants were predominantly older workers with 60% of the sample aged 40 and over, including 33% of these aged over 50, reflecting the aging of the mental health workforce in Australia. The participant group was predominantly female, again reflecting the mental health sector, with males representing only 19% of the sample.

Findings and Discussion

A key finding of this study was that respondents found it difficult to recognise burnout in themselves until signs of physical and emotional breakdown had started to impact their functioning. Even when they recognised their burnout, they tended to blame themselves and had a difficult time disclosing it to others for

fear of negative judgement. These observations suggest respondents had strong perceptual and emotional barriers to dealing with burnout. This paper will present a model of the perceptual barriers to recognising and responding to burnout.

Self-Blame

A very high proportion of respondents indicated they would blame themselves if they burned out, describing it as a sign of weakness, failure and incompetence. This helps explain why they are unwilling to speak up about their experiences.

For example one participant recalled: "I just thought it was me, and I needed to work harder, so it became a vicious circle". Several studies have established a link between self-blame and poorer adjustment outcomes after trauma or illness (e.g., Frazier, 1990).

Self-stigmatising beliefs

Many respondents who reported suffering burnout found they came to believe they were weaker or less capable employees. This attribution of an underlying personality problem is another contributor to the vicious cycle of self-beliefs that both feed and are fed by burnout.

The illusion of control

Participants reflecting on past burnout were aware that unrealistic expectations of their ability to avoid burnout had allowed them to continue overwork to the point of breakdown. This suggests the presence of an illusion of control (Thompson, 1999), an exaggerated sense of self-efficacy based on the belief one has more control over one's fate than environmental factors allow. In burnout, this illusion may result in a belief that helping professionals are immune to work stresses or even infallible.

Optimism bias

A third attributional process allowing a person to justify overwork to the point of burnout is the belief that "it won't happen to me" (Weinstein, 1984, p. 431), or optimism bias. The findings show workers often had a generalised attitude of optimism concerning the risk of burnout which lead them to minimise the hazards of their behaviour and ignore symptoms of burnout. Past experience of having avoided burnout in high-stress situations may have contributed to this.

Thinking of burnout in dichotomous terms

Another form of attribution identified was a tendency to view burnout in black and white terms. On one hand, most respondents saw burnout as a very serious occupational hazard, with more than half believing it can have serious consequences for a person's health, self-esteem, career, financial stability or relationships. Many saw that it could force them out of the workforce. On the other hand, it was often not seen as a real threat to them individually.

Stress-induced cognitive deficit

An interesting point made repeatedly in the interviews was that as burnout reduced a professional's mental or physical health and work competence, it also reduced their ability to recognise that they were suffering from burnout. Therefore, once the process of depletion had begun, professionals were less likely to seek support and more likely to ignore the warning signs. Several commented on the irony of being a mental health worker yet being unable to recognise symptoms of stress, anxiety and depression in themselves. Many previous studies show a decline in capabilities such as decision-making or sense-making under stress (e.g., Oosterholt, Van der Linden, Maes, Verbraak, & Kompier, 2012).

Effects of professional role-identity

Those who had burned out often recalled feeling then that they were not 'cut out' for their job because they should be able to withstand its stresses. This 'should' seems to reflect a belief that since mental health workers are trained in managing others' emotional and psychological problems they should not suffer from these themselves. This role identity can have a powerful distorting effect on an employee's awareness of burnout and willingness to increase self-care or seek help.

Conclusions

The perceptual biases discussed above all lead a person to a distorted view of his or her health. Self-blame and self-stigmatising allow the possibility of taking action to be ignored, while the illusion of control, optimism bias, and dichotomous thinking lead to minimising or ignoring symptoms. Stress itself can add to these effects by narrowing sense-making and decision-making capabilities. Values of competence and

selfless helping of others in professional identity of many mental health workers may further exacerbate the basic attributional tendencies.

The present perspective suggests that the mental health sector should move beyond the pervasive view of burnout as primarily a problem that frontline workers themselves should detect and respond to. Organisations should not view failure to seek help for self-impairment as a 'violation' of professional ethics but a normal human response to the stress process. As a consequence, mental health workers need others to help them recognise their symptoms and seek treatment. This does not reduce their responsibility for self-care, but highlights the organisation's duty of care for staff who are unable to see their own situation, whether due to unrealistic or unhealthy workload expectations or factors outside the employer's control.

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F06

Discussion

If competencies are dead, who is the new kid in town? Assessing for impact not input.

Hannah Hemmingham & Joanne Ailden, IBM

Strand Psychological Assessment at Work

The purpose of the session is to share, learn and contribute to the continual development of our profession by considering occupational psychologists response to creating open organisations. Given the vastness of this topic, we will focus on psychological assessment at work in this context, however would be happy to widen the debate. We will share some thought provoking projects that we have been working on to bring this topic to life.

The main backdrop to the discussion is the move to creating open organisations, which empower employees to perform in their own way to achieve success in an uncertain future. This move has been stimulated by the consistent change that organisations experience; when Volatility, Uncertainty, Complexity and Ambiguity exist having a rule book of behaviours no longer seems practical or the right tool for sustained performance. Organisations therefore appear to be moving away from competency frameworks and towards broader frameworks of standards, principles and desired impact. The premise behind the open organisation, in our work to date, is that detailed list of behaviours within a competency framework can be restrictive (we are not talking about technical competencies); instead, by defining what is broadly expected of employees and the values that should be lived, freedom is created for people to flex, adjust and perform to their best ability, driving the required outcomes, in their own way (there are numerous ways to reach an outcome). As circumstances change, the workforce's behaviours must change in response.

As a practical example of what this means for our practice, we will share an approach we have taken to assessment centres that does not draw on a behavioural competency methodology. Traditionally occupational psychologists have created assessment centres that draw on competency frameworks, defining detailed, specific observable behaviours to be assessed. However, increasingly we hear the requirement for employees and leaders to be flexible in their approach and to draw on their strengths to achieve, thus creating more open organisations. We have therefore created assessment centres that assess the impact and outcome that was driven not the behaviours used.

The idea of open organisations and our assessment centre work has sparked a number of questions for us, e.g. how do you ensure freedom is not abused, how do you observe the impact in an assessment centre, how do you provide people with feedback, how do people know what to develop to achieve the outcome?

We will facilitate a conversation that shares our experience in relation to assessment in open organisations, what we have heard from our clients and our thoughts so far to initiate a conversation. We will seek to hear from others to share, learn and consider how occupational psychology can support organisations in selecting future high performing employees within the context of an open organisation (and more if there is time).

What are the main psychological theories, models and research underpinning your session? This approach touches on a number of psychological theories. Releasing the prescription of behaviours taps into theories such as:

- Maslow's hierarchy of needs: can one ever become self-actualised if you are only following the rules laid down by others or how you should go about your work?
- Job Characteristics Model highlights the requirements for autonomy, as defined by exercising choice and discretion, meaning allowing people to complete tasks in the way that works most effectively for them
- Strengths based theory, highlights that people are different and emphasises the use of individual strengths to achieve an outcome (as opposed to all using the same behaviours)
- Learning agility and growth mind-set: if we expect people to find their own ways as opposed to prescribing behaviours an ability to learn and unlearn may be crucial

The assessment ORCE process remains pivotal.

How do you see your proposal linking with the main conference theme of Learning, Sharing, Impacting? This session will share a new approach which will provide thought provocation around refreshing our traditional methods within assessment centres and wider implications of creating open organisations. This approach links what we know about human behaviour and motivation, best practice approaches for reliable assessment and the future context of open organisations. It will also challenge us to consider the risks and advantages of moving from behavioural competencies to outcome focused approaches and methods.

When considering our impact as occupational psychologists' rigour is paramount, we must balance and improve this by continual review and adaptation of our approaches to reflect the businesses within which we operate – we must continually learn to ensure continued impact of our work. This new approach is an example of the collaboration between science and practice, speaking our clients' language and adapting to reflect the changing world of business.

We envisage this discussion will enable attendees to learn about different assessment approaches (and perhaps broader areas) that reflect the changing world of business. This session will challenge us to think about how our science must align and support the constant change experienced today.

Why is the submission appropriate for the particular strand you have chosen? The examples drawn upon will focus on assessment as opposed to development. However, the move towards open organisations has implications across the whole of occupational psychology.

What do you consider to be the most novel or innovative aspects of the ideas being presented? The examples we will share do not use traditional assessment centre marking criteria (e.g. BARS). It is also forward thinking about how occupational psychologists can support organisations to be flexible and agile by removing detailed behavioural competencies. Hiring employees that deliver the required outcomes, but in a variety of ways, aligned to organisational values may be an effective way to ensure sustained organisational performance. This is however very different to the traditional approach to assessment centre marking.

Why do you think conference delegates will find the paper or session stimulating and useful? Most Occupational Psychologists will have worked with competency frameworks and will have faced numerous challenges such as keeping the framework up to date, the framework being user friendly (i.e. not too long) but still containing enough information to be of benefit. This discussion will help us to learn other approaches from one another and consider the future applicability of competency frameworks to ensure that we are servicing organisations with the future in mind. The debate will also likely raise numerous questions and considerations for how we can further support organisations to be agile and open whilst minimising the potential risks.

What might the public find interesting about your paper or session? The working population will likely find

the idea of being given more trust by organisations to deliver in their own way interesting. The idea of open organisations can be seen to link to flexible working, which is a popular topic for many. The concept of an open organisation would suggest that providing the employee delivers the outcomes expected and has the impact required, how or where they do it should be up to them.

HRDs may find the impact and outcomes approach to assessment more captivating for business leaders, demonstrating forward thinking and assessment of employee value as opposed to the behaviours they exhibit.

What is your preferred duration for the session (this must be within the range specified for the session type)? 60 minutes

How will the session be structured (provide an agenda or outline timetable where appropriate)?
Introduction to open organisations, case study example of application in assessment context (10 mins), key questions to explore the impact of open organisations on our approaches to assessment. The session will provide overarching questions, but we will also provide the opportunity for attendees to ask their own questions in relation to current issues or reflections in relation to the topic.

What is the minimum, optimum and maximum number of attendees? Maximum would be 15, minimum 5, optimal would be 10 (for larger groups we may split the group into two).

What form will the discussion take – e.g., town hall meeting, panel discussion, debate, roundtable (describe the process in detail)? Roundtable. A group of practitioners will have an open conversation, where we agree to be curious and non-judgemental about the approaches taken by others. The aim is to explore the possibilities and implications of assessment in the context of open organisations where behavioural competencies appear to be outdated and outmoded. The hosts will introduce the concept of open organisations and what this has meant for recent assessment projects. The hosts will then open the area up for debate, asking key questions, drawing on the audience's experiences and encouraging people to share and challenge in a constructive way. The hosts will ensure fair opportunity for all to participate.

What topics are to be debated and what do you see as the major questions to be raised and points to be argued? Example questions area below:

If organisations need to empower employees to be agile, innovative, and to flex their approach to changing circumstances what does this mean for competency frameworks?

Can behavioural competencies restrict organisational performance through limiting flexibility, individuality and use of strengths?

If organisations need to empower employees to be agile, innovative, and to flex their approach to changing circumstances what does this mean for assessment?

What are the risks of moving away from competency frameworks and how can we mitigate them? How can occupational psychologists develop our assessment approaches to reflect a desire for open organisations whilst maintaining our rigour?

The main points are that organisations need to be flexible to ever changing demands, this likely means a requirement to not prescribe required behaviours of employees. Open organisations give employees the freedom to flex to change and to deliver outcomes in a way that motivates and empowers them, capitalising on the strengths of each individual. We will share one approach to assessment that does not use behavioural competencies and learn from one another, adding to the knowledge and advancing the field of Psychological Assessment at work.

How and by whom will the discussion be facilitated? There will be two facilitators who are Chartered Occupational Psychologists. They will share their own experiences and facilitate the group by asking questions, inviting critique and encouraging openness to ideas. The facilitators will ensure fair opportunity for all to participate.

Who will be the main discussants and what is their experience and general perspective on the topic? We envisage practitioner psychologists who have worked with competency frameworks and assessment, or who have an interest in the future direction of organisations will attend this session. Throughout our networks, this topic has sparked much interest and thought. The facilitators are Chartered Psychologist

who work with a variety of clients on global assessment and development projects. They are passionate about the use of Occupational Psychology to enable organisations to make informed choices. They are also open to the ideas of others and keen to learn the thoughts of other practitioners about open organisations and what this means for our practice.

F07

Workshop

Accelerating expertise: experiencing applied cognitive task analysis

Dr Julie Gore, Dr Adrian Banks & Dr Almuth McDowall, City University London/Birkbeck University of London

Strand **Research Design, Analytical Techniques and Practical Applications**

In this brief interactive workshop we will introduce delegates to the methodological merits of Applied Cognitive Task Analysis (ACTA). The ACTA technique is intended to support the identification of the key cognitive elements required to perform a task proficiently, albeit in a way useful to practitioners. Gore and McAndrew (2009) have previously highlighted pragmatic work which has successfully used ACTA to understand cognitive expertise in a wide range of areas including: fire fighting, recruitment, weather forecasting, clinical medical contexts, trading, aviation and command and control operating procedures within naval and military environments.

The workshop will introduce the ACTA technique and provide a recent case example from a leading Engineering organisation. In brief, we will examine the importance of the role of academics translating methodological research developments for explorations *of* and *in* professional knowledge management practice (Anderson, 2007). We will also highlight the importance of the impact of this method in terms of its potential for accelerating expertise (Hoffman et al, 2014).

More specifically, the aims of the presentation are to:

- Introduce delegates to ACTA's qualitative interview techniques, potentially 3 stages including a: task diagram, knowledge audit and simulation/scenario.
- Briefly review ACTA's historical roots, evidence from Naturalistic Decision Making and Cognitive Expertise
- Provide the opportunity for reflection and practice with key elements of the techniques
- Introduce the analysis output: a cognitive demands table which can assist with training needs analysis and scenario-based interventions
- Review and close.

Selected references:

Gore, J. & McAndrew, C. (2009) Accessing expert cognition. *The Psychologist*. 22(3) 218-219

Hoffman, R., Ward, P., Feltovich, P.J., DiBello, L., Fiore, S.M., & Andrews, D.H. (2014) *Accelerated Expertise: Training for high proficiency in a complex world*. New York, Psychology Press

F08

Short Paper

Dark Triad: How leaders' traits impact followers' behaviour and performance

Gillian Wall & Matthew Jellis, University of Worcester; **Prof Peter Jonason**, University of Western Sydney

Strand **Leadership, Engagement and Motivation**

Introduction

The aim of this study was to consider how the personality characteristics of leaders impact upon the behaviours and performance of their followers. Specifically, the personality characteristics considered were the *Dark Triad traits*, whilst the outcome variables were *counter-productive work behaviours* (CWB), *organizational citizenship behaviours* (OCB) and individual follower performance (*task performance* and *personal development*).

Interpersonal relationships are likely to be impacted by the manipulation, denigration of others and aggression in response to challenge, resulting in a toxic team environment and erosion of loyalty to the leader. However, if skilfully done, the tendency to engage in manipulation in the interests of self-promotion could have a positive effect. Such behaviour is only then problematic perhaps where the interests of the individual and those of others are misaligned.

The over-confidence of leaders, resulting in undeliverable visions, may lead to employees becoming disillusioned, reducing engagement, and thereby reducing OCB. Further, goals subsequently set for followers may well be unachievable, leading to both follower underperformance and further disengagement. Additionally, the aggression that is the likely response to challenge will make it difficult for followers to propose changes to their leaders' plans.

The research tested the following hypothesis:

Leaders' Dark Triad Dirty Dozen (DTDD) scores predict followers' behaviours and performance.

Method

Design

The study design was correlational. The outcome variables were self-report scores on the Interpersonal Deviance sub-scale, the Organizational Deviance sub-scale, Organizational Citizenship Behaviour and performance and the predictor variable was the Dirty Dozen Dark Triad (Jonason & Webster, 2010) composite (participants ratings of their manager).

The sample included 232 participants. The mean age of the participants was 40.23 years ($SD = 11.15$), and the sample included 140 females (60.3%) and 92 males. Further, participants worked at a range of different organisational levels and in a wide-range of industries including for-profits, public service and not-for-profits.

Results

A preliminary step ascertained that it was unnecessary to control for any demographic or situational variables included in the study.

The hypothesis that managers' Dark Triad traits (Dark Triad composite) predict employee behaviour (IDS, ODS and OCB) and performance was tested using multivariate linear regression analysis.

Using Wilks' statistic, and after Bonferroni correction, there was a statistically significant effect of the Dark Triad composite on employees' behaviours and performance, $\Lambda = .95$, $F(4,227) = 3.33$, $p = .011$. Before Bonferroni correction, the Dark Triad composite was a statistically significant predictor of IDS, ODS, and OCB, explaining 2%, 4% and 2% of the variance in each outcome variable respectively. After Bonferroni correction, ($\alpha = .013$ (i.e. $.05/4$)), the Dark Triad composite was a statistically significant predictor of ODS alone.

Table 1

Multivariate Regression Analysis Predicting Employees' Behaviour and Performance from the Dark Triad Composite

	Outcome Variable			
	IDS	ODS	OCB	Performance
R^2	.02	.04	.02	.00
B	0.34	0.50	0.44	0.05
$SE(b)$.16	.17	.20	.15
β	0.14	0.19	0.15	0.02
p	.033	.003	.027	.748
95% CI				
LL	0.03	0.17	0.05	-0.25
UL	0.64	0.83	0.84	0.34

Note. IDS = Interpersonal Deviance Scale. ODS = Organizational Deviance Scale. OCB = Organizational Citizenship Behaviours. CI = Confidence Interval. LL = Lower Limit. UL = Upper Limit. Figures in bold were significant after Bonferroni correction.

Thus, the hypothesis was only partially supported, with some support for the ability of the Dark Triad composite to predict employees' negative behaviour (CWB) but only limited support for its ability to predict positive behaviours, and the effect sizes were relatively small, and no support for its ability to predict employees' task performance.

Exploratory Analysis

Table 2 depicts the correlations between each of the behaviours included in the analysis and the Dark Triad traits.

Table 2

Correlations between Item-Level Behaviours and Dark Triad Traits

	Mean (SD)	M	P	N	DT
Machiavellianism (M)	3.57 (2.29)	-			
Psychopathy (P)	3.77 (2.26)	.85***	-		
Narcissism (N)	4.47 (2.18)	.81***	.72***	-	
Dark Triad composite (DT)	3.94 (2.08)	.96***	.93***	.91***	-
Made fun of someone at work ^a	2.66 (1.57)	.11	.11	.15*	.13*
Said something hurtful to someone at work ^a	1.54 (0.92)	.08	.03	.08	.07
Made an ethnic, religious, or racial remark at work ^a	1.32 (0.82)	.07	.03	.07	.06
Swore at someone at work ^a	1.85 (1.45)	.12	.12	.12	.13*
Played a mean prank on someone at work ^a	1.29 (0.87)	.10	-.02	.09	.06
Acted rudely towards someone at work ^a	1.47 (0.90)	.11	.08	.08	.10
Publicly embarrassed someone at work ^a	1.28 (0.86)	.11	.03	.03	.06
Spent too much time fantasising ^b	2.59 (1.65)	.09	.07	.09	.09
Taken an additional or long break ^b	2.10 (1.35)	.12	.14*	.14*	.14*
Come in late without permission ^b	1.63 (1.13)	.06	.07	.10	.09
Littered your work environment ^b	1.34 (0.84)	-.02	-.08	-.04	-.05
Neglected to follow boss's instruction ^b	1.85 (1.13)	.22***	.14*	.25**	.22***
Intentionally worked slower than necessary ^b	1.61 (0.99)	.16*	.17**	.20**	.19**
Put little effort into work ^b	1.72 (1.04)	.16*	.13*	.16*	.16*
Dragged out work to get overtime ^c	1.08 (0.38)	.07	.13	.13*	.12
Helped others who have been absent ^c	4.23 (1.47)	.18**	.17*	.18**	.19**
Volunteered for things not required ^c	4.55 (1.36)	.15*	.14*	.16*	.16*
Helped new people ^c	4.19 (1.56)	.02	-.04	.02	-.00
Helped others with heavy workloads ^c	4.41 (1.44)	.09	.08	.06	.08
Assisted my manager with their work ^c	4.58 (1.62)	.08	.02	.13*	.08
Made innovative suggestions ^c	4.13 (1.45)	.17*	.11	.08	.13

<i>IDS</i>	11.41 (4.97)	.15*	.10	.14*	.14*
<i>ODS</i>	13.91 (5.45)	.18**	.15*	.21**	.19**
<i>CWB</i>	25.31 (8.82)	.20**	.15*	.21***	.20**
<i>OCB</i>	26.09 (6.37)	.16*	.11	.15*	.15*

Note. ^aIDS; ^bODS; ^cOCB

Whilst caution must be used in using inferential statistics to evaluate at item-level rather than in aggregate, the correlations in Table 2 provide some initial exploratory insight into the specific behaviours that were most closely related to leaders' Dark Triad traits.

Discussion

There was partial support for the hypothesis that leaders' Dark Triad traits predict followers' behaviour and performance. Whilst there was some evidence to support the ability of the Dark Triad traits to predict negative behaviours, there was no statistically significant evidence linking these traits to followers' performance. Further, whilst Dark Triad traits were found to be statistically significant predictors of OCB, the direction was particularly interesting.

Behaviours. The relationship between the Dark Triad and OCB was surprisingly positive. This suggests that Dark Triad traits in fact lead to greater teamliness amongst followers. It is possible that this is reflective of team coping strategies that evolve to mitigate the impact of destructive management, thus establishing team resilience and maintenance of performance levels.

Alternatively, a plausible interpretation is that Machiavellian managers are adept at manipulating their employees such that they work beyond their contractual obligations. Further, investigation of the correlations at item level suggests that the positive relationship between OCB and Machiavellianism could be caused by increased support given to peers but not to the manager. Indeed, all of the DT traits were positively correlated with neglect of the manager's instructions; this could reflect either a lack of loyalty or a lack of confidence in the manager's decisions.

Whilst higher Dark Triad scores in leaders were predictors of higher CWB, this is not unequivocal evidence of a causal relationship from leaders' traits to followers' negative behaviours. Alternative interpretations include the potential impact of recruitment and retention processes. Furthermore, employees who score highly on CWB might perceive their managers in a more negative light if their managers are actively managing their negative behaviours.

Performance. With regard to the lack of any significant relationship between the Dark Triad and performance, noting the relevance of situation to leadership, it is possible that coexistence of situation-dependent benefits and costs of Dark Triad leadership styles may be rendering the overall impact non-significant.

It is also important to consider how performance was being measured in these circumstances; that is, short-term versus long-term performance.

In conclusion, this study suggests that Dark Triad traits leaders potentially have a deleterious impact on followers' behaviours, particularly discretionary effort. However, rather than creation of a toxic culture, the research findings also suggest that followers develop strategies to manage their leaders' less socially desirable tactics that include greater within-team bonding.

What are the main psychological theories, models and research underpinning the work?

The work considers how followers may be affected by leaders' Dark Triad (DT) traits. It initially draws on existing theory and research to compare and contrast the potential positive and negative effects of DT traits, focusing on followers' Organisational Citizenship Behaviours (OCB), Counterproductive Work Behaviours (CWB) and performance.

Focussing on the potential negative effects there are numerous theories and a growing body of research. For example, social exchange theory suggests that the DT traits promote violation of the norms of reciprocity that are crucial to the maintenance of positive long-term relationships whilst social learning theory suggests that there is potential for workers in tough organisations to learn to be callous, creating toxic cultures.

More recently, interest has grown in the potential benefits of DT traits. For example, theories such as the *method psychopath* (Dutton, 2012) propose that certain DT traits can be useful in leadership positions in some circumstances, e.g. tough-mindedness, interpersonal charm and charisma. This study sought to ascertain which forces would prevail.

How do you see the proposal linking with the main conference theme: Learning, Sharing, Impacting?

The session will **share** recent research findings on leaders' traits and their impact on followers, linking insights from various psychological disciplines (e.g. individual differences, evolutionary psychology, social psychology) and applying them to a key occupational psychology issue.

Additionally, the research indicates the extent to which practitioners need to consider the need to select out certain traits in individuals for leadership positions, or to implement interventions that mitigate against these risks. Such steps have the potential to **impact** not only organisational performance but also the working experiences of employees.

Why is the submission appropriate for the strand chosen?

The submission is appropriate for the strand chosen because it directly relates to two key areas of the strand: 'leadership' and 'organizational citizenship'.

What do you see as the most novel or innovative aspects of the ideas presented?

Whilst there is a significant body of research exploring the impact of leaders' traits on individual performance and organisational outcomes, including research into destructive leadership, little research has explored the relationship between leaders' DT traits and the performance and behaviours of others (O'Boyle et al., 2012). Thus, the focus on followers' behaviour makes inroads into a gap in the existing literature.

Why do you think delegates will find the paper or session stimulating or useful?

There is increasing interest in the impact of destructive leaders on organisations. Researchers are also looking increasingly to the potential positive aspects of DT traits, whether for the individual, or for the organisation. For example, *The Psychologist* included a recent article on the *successful psychopath* (Smith, Watts & Lilienfeld, 2014). This session provides delegates with the opportunity to compare these contrasting perspectives.

What might the public find interesting about your paper or session?

Recent leadership failures have hit not only the press, but people's pockets. The growing public voice (supported by social networking) has highlighted and perhaps fostered increasing concern about how companies are led and how they care for their employees, their customers, their communities. Recent examples include Syngenta and Matalan. This paper indicates how certain traits in leaders may create toxic cultures, but also considers how these traits may be essential in some situations.

If any, what materials do you intend to make available to attendees and in what format?

I intend to provide electronic copies of the slides presented.

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F09

Short Paper

Birthplace or where you live - less important than personality

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Strand **Work Design, Organisational Change and Development**

Introduction

It is easy to identify the stereotypes associated with people from different cultures (McCrae, 2002). In the past, such stereotypes may have performed a useful function in the workplace, helping teams to bond together in comparison with a common ‘other’, typically a national or regional neighbour (Terracino et al, 2005). However, in a world where multinational teams are common, assumptions based on stereotypes can disrupt the smooth functioning of a team. Hofstede & Hofstede (2004), defining culture as “The way we do things round here” and “a learned pattern of thinking, feeling and acting”, have shown that while many differences between countries are at a deep, values-related level, differences among organisations are typically at the level of practices (Hofstede, 1993). Many researchers have developed culture models, notably Hofstede (1980) and Trompenaars (Trompenaars & Hampden-Turner, 1998). The Cultural Orientations Framework (Rosinski, 2003) takes aspects of Hofstede and Trompenaars as well as Kluckhohn & Strodtbeck (1961), Hall (1990) and others to derive a set of cultural orientations - an inclination to think, feel or act in culturally determined ways.

Differences in behaviour and orientation will of course exist between people in a team. However, if these are principally due to individual differences in personality, rather than of national culture (Kirby et al, 2007; Allik, 2012), then it will be easier for organisations to develop teambuilding strategies and for individuals to understand where their colleagues ‘are coming from’.

Many studies have examined the relationship between personality and culture (e.g. Heine and Buchtel, 2009) and how personality and culture interact in the workplace (e.g. Taras et al, 2010). This study set out to establish the influence of a number of factors on cultural orientation. It was hypothesised that:

- Individual differences in personality would have a greater effect on cultural orientation than country of origin, country of residence, age, gender, or level of seniority
- Country of residence would show a greater effect on cultural orientation than country of origin (Peltokorpia & Froese, 2014)
- There would be few differences in typical personality between countries.

Methodology

Data was collected online between April and December 2014, from participants who already knew their personality type. A subset resident in Australia (n=132), France (n=33), Germany (n=37), India (n=172), South Africa (n=89), the UK (n=110) or the US (n=307) was used. Participants were predominantly working in coaching, consulting, education, HR, or learning and development. The sample was 69% Female and 31% Male, with a mean age of 43 years and a range of seniority from “employee” to “executive level/owner”.

Cultural orientation was measured using the Cultural Orientations Framework (Rosinski, 2003). The framework includes 17 dimensions, grouped into 7 categories, and measures both the visible aspects (behaviours, language, artefacts) and invisible manifestations (norms, values, basic assumptions or beliefs) of culture. Although used in coaching practice, little empirical research has previously used the framework. Participants had all previously completed the Myers-Briggs Type Indicator® questionnaire (Myers et al, 1998), and had feedback to help them decide on their true or “best fit” personality type, as measured by four dimensions, Extraversion/Introversion, Sensing/Intuition, Thinking/Feeling and Judging/Perceiving. Additional survey items included gender, age, occupation, employment status, and job level.

Results

Impact of different factors on cultural orientation

A univariate analysis of variance was used to establish the relative effects of country of residence, country of origin, job level, personality and age on cultural orientation. Table 1 below shows which factors showed a significant effect on the variance of each cultural orientation dimension. For clarity, only the significance levels are shown and interaction effects are not included

Table 1: Impact on cultural orientation, main effects only

Cultural Orientation	Country of residence	Country of origin	Job Level	Gender	MBTI type	Age
Control/Harmony/Humility	NS	NS	.048	NS	.001	NS
Scarce/Plentiful	NS	NS	NS	NS	.000	NS
Monochronic/Polychronic	NS	NS	NS	.001	.000	NS
Past/Present/Future	NS	NS	.041	NS	.000	NS
Being/Doing	NS	NS	NS	NS	.000	.029

Individualistic/Collectivistic	NS	NS	.004	.043	.000	NS
Hierarchy/Equality	NS	NS	NS	.008	.000	.001
Universalist/Particularist	NS	NS	NS	NS	.000	NS
Stability/Change	NS	NS	NS	NS	.000	.018
Competitive/Collaborative	.002	.005	NS	.008	.000	NS
Protective/Sharing	NS	NS	NS	NS	.000	NS
High context/Low context	NS	NS	NS	.024	.000	NS
Direct/Indirect	NS	NS	NS	NS	NS	NS
Affective/Neutral	NS	NS	NS	NS	.000	NS
Formal/Informal	NS	NS	NS	NS	.000	NS
Deductive/Inductive	NS	NS	NS	NS	NS	NS
Analytical/Systemic	NS	NS	NS	NS	.000	NS

NS = Not Significant

The results demonstrate that for all orientations except Direct/Indirect and Deductive/Inductive, personality has a significant effect. For 6 orientations it is the only significant effect, and for the remaining 9 orientations it is the most significant effect.

Country of residence and country of origin

A univariate analysis of variance was used to establish the relative effects of country of residence and country of origin on cultural orientation; the results are presented in Table 2 below. For clarity, only the significance levels are shown, and only for those orientations where the model has a significant effect. Note that only a minority of the group (7%) lived in a different country to that in which they were born. Even when the effects of other factors are removed, only two orientations show an effect, and only for country of residence.

Table 2: Impact of country of residence and country of origin on cultural orientation

Cultural Orientation	Country of residence	Country of origin	Interaction effects
Competitive/Collaborative	.008	NS	NS
High context/Low context	.026	NS	NS

NS = Not Significant

Post-hoc tests on country of residence show that:

- Those living in the UK have a more competitive orientation than those living in Germany or India
- Those living in Germany have a more high-context orientation than those living in all other countries except Australia
- Those living in Australia have a more high-context orientation than those living in India

Differences in personality between countries

There were some significant differences in personality between countries (as measured by chi-squared analysis). However, these were not in line with cultural stereotypes:

- Those living in Australia and in the UK were more likely to have preferences for Extraversion, and those resident in India and South Africa for Introversion, than would have been expected by chance.
- Australian residents were more likely to have preferences for iNtuition, and British residents for Sensing, than would have been expected by chance
- Those living in Australia and France were more likely to have preferences for Perceiving, and residents in India and the USA for Judging, than would have been expected by chance.

Discussion

The results provide support for the hypothesis that individual differences in personality have a greater effect on cultural orientation than country of origin, country of residence, age, gender, or level of seniority. This demonstrates that individual differences in personality are likely to be one of the most important factors when building cross-cultural teams. While there will be national differences in how personality is expressed (Kirby et al, 2006), those of a similar personality type will have a great deal in common, wherever they live and wherever they were born. It may be that an understanding of personality type can be a bridge between cultures; those of the same type from different cultures may have more fellow feeling than people of the same type in the same culture.

One area where country of residence in particular does have a significant effect is the competitive-collaborative orientation. Here, there is an interaction between country, gender and personality; the practical implications of this finding will be discussed in more detail in the session.

The hypothesis that country of residence would show a greater effect on cultural orientation than country of origin was supported to a limited degree. When it comes to cultural orientation, it may be that where we were born and brought up is less important than the culture in which we are immersed at present. This may have particular importance when working with expatriate groups.

There were some differences in personality between countries. They were not however in line with national stereotypes, and were too small to account in themselves for the other findings of the study.

While national differences do exist, both in terms of country of residence and country of origin, the results of this study suggest that individual differences in personality, irrespective of nationality or location, are more important when it comes to understanding our cultural orientation.

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F10

Short Paper

High stakes recruitment in the public eye

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Strand **Psychological Assessment at Work**

Introduction

The Public Appointments Service is the centralised provider of selection and recruitment services to the civil and public sector in Ireland. This paper reviews a high stakes recruitment process for the Irish police force (An Garda Síochána) where online testing played a major role. No police recruitment had been conducted for 7 years and there was great media, public and candidate interest. The re-launch of Garda recruitment was announced by the Minister over 20 times! Social media had developed significantly in the intervening years and it played a considerable role in advertising the campaign, but also the input of discussion boards etc had to be addressed as part of the campaign. This is a vocational career which has an age limit. The age range was 17 – 35 years. (The Police force in Ireland is exempt from the Equality legislation). There were approximately 25,000 applicants with a requirement for an initial batch of 300 trainee police officers for appointment in 2014 and subsequent appointments to be made in 2015 and 2016.

Sanction to hold the competition was received in the fourth quarter of 2013, and the first batch of successful candidates was forwarded to the client in early June 2014.

It was also noted that such large scale online recruitment in Ireland was rare and there was little research in the area to inform the process. The move to online testing was informed by the work of, for example Lievens and Harris (2003), Lievens and Burke (2011) and best practice guidelines e.g. International Test Commission Guidelines on computer-based and internet delivered testing. Furthermore, testing in the public sector presents its own challenges that would not be an issue in the private sector.

While the PAS has run several online testing campaigns this was the most high profile online campaign which carried a great reputational risk. Given that the PAS had conducted a number of smaller online campaigns since 2012, there was significant learning that was applied; informed by previous experience. A range of practical measures were taken to ensure the success of the selection process and guard against some of the pitfalls of online testing, all of which were in line with the ITC guidelines.

Method

The selection process comprised 5 stages as follows:

Stage 1 – Unsupervised Online tests – verbal and abstract reasoning and bespoke assessment questionnaire

Stage 2 – Unsupervised Online tests – verbal and abstract reasoning (higher level than stage 1)

Stage 3 – Assessment Centre including supervised verification verbal and abstract reasoning tests, video based written exercise and situational judgement

Stage 4 - Interview

Stage 5 - Reference checks, Garda clearance, medical and fitness test.

Candidates who undertook the tests at Stage 1 were scored and ranked in terms of order of merit. Those who met the required standard at Stage 1 were “batched” into groups in order of merit to allow the PAS to go back to the candidate pool if needed at a later date. The top performers were then called to undertake more difficult versions of the tests supplied by a different test publisher. Those scoring highest in the second stage were then called to an Assessment Centre which comprised supervised verification tests as well as bespoke tests. The Interview formed the final stage of the process conducted by PAS. The Irish Police Force (An Garda Síochána) was responsible for Stage 5.

A number of measures were used to ensure the success of the selection process including:

- The development of bespoke face valid measures, in partnership with the Police Force, to be used as an initial screen along with cognitive tests to ensure assessment of a good mix of skills
- The development of bespoke video-based reporting writing exercise and situational judgement test as part of the Assessment Centre.
- Confidentiality and honesty contracts.
- Candidates were given only a short testing window to guard against cheating and tests being published by the media. This had its disadvantages in terms of the load on the system.
- Load testing of our candidate management system (publicjobs.ie) to ensure the system could cope with large numbers registering at the same time.
- Engagement of an external call centre to deal with generic candidate queries.
- High quality candidate support systems during the testing phase to address any technical issue which could impact on the reliability and fairness of the testing process.
- Particular attention was paid to crafting of candidate information material
- A bespoke practice site for the tests
- PAS established communication links through Twitter and Facebook and monitored the different discussion forums.
- All candidates progressing to the assessment centre were re-tested to address concerns in relation to possible candidate cheating in an unsupervised environment.
- Increased security at assessment centre (personal belongings, including phones, not permitted in the testing centre)

Some interesting and unexpected issues emerged such as:

- Date of Birth requirements – candidates had to be within certain age bands and the systems were designed to exclude those who were not eligible. However, a large number of candidates put in “today’s” date or their birthday this year instead of their Date of Birth.
- At Stage 1, some candidates did not complete all three of the measures so they were given the opportunity to sit the tests that they hadn’t completed again
- A significant number of emails from PAS and the test providers went into candidate’s junk and spam folders despite Candidates being told to add the addresses to their safe senders list.

- A massive storm hit the country in January so a number of counties and therefore candidates were without electricity and broadband at critical stages.
- On reviewing of all candidates a small number of duplicate applications were identified

This campaign was novel in the size and scale of the project as well as the high media and public interest. This paper particularly relates to online recruitment and all the associated issues that go with it. Very little research has been conducted on actual online testing campaigns and of particular interest is the part social media has to play. A significant number of candidates applying for the position of Trainee Garda were talking to other candidates on social media websites / discussion forums. Media coverage and social media discussion forums were far more prominent than expected to date e.g. 542,210 views of posts related to this campaign in one social media forum. Fortunately, the moderators belonging to the sites took down messages that would compromise the process such as candidate's discussing the actual tests or interview questions.

While social media is a concern it can also be of immediate value to the recruiter to learn what is happening amongst the candidate pool. Many of the candidates used the practice sites to improve their performance and it was noted that indeed on some particular types of tests such as abstract reasoning, continued practice did have an impact on performance. Not typical normal distributions were discerned and examples will be provided. When reviewing the data it was found that candidates performed better on the abstract reasoning test than on the verbal reasoning test most likely because of practice effect.

Conclusions and Implications

Conference delegates will find the paper stimulating and useful as we are providing our hints and tips and lessons learned from conducting such a large scale campaign online.

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F11

Short Paper

Exploring the influence of group processes in end-of-day discussions in an assessment centre and their effect on objectivity and standardisation.

Dr Kate Hammond, Kingston University
Strand **Psychological Assessment at Work**

Aims / objectives

This qualitative project explores whether the standardisation process that is very important in assessment centres (ACs) is less effective in the final end of day discussions (EODD), and to what extent personal bias and judgement enters discussions at this point. It focuses on group processes and how these affect the discussion. This includes the accentuation effect, groupthink and conformity, drawing on social norms theory and social identity theory. It also looks at epistemic primacy, that is, that whoever goes first has a greater role in structuring the ensuing dialogue. This draws on the discursive psychology literature on leadership and followership.

Research question: To what extent do group processes influence the discussion and outcomes at assessment centre

Rationale and Key Contributions (inc. most novel and innovative aspects)

The project is based on a thematic literature review looking at both the methodological approaches that have been taken and what have been the key issues in previous research into the EODD. This review found that mainly positivist, quantitative approaches had been conducted with a range of true and quasi-experimental designs. It also found that while earlier research had focused on the value of the consensus discussion in relation to its validity (both construct and criterion-related), and had concluded that these discussions had little benefit over mechanically calculated overall assessor ratings (OARs) owing to issues such as group dynamics, more recent research tended to take their use for granted and there is little

reference to this earlier body of work. As AC validity has been falling in recent years (Cooke 2009), the study has potential to contribute to our knowledge of why this might be occurring.

This project therefore sought to re-establish a research focus on the benefits of the EODD, and to explore specifically the issue of whether the standardisation that is effective during the separate assessment tasks was being undermined in the final discussion. Initial observations also suggested that the EODD was serving social purposes other than standardisation such as ongoing training of selectors and therapeutic purposes. To examine these factors a more qualitative design was required, to explore how assessors were using their 'talk' and what functions it was achieving for them. The study contributes to the literature on assessment centre validity by:

- Re-establishing a focus on the EODD and what these contribute to an AC;
- An examination of whether group processes appear to be occurring; and
- A more in-depth analysis of the other roles that assessors' talk serves through a qualitative discursive approach

Conference Themes

This project will contribute to the themes of sharing through the contributions of the research (see above). It hopes also to contribute to the impact theme, as this is research into an area that touches on many people's lives - for example, 44% of organizations use ACs for graduate recruitment (Keenan 1995). As validity has been dropping recently (Cook 2009), this project will hopefully contribute to greater understanding of why that might be so. The project is being undertaken in an organisation that is committed to learning, and so will also be presented in the form of a report to the organisation and so have an immediate impact. Finally, the project also seeks to build impact by taking up a strand of research that was quite extensively explored but subsequently ignored by practitioners.

Conference Strand

The project falls into the strand above as it is centred on the assessment centre method of selection. There are also some links with inclusion and diversity in its consideration of social identity (eg gender, ethnicity)

Interest for public

Many people take part in different forms of selection, including ACs. While they witness much of the selection process, this part takes place behind closed doors. It will therefore be of interest to the public to know how scores are decided and how standardisation is/is not maintained. The role of social processes on individuals is also of general interest. Finally, the idea of talk being performative and rhetorical in nature rather than neutral is a fairly new idea which is also of general interest.

Main psychological theories and models

Key theories are those that relate to group processes. These include (with key names) groupthink (Janis), the accentuation effect (Sherif), social identity theory (Tajfel, Turner, Abrams, Hogg), conformity (Asch), stereotyping/prejudice (Devine), minority influence and social representations (Moscovici) and discursive leadership, including epistemic primacy (Clifton). It will also draw upon the key assessment centre literature (eg Cook 2012; Woodruffe 2007).

As these sections are still in draft form, an annotated bibliography is provided to show the key literature that is being drawn upon as background for the project.

Research design and methods

Methodology: The research is being undertaken through the discursive psychological approach (Potter and Wetherell 1997). A key feature of this perspective, which draws upon social constructionism and the hermeneutic tradition, is that it views language as performative rather than a neutral conduit of meaning, as constructive and fundamentally rhetorical in purpose (Wetherell 2001). The purpose and function of selectors' talk is therefore being examined within the social context of the assessment centre discussion. As this approach is iterative, it is possible that the research question will be amended or extended during the research project, for example to look at how standardisation may be reduced through the talk serving other purposes beyond standardisation such as to construct and sustain social identities as assessors.

Method: The overall design is a case study design, with an in-depth analysis of a series of six EODDs within one organisation. Discussions were all similar in focus and set-up, that is, they had a similar task of

summarising scores and agreeing an overall score for candidates as part of the end of day discussion, using similar types of personnel, such as an assessment day manager (ADM) and three to four selectors for each meeting. While some selectors and ADMs were present more than once, in general, the teams were different. The dataset therefore consists of the series of audio-tape-recordings of group discussions, totally approximately 14 hours, and transcriptions of these.

The analysis of the data will be through discourse analysis in line with discursive psychology. This type of discourse analysis (DA) looks at the subject positions people adopt and assign in discourses, and what performative function talk has for them, drawing on the work of Goffman and Gumperz among others (Goffman 1981; Gumperz 1982; Heritage 2001). This form of DA takes a more detailed look at the text, using the methods of conversation analysis (CA) to explore the rhetorical functions of each turn and how these are responded to in subsequent turns (eg Sacks 2001). This can include some quantitative analysis of length of turn, number of turns, and closing turn rates for each participant in the discussion, as well as more qualitative examination of the rhetorical functions. Transcription of key passages will involve more detailed transcription methods, including over-lapping and pauses. Section of text that are of particular interest are where the scores for different exercises on the same dimension differ and an overall score must be agreed from these different scores.

Again, as the project has not yet entered the final analysis phase, the annotated bibliography below gives some further detail of the key texts being drawn upon.

Project progress

The project is due to be completed on October 1st 2014 and is fully on target. So far, the thematic review has been completed, access has been agreed both with the gatekeeper and with participants. Several initial scoping observations have been made, and then the six days have been attended, completing the data collection phase. The transcription of approximate 14 hours of discussion is almost complete, with initial analysis.

Conference Materials

Printed handouts will be provided, giving the key points from the slides, excerpts from the EODDs that will be discussed during the presentation, key methodological exemplars where appropriate and an electronic copy of the presentation will be made available

Annotated Bibliography

Key social identity/group process texts are:

- Abrams, D. and Hogg, M.A. (1999) (Eds) *Social Identity and Social Cognition*, Oxford: Blackwell [see especially chapters by Abrams; Oakes, Haslam & Reynolds; Van Knippenberg]
- Dashtipour, P. (2012). *Social Identity in Question* London: Routledge [a recent critique of SIT and DA, using social psycho-analytic perspective]
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- Smith, J.C. and Haslam, S.A. (Eds)(2012) *Social Psychology: Revisiting the Classic Studies* [many useful chapters which also provide up to date bibliographies for the key studies such as Asch's conformity, SIT, Sherif's norms, Moscovici's minority influence, Sherif's boy camp studies. Alex Haslam, the editor ran the TV prison study based on Zimbardo's study]
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Clifton, J. (2012) 'A discursive approach to leadership: Doing assessments and managing organizational meanings' *Journal of Business Communication* 49(2), pp148-168

[highly relevant article, looking at epistemic power and how leadership is achieved dialogically in interaction]

And for methodology:

General research process:

Bryman, A. (2008). *Social Research Methods* Oxford University Press: Oxford.

Easterby-Smith, M, Thorpe, R. and Jackson, P.R. (2008). *Management Research* Sage Publications: London.

And focusing on DA:

Goffman, E. (1981) *Forms of Talk* (Oxford, Blackwell)

Gumperz, J. (ed) (1982) *Language and Social Identity* (Harmondsworth, Penguin)

Potter, J. and Wetherell, M. (1987). *Discourse and Social Psychology: Beyond Attitudes and Behaviour*. Sage: London. [classic text on DP approach to DA]

M. Wetherell, S. Taylor and S. Yates (2001)(eds) *Discourse as Data*, Sage: London. [especially chapters by Edley, Horton-Salway, but others also relevant]

M. Wetherell, S. Taylor and S. Yates (2001) (eds) *Discourse Theory and Practice*, Sage: London.

[especially chapters by Sacks, Billig, Davies & Harre, Fitch, Gergen, Heritage, Hollway, Kitzinger & Frith, Maybin, Potter & Wetherell, Wertsch]

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Cook, M. (2009). *Personell Selection: Adding Value Through People* Chichester: Wiley-Blackwell.

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F12

Short Paper

Values Based Recruitment for Nurse Education

Dr Helen Scott, Michelle Abad & Jade Williamson, University of Worcester

Strand **Psychological Assessment at Work**

Introduction – Values Based Recruitment in the NHS

Following reports of poor care conditions found in Stafford hospitals and the surrounding area between 2005 and 2008 (Francis, 2013), an increased focus on a culture of care and compassion in nurse recruitment, training and education has been emphasised. It has been argued that qualities such as care and compassion cannot be taught (Barker, 2013), placing an emphasis on the importance of recruiting and selecting the right individuals into nursing education programmes. Driven by the need to ensure quality care, the Department of Health (DOH, 2012) have developed the '6Cs' (care, compassion, competence,

communication, courage and commitment), as a vehicle for delivering the values within the NHS Constitution. Furthermore, the HEE has a key objective to include VBR in the national standard contract for pre-registration nursing programmes as one way of ensuring the right people with the right skills and behaviours are appointed to meet the needs of the people they care for. This study therefore describes and evaluates the development of a VBR process for selection on to a pre-registration nursing programme within a single UK university.

For entry into graduate programmes in the UK, face to face engagement is a requirement (Nursing and Midwifery Council, 2010). However, there appears to be a lack of evidence supporting one particular approach to values based recruitment; in a recent review of evidence it was concluded that detailed evaluations of VBR measures are required. This study aims to provide such an evaluation. The development of the process was informed by the multiple mini interview approach developed within the medical and nursing fields (Eva et al., 2004; Perkins, Burton, Dray & Elcock, 2012) as well as the assessment centre literature from within occupational psychology.

In designing a VBR process, occupational psychology has much to offer by way of expertise in evaluating reliability and validity. It is therefore important that as a profession we engage with a politically and nationally high profile project. Involvement in this particular project ensured the design and development of a robust multiple method selection centre with clear indicators of the 6Cs to be used as criteria for selection. The objective of this study is to provide an initial evaluation of the VBR process.

Candidate Reactions

The first level of evaluation of a selection process is that of face validity – does the process look reasonable to the candidates being asked to participate in it? Candidate reactions are therefore an important stage of evaluation. Perceptions of procedural justice are seen as key predictors of identifying who might challenge selection decisions as being unfair. Furthermore, it has been argued that candidate reactions to a selection process will be important in attracting and recruiting the best candidates to the program (HEE & Work Psychology Group, 2014). Assessment centre type approaches have typically been received well, with candidates seeing the process as wider ranging and highly job related (Fletcher, 1991). It is therefore hypothesized that a well designed assessment centre used for a VBR process will be positively received by candidates.

Hypothesis 1: A multi method selection process with clear criteria based on the 6Cs will be positively received by candidates.

Construct validity

Construct validity is an important part of evaluation as the process needs to measure what it claims to measure. When identifying a potential avenue for investigating construct validity, Emotional Intelligence (EI) was identified as a potential variable. EI is described as the capability of an individual to perceive, to understand and also utilise emotions in the self and others in an effective manner (Salovey & Mayer, 1990). Nurses are often in the frontline of care provision attending to both patients and the families where emotions are often at its peak; hence compassion among nurses is vital (Heffernan, Quin-Griffin, McNulty & Fitzpatrick, 2010) and alongside this, emotional intelligence is also one of the important qualities among nurses (Bellack, 1999; Rankin, 2013). Rankin (2013) suggests that there is a significant relationship between EI and student nurses' performance in relation to clinical performance, academic performance and retention. This suggests that when EI is high, nurses' performance is also good, therefore EI may be considered as a measure of a nurse's compassion. The 6 Cs are qualities that are highly associated with being emotionally intelligent (Lyon et.al., 2013), therefore it would follow that scores of the 6Cs would be related to EI.

Hypothesis 2: There will be a positive correlation between the scores of the 6Cs during selection and a self report measure of EI.

Hypothesis 3: Candidates selected for entry on to nurse education will have significantly higher EI than those rejected.

Method

Participants were applicants to a single University pre-registration nursing programme (adult, child and mental health branches). The Values Based Recruitment process took place in the 2013/14 UCAS cycle, beginning in November 2013 and concluding in June 2014. The process consisted of reviewing the UCAS application form and shortlisting candidates based on previous academic performance and experience. Candidates were then invited to a selection centre, before which they were sent a link to an online self-selection tool entitled the 'Values Exchange' (Seedhouse, 2008). Within the Values Exchange, candidates were required to work through a decision making process in relation to an ethical dilemma. For example, candidates may be asked to consider the case of an elderly neighbor whom they would visit in hospital. While in hospital, the neighbour's cat has died and candidates are asked to consider the issues raised by this when deciding whether or not to disclose this information to the neighbour. Once they had given their own considerations and submitted their responses, they were able to see how others responded. This therefore gave an opportunity to compare their own approach to that of their peers. Candidates were encouraged to use this as a learning experience and reflect on their suitability for their chosen course.

On attending the selection centre, candidates were shown a short video made by current students of the University about life on the course, to provide a realistic preview and encourage self-selection. They then took part in a test of numeracy as well as five values based exercises (role play, interview, group exercise, two written exercises). None of the exercises required clinical knowledge or experience. For example, the role play asked the candidate to conduct a five minute conversation with an upset patient (or parent, in the case of a candidate for Child Nursing). The service user or carer playing the role of the patient was trained, to ensure standardization, and was instructed to be 'unable to remember' their diagnosis.

The values based exercises were scored by trained assessors including academic staff, clinicians, occupational psychology students and service users. Scoring involved inspection of indicators of the 6Cs (care, compassion, competence, communication, courage and commitment) before giving a score ranging from one to five. Each of the values was assessed at least twice and a mean score calculated. The possible total values based scores therefore ranged from five to 30. Candidates for adult nursing were required to reach a score of at least 18 out of 30, with those for child and mental health requiring higher scores (24) due to the more competitive nature for fewer places on these courses. Minimum scores from the numeracy test and for literacy, from the written exercises, were also required as essential NMC criteria.

To evaluate the candidate reactions to this process, questionnaires were distributed to all candidates that were completed anonymously. Questions related to the experience of the selection day and exercises, as well as perceived fairness of each of the exercises. Questions were rated on a 4-point Likert-type scale, from 1 (Strongly disagree) to 4 (Strongly agree). 466 candidates completed these questionnaires immediately upon completion of their selection centre, before any selection decisions had been made.

To evaluate construct validity of the selection centre, a self report measure of emotional intelligence, the short form of the Trait Emotional Intelligence Questionnaire (TEIQue SF; Petrides & Furnham, 2009) was distributed to those candidates who volunteered to take part in this research. This scale consists of 30 items scored on a 7-point Likert type scale from 1 (Completely Disagree) to 7 (Completely Agree). A global EI score was calculated, with possible scores ranging from 30 to 210. A stream of research from Petrides has demonstrated the strong reliability and validity of this tool. To ensure ethical conduct, candidate numbers rather than names were used to ensure confidentiality. Furthermore, it was explained that participation (or not) in this research would not affect the selection decision. As a result of particular care in avoiding coercion, a smaller sample size ($n = 127$) was obtained for this part of the research.

Results

Of the 466 candidates completing the candidate reactions questionnaire, 462 (99%) rated their experience of the process positively (either agree or strongly agree), with only 1% rating this negatively. With regard to the content of the exercises being perceived as fair and effective, 98% of the 466 candidates rated these items positively. This supports the hypothesis that a thorough process based on clear criteria will be perceived positively by candidates.

With regard to construct validity, the mean scores from the values based ratings of the 6Cs were correlated with the global EI scores ($n = 127$). Notably, a moderate positive correlation was found between

Compassion and EI ($r = .37, p < .01$), supporting hypothesis 2. Finally, an independent t test was conducted to test the difference in EI between those selected and those rejected at the selection centre stage. A significant difference indicated that those being selected were higher on global EI than those rejected at this stage.

(These are preliminary analyses due to the very current nature of the research).

Discussion

The almost unanimously positive candidate reactions are pleasing. They reinforce the message that occupational psychology has much to offer in the national agenda of VBR for the health professions. Furthermore, the inclusion of the pre-selection centre self assessment activities in combination with the candidate reactions to the process give this university a strong chance of attracting the very best candidates to nurse education (Carlson, Connerly & Mecham, 2002).

With respect to construct validity, using the 6Cs as a framework of selection criteria appears to be a valid step forward in the VBR development process. Many authors have discussed the difficulties of using trait EI measures within selection. Although it is argued as an important attribute for a nurse to hold (e.g. Rankin, 2013), using a self report measure of EI has been called into question, with socially desirable responding reducing the effectiveness of such a method (HEE & Work Psychology Group, 2014). To use a selection centre approach which appears to be measuring these important attributes is an important finding at this stage of the research.

In terms of future research, the next steps are logically to evaluate the predictive validity of the VBR process in determining good performance in both the academic and clinical contexts. This research is planned to commence in September 2014. It is vital that the profession of occupational psychology aims to demonstrate real impact in terms of these outcomes, ultimately at the level of benefits to patients. However, selecting the right individuals is only part of the story. These individuals need to be supported by strong leaders who can bring about a change in culture, so that a truly compassionate environment of care can be achieved. The future avenues for investigation reach well beyond that of personnel selection.

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F13

Should we stay or would we go?

Stephen Reicher, St Andrews University
Strand **Well-being and Work**

Psychology is often marginalised from debate of social issues, even when psychological processes lie at the core of the relevant issue. This was certainly true of the Scottish Independence Referendum. In this talk I shall examine how the independence debate hinged on a series of psychological issues, notably those surrounding the issue of leadership. These include the way leaders framed issues of risk, the roots of trust and distrust in different leaders, and the relationship between leader effectiveness and the dynamics of social identification. As part of this examination, I will highlight both how the psychology of leadership can benefit from an engagement with the referendum campaign and how an understanding of the referendum campaign can benefit from an engagement with the psychology of leadership. I will conclude by arguing that we must address the neglect of psychology in the social/political domain and I will offer some modest proposals for putting psychology at the heart of the debate come the next referendum.

F14

Deliberate and Decisive or Thinking Fast and Loose? Why Behavioural Science is key to better people insight.

Convenor: John McGurk, Head of CIPD Scotland

Strand **Research Design, Analytical Techniques and Practical Applications**

Psychologists are at the cutting edge of behavioural science. Their insights on how we think, act and decide are vital to understanding the workplace. The profession has generated many useful workplace insights, yet HR and learning practitioners have not engaged as much as they should. Indeed much insight has been retailed by others primarily journalists who are able to translate insights into useful nuggets and fused these with other disciplines such as management and economics. Economists such as Zak and Ariely have merrily used psychological and cognitive research to weave a new science of behaviour. Many psychologists are uncomfortable with the validity of such work.

CIPD is driving new future set of capabilities which includes a deep engagement with behavioural science. Dr McGurk though a non psychologist has in his previous roles been at the forefront of developing insight round neuroscience and cognitive science. He believes with CIPD's CEO Peter Cheese that Psychology needs to be fused with those of other disciplines to provide the new capability for HR and business.

Over the 100 years plus that CIPD has been in existence psychology and its related disciplines has played a major part in the understanding how we build better work and working lives. In the next phase of the workforce as technology, demographics, wellbeing and other challenges manifest themselves we need to be aware of the changing nature of knowledge in this area and how psychology, people management and learning can connect better.

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Standard Paper

Analysing and Addressing the Human Factors in Incidents at Work

Richard Scaife, The Keil Centre Limited

Strand **Work Design, Organisational Change and Development**

This session has been proposed following discussions with colleagues in DOP Scotland who have seen an increase in interest in human factors within a number of sectors in Scotland, especially healthcare.

The session would have a strong applied focus on the use of a set of human factors analysis tools to understand the underlying causes of human failures in accidents and incidents in a range of industry sectors.

The session would include the background to the analysis tools and their development based upon mature theoretical models and methods that describe human information processing (e.g. Wickens, 1992), human error (e.g. Shorrock and Kirwan, 2002) and ABC Analysis (e.g. Daniels, 1999). Worked examples from a range of sectors representative of Scottish industry will be used to demonstrate how the tools are used to develop recommendations for improving safety within the workplace.

In order to build interactivity into the session, a number of points in the session will require audience participation:

- Introduction to the difference between intentional and unintentional unsafe acts with the audience being required to indicate how often they have engaged in generic intentional and unintentional behaviours. The intention is to demonstrate that human error is extremely common, and that when humans behave unsafely it is less likely that they have done so deliberately (approximate 5 minute exercise).
- Audience participation in how to define a behaviour from within an incident sequence, including specifying a simple behaviour in order to determine whether it was intentional or unintentional (approximate 10 minute exercise).
- The audience will also see the results of an analysis, and if there is time this may be achieved using a video segment followed by analysis of the video segment with input from the audience.

We see that the proposed session will fit well with the overall conference theme of Learning, Sharing, Impacting for several reasons:

1. It describes an approach that organisations have used to learn lessons from incidents that have occurred and identify ways of preventing future incidents occurring because of the same underlying causes. Lessons on how this has been achieved will be shared as part of the session also.
2. Given the increased interest in human factors in Scotland, this would also be an opportunity to share some practices from other industries with those present at the conference.

We have chosen to submit this proposal for the “Work Design, Organisational Change and Development” strand of the conference. The tools that we will be describing have been successfully employed to improve workplace safety in a number of organisations, but have also had additional impacts on organisational culture, design of the physical work environment and ergonomics, and in risk management.

The tools that will be described are novel in the sense that there is no other suite of tools for incident investigation that pulls all of these areas of psychology and human factors together in one place. This was independently verified by a guidance report produced by the Energy Institute on investigating and analysing human and organisational factors aspects of incidents and accidents (Energy Institute, 2008). The approach also won the DOP Practitioner of the Year Award in 2006 for its two developers.

We believe from DOP Scotland that there will be a number of industry sectors represented at the 2015 conference who will not have had access to information on this approach before. It describes a concept that is central to any business – reducing accidents and incidents. In the past the tools have been applied primarily by organisations that are aiming to maintain the safety of their own personnel. We expect that there may be a number of delegates at the 2015 conference who are interested in approaches to maintain the safety of third parties, including members of the public, and therefore this session could be of significant interest.

Although the session will describe methods that have been applied to understanding behaviours that result in safety issues, accidents and incidents, the tools and techniques that will be described can be applied to any type of behaviour. For example, they could be used to examine management decisions, financial decisions, or even the behaviours of members of one’s own family (the author suggests caution be applied with the latter). Therefore as well as being of potential interest to industry, the session should also be of interest to the public. In addition, any tools or approaches which have the potential to improve public safety when they interact with organisations using such approaches are likely to be of interest.

We will provide printed handouts of the presentation materials.

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F16

Standard Paper

What does the evidence say about how best to prevent “wrong doing” and enable “right doing” in the police and other organisational settings?

Dr Almuth McDowall, City University London/Birkbeck University of London, **Prof Indira Carr**, **Dr Sophie Russell**, **Dr Emily Glorney**, **Dr Robert Nash**, **Prof Adrian Coyle & Natasha Bharj**, University of Surrey
Strand **Research Design, Analytical Techniques and Practical Applications**

Introduction

Wrongdoing and how to prevent remains a key issue across organisational settings, cultures and contexts. Certain organisations, such as the police, are the focus of particular scrutiny and public attention given their function to enforce public law and order. In the UK, policing has undergone fundamental changes, which included cut backs and efficiency savings mandated by the Government Spending review (Home Office, 2012), but also a £50 million Home office fund to transform policing through “innovation and collaboration” (Home Office, 2014). Nonetheless, the role of the police in society and also its organisational functioning continues to be subject to public critique. This has been fuelled by recent high profile cases including the Levenson Inquiry (2012) which detailed how officers and other public figures were involved in a hacking scandal, or the “Plebgate” affair (BBC, 2013), where UK police officers were found guilty of misconduct, having made false allegations against an MP, and also the Hillsborough Independent Panel (2012) which concluded that the police and emergency services had deflected any blame for any failings.

Much of the extant evidence and reviews are concerned with corruption. An early and now ‘classic’ review by Newburn (1999) outlined that corruption is pervasive, not confined to any groups or individuals, and that radical reform was needed. Miller (2003) provided a categorisation of different corrupt activities including conspiring with criminals, theft/ violence or spurious claims of illness, highlighting that the full extent is difficult to gauge due to a lack of reporting and/ or relevant data. Such data published by the Independent Police Complaints Commission (IPCC) shows that the number of allegations against the police had dropped by 8% between 2010/11 and 2011/12, whereas the 2012 HMIC Public Police Survey found that 74% of respondents said that they would trust the police to tell the truth, but also that 46% believed that corruption remains a problem.

Given that current evidence would suggest a need for reform in the policing sector and the need for ‘better’ activities to prevent wrongdoing, it is important that these are rooted in evidence. To this extent, it was our objective to locate, scrutinise and integrate across scholarly disciplines and organisational contexts to answer the following four distinct, but interrelated research questions:

- Which interventions or practices (if any) have been shown to cause a reduction in unethical behaviour in policing and non-policing organisations?
- Which interventions or practices (if any) are promising in reducing unethical behaviour in policing and non-policing organisations?
- In which contexts are these interventions or practices most likely to be effective?
- Which factors have been shown to be associated with (un)ethical behaviour in policing organisations (e.g. the organisational culture, perceptions of organisational justice)?

Rapid Evidence Assessment

Due to various organisational constraints, our research had to be conducted in a confined time period between August and November 2013. For this reason, we conducted a rapid evidence assessment (REA) of extant literature as opposed to a full systematic review. Such REAs have the objective to elicit what is already known about a particular issue and also what is not known through a transparent and replicable method akin to full systematic reviews (SRs) however also stipulating limitations on particular aspects of the review process.

Given that wrongdoing and unethical behaviours are lack unified definitions, our REA commenced with a three week scoping phase to refine the protocol based on an assessment of known reviews in the field and consultation with subject matter experts. We determined two broad approaches for examining this topic considering (a) preventative approaches including organisational leadership, ethical/ professional standards and good governance to facilitate ‘right doing’, in other words effective and ethical behaviours, and (b) remedial approaches to counteract and address any wrongdoing. We searched across a range of

databases¹⁶ to include evidence across disciplines, including criminology, sociology, psychology and management studies and undertook a manual search of policing-specific sources of grey literature. In summary our inclusion criteria were:

- (a) Papers published In English in or after 1990
- (b) A published abstract or summary was available
- (c) Relevant to at least one of the research questions
- (d) Were available within the timeframe for inspection of the abstract and reading of full text
- (e) Contained data and evidence either directly (empirical study) or indirectly (a review), stipulating systematic reviews, Meta-analyses, or tightly controlled study for review question 1.

Our search terms for each search are summarised below (* denotes a 'wild card'). In total, we generated 4,127 results, and another 5,612 from the National Police Library (note: we had to adapt our search here due to limited database functionality).

Row for search	Set 1: positive Terms	Set 2: Negative Terms
Tier 1	police OR policing OR law enforcement	police OR policing OR law enforcement
Tier 2	organi* justice OR organi* citizenship OR ethic* OR role model* OR transformational leadership OR good governance OR moral* OR integrity OR polic* culture OR organi* culture OR *competence	corrupt* OR misconduct OR transparen* OR legitima* OR organi* justice OR whistleblow* OR integrity OR crim* OR report* OR polic* culture OR abuse OR complaint OR wrongdoing OR compliance OR *competence OR accountability OR brutal* OR organi* culture
Tier 3	Satisfaction OR performance OR engagement OR management OR training OR awareness OR incentive OR proactive OR outcome* OR development OR intervention OR facilitat*	management OR intervention OR reform OR oversight OR disciplin* OR training OR development OR outcome* OR sanction OR punish ²
Tier 4	meta analysis OR meta-analysis OR rapid evidence assessment OR systematic review OR randomised controlled trial OR controlled trial OR field experiment OR quasi experiment ³	meta analysis OR meta-analysis OR rapid evidence assessment OR systematic review OR randomised controlled trial OR controlled trial OR field experiment OR quasi experiment

We imported the first 100 results from each database into electronic reference management software to remove duplications and screened first by abstract, and then by full text as necessary against thorough inclusion criteria, by evaluating the quality of the study, the source (e.g. peer versus non peer reviewed), the population and sample size, methods used and also the clarity of any interventions and outcome criteria. This process reduced the number of relevant papers dramatically to 43 results in total, as our scrutiny elicited that papers were either highly context relevant but lacking in methodological quality (e.g. correlational data only, small sample sizes) or more high in quality but not necessarily discussing specific interventions or practices. An additional 15 papers were identified through consultation with several subject matter experts¹⁷ from law, psychology, sociology, criminology and the college of policing to ensure we also included unpublished material. Each of the 58 papers was read and reviewed independently by a team of seven researchers, where each researcher first read and evaluated the paper independently, and then both reviewers agreed on a synopsis.

Findings

¹⁶ We searched ASSIA, Business Source Complete, Criminal Justice Abstracts, IBSS, Psychology Cross Search, Sociological Abstracts, Scopus and Open Grey as well as the National Police Library Catalogue, and manual search of electronic sources (Web-sites) which were policeombudsman.org, policefoundation.org, nij.gov, ipcc.gov.uk, policeombudsman.org, policefoundation.org, www.gov.uk

¹⁷ NB: as the output from the study is currently being finalised and being peer reviewed, it is likely that the total number of studies included will have changed slightly at the time of presentation at the conference.

The studies we elicited varied considerably in terms of the operational variables, the conceptual frameworks (if any could be identified), the organisational context (policing, other organisations, or combined samples) and also the outcome measures, making a quantitative integration impossible. We hence undertook a narrative synthesis of the results.

Which interventions or practices (if any) have been shown to cause a reduction in unethical behaviour in policing and non-policing organisations, or are at least promising?

Our literature search did not reveal any robust studies which allow strong inferences about “what works” to reduce wrong doing. This is a significant gap in the literature. Our search did elicit one study which at the time had not yet undergone peer review however, which elicited promising evidence that direct monitoring could provide substantial reductions in use of police force and subsequent complaints filed (Ariel & Farrar, 2013). With regards to promising literature, we elicited one rigorous meta-analysis which outlines “what predicts” unethical behaviours, defined as “any organizational member action that violates widely accepted (societal) moral norms” (Kish-Gephart, Harrison & Trevino, 2010, p. 2), hence is concerned with the antecedents of unethical choices rather than specific interventions. Overall, the analysis revealed that ethical choices are inherently complex, where individual (“bad apples”), moral (“bad cases”) and organisational characteristics (“bad barrels”) influenced unethical choices independently, showing that all three aspects need to be tackled in organisational practice. Other papers included reviewed particular training activities, for instance a study from a military context (Seiler et al., 2011) which showed that training using moral dilemmas improves moral decision making with sustained effects in this context.

Another approach was profiling to determine which individuals may be more at risk of wrong doing and hence target any activities, however we did not find any controlled intervention studies which would document that this actually results in a reduction.

In which contexts are these interventions or practices most likely to be effective? Which factors have been shown to be associated with (un)ethical behaviour in policing organisations (e.g. the organisational culture, perceptions of organisational justice)?

The evidence reviewed shows that the prevention of wrongdoing is contingent on environmental factors, including a strong ethical work climate (Weber & Gerde, 2011) and workplace supervisors leading by example (Resick et al., 2013). Other reviews and commentaries took an even wider systemic perspective to also advocate civilian oversight for policing organisations.

Conclusion

Overall, our conclusion is simple – there is no magic trick in other words one particularly successful activity for preventing wrong doing in policing or other organisations. The solution lies in a combination of strong codes of ethics and conduct, their robust enforcement, training in moral decision making and reasoning but also notably strong and ethical leadership. Particularly the latter aspect is a matter of embedding into day to day organisational practice, rather than one off isolated activities. Whilst we appreciate that our review did not elicit a ‘one size fits all solution, we hope that policing- and other organisations will engage with the complexity of the evidence to work towards sustainable good practice.

How does our submission address the conference theme and how will it appeal to the audience?

We contend that we have taken Rousseau and Briner’s (2011) baton to synthesize and integrate existing evidence, notably taking a cross disciplinary perspective. Wrong doing continues to be a ‘hot topic’ and is likely to be of interest to a wide audience, we will be able to demonstrate impact at the time of the conference by pointing delegates to the publication arising from our review (being finalised at the time of writing). The last 10 minutes of our session will concentrate on interactive debate on the value of “codes of conduct” and their potential value to practice, given that these are now being introduced across organisational contexts (e.g. police, but also media industry, publishers and so on).

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F17

Short Paper

Leading and Managing Volunteers: Saving Lives at Sea

Dr Fiona Beddoes-Jones, The Cognitive Fitness Consultancy

Strand **Leadership, Engagement and Motivation**

This paper is one of the outcomes of the current DOP / Leadership Development Programme (LDP), individual projects for the 2014/15 cadre, and if required, could be split into TWO short papers to make up a short symposia: the first paper would be the Literature Review and the second paper a more in-depth exploration of the two case studies comparing the MCA and the RNLI.

What are the main psychological theories, models and research underpinning your session?

There is now a burgeoning literature surrounding why people are motivated to volunteer, why they continue to volunteer and why they stop volunteering, or change allegiance to another volunteering organisation. This paper explores and summarises that literature with particular emphasis on the effective leadership and management of volunteers. It goes further to explore two real world UK case studies of organisations which rely on their volunteer workforce to save lives. (This was the best way I could answer this question, although I'm aware that it hasn't answered it very well! Personal identity theories are relevant, as are social identity theories, as is the psychological contract and theories of motivation and personality).

*How does your proposal linking with the main conference theme of **Learning, Sharing, & Impacting?***

Due to constricted budgets and an ever increasing focus on cost reductions and financial management, many organisations within the third (charity), sector are beginning, if they don't already, to rely heavily on the support and contribution of an unpaid, volunteer workforce to achieve their objectives. By sharing new findings, this paper enables new learning, shares it publicly and impacts on practice by adding to the evidence base relating to the effective leadership and management of volunteers.

Why is the submission appropriate for the particular strand you have chosen?

It relates specifically to the effective leadership and management, engagement and motivation of volunteers.

What do you consider to be the most novel or innovative aspects of the ideas being presented?

The RNLI most often compares itself to another similar sized NGO, The British Red Cross. This is the first piece of case study research to compare the RNLI directly with the MCA with volunteers as its focus.

Why do you think conference delegates will find the paper or session stimulating and useful?

Its relevance to leadership and the two high profile organisations it explores. The findings on identity, well-being, longevity and the relevance of the psychological contract and how it's not yet well understood or utilized within the Third Sector will all be of interest to DOP members.

What might the public find interesting about your paper or session?

The findings on identity, well-being and longevity as they relate to volunteering, (although these are not new findings and are already recognised).

If any, what materials do you intend to make available to attendees and in what format?
Paper handouts on the day and a pdf copy of the slides post-delivery of the session.

Leading and Managing Volunteers: Saving Lives at Sea

The literature surrounding volunteering is global and burgeoning. It includes 'emergency' volunteering after a crisis event such as an earthquake, tsunami or terrorist attack like the twin towers in New York in 2001, faith-based or politically motivated volunteer activities such as leaflet dropping, to the 2 hours a week a retired pensioner may contribute on the till at their local charity shop. It includes everything from sitting unpaid on local or national charitable bodies such as educational or sporting associations, children and adult support organisations, institutes such as the Institute of Directors or the British Psychological Society, to risking one's life to help others as is the case with volunteer fire fighters, coastguards and RNLI lifeboat crews.

Due to constricted budgets and an ever increasing focus on cost reductions and financial management, many organisations, especially those within the third (charity), sector are beginning, if they don't already, to rely heavily on the support and contribution of an unpaid, volunteer workforce to achieve their objectives.

Volunteering can be defined as, *"unpaid help given to another person not a member of one's family,"* Verduzco, (2010, p. 49). Snyder and Omoto, (2008, pp. 3), define volunteer work as consisting of, *"freely chosen and deliberate helping activities that ... are engaged in without expectation of reward or other compensation and ... that are performed on behalf of causes or individuals who desire assistance."*

From an oblique perspective, the literature can broadly be divided into three parts, known as the Volunteering Process Model, (Musick and Wilson, 2008, and Wilson, 2012). The first part concerns what motivates people to volunteer in the first place; why do people volunteer? The second part concerns those factors which motivate people to continue to volunteer and how to lead and manage them effectively, and the third part concerns why people stop volunteering or switch their allegiance from one volunteering capacity to another.

This paper firstly summarises and simplifies the literature across all three parts of the volunteering lifecycle. Secondly, in case study format, it compares two UK emergency service lifesaving organisations which predominantly operate at sea and rely on their volunteer workforce to achieve their daily purpose and objectives. The first is the Maritime Coastguard Agency, (aka Her Majesty's Coastguard), which is publicly funded and staffed by civil servants, supported by 3,500 volunteers. The second organisation is the Royal National Lifeboat Institute, (RNLI), a registered charity staffed by more than 50,000 volunteers which needs to raise in excess of £15 million per year in donations to achieve its purpose. The paper thirdly details the implications for practice regarding the effective leadership and management of volunteers including the recruitment and selection and professional training of those of managers and leaders who are tasked with the leadership and management of a volunteer workforce; a metaphor which can be described as 'herding cats'.

Implications for Practice

This paper is relevant to the effective leadership and management of ALL volunteers within ALL organisations, formal and informal, organised and ad-hoc, who rely on volunteers and volunteering to achieve their objectives.

There are wider implications for the recruitment and selection and professional training of those of managers and leaders who are tasked with the leadership and management of volunteers, (some of whom, the literature reveals, receive little or no training in how to achieve that effectively), compared to the leadership and management of paid employees whose contract of employment and psychological contract, set them apart differentially from the organisations' volunteer workforce where generally only the psychological contract is relevant, even though this is rarely recognised, acknowledged or actively managed.

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F18 Qualification in Occupational Psychology Session 3

Supervising the BPS DOP Qualification

Rosemary Schaeffer & Karen Moore, *QOccPsych Qualification Board*

Strand **Well-being and Work**

This session is for potential supervisors to find out what is involved in supervising candidates as they work towards the Qualification. What are you taking on? How much time is involved? Current supervisors are welcome to attend and share their insights!

F19

Short Paper

A comparison of personality and values differences across countries

Matt Stewart, Pearson Talent Lens

Strand **Work Design, Organisational Change and Development**

Introduction

With the increasing emergence of global teams (individuals from various countries working in a collaborative unit) research around country level differences in personality and values is become ever more pertinent. For managers, knowing cultural norms of their global staff can be a significant aid to improving effectiveness and collaboration between team members. This large-scale cross-cultural study sets out to examine differences in personality, interpersonal values and personal values across twelve countries:

Australia

Brazil

Denmark

France

Germany

India

Netherlands

Norway

Singapore

Sweden

UK

US

Personality traits describe the relatively stable characteristics that influences behaviour (Gordon, 2014), someone's unique resources that characterise the way in which they behave on a daily basis (i.e. resistance to stressful situations or the degree to which someone is comfortable with social interaction). Values are important sources of motivation and also impact a person's behaviour at work (Gordon, 2014). Values describe what a person likes in life and their ideals. They shape an individual's expectations around what's needed in a work environment. Values are important, as a lack of convergence between an individual's value system and their work situation could lead to de-motivation and poor performance. There are two types of values that are evaluated in this study. Firstly, personal values, relating to an individual's internal beliefs and interpersonal values, relating to someone's interactions with other people.

A number of studies have reported differences across countries on both personality traits (e.g., Costa, Terracciano, & McCrae, 2001; Schmitt, Allik, McCrae, Benet-Martinez, Alcalay, Ault et al., 2007) and values (e.g., Schwartz and Bardi, 2001; Oishi, Hahn, Schimmack, Radhakrishnan, Dzokoto, Ahadi ,2005). Unlike

previous research, this study sets out to also compare the size of the differences between personality traits, interpersonal values or personal values. This leads to the following hypotheses:

1. Are differences between countries more pronounced for personality traits, interpersonal values or personal values?
2. If there is an area where the differences are most pronounced, what are those differences between countries?

Method

The SOSIE questionnaire of personality and values (Gordon, 2014) was used to evaluate country level differences in characteristics. This questionnaire is composed of 80 items, measuring 8 personality traits via 31 items, 6 personal values with 25 items and 6 interpersonal values via 24 items. The definitions of each scale are below:

PERSONALITY TRAITS

Dominance

Evaluates ascendancy, the ability to persuade and convince, as well as self-assurance.

Responsibility

Evaluates diligence to tasks, professional conscience and an individual's sense of duty.

Stress Resistance

Evaluates emotional stability and stress management.

Sociability

Evaluates social and relational comfort, extraversion and feeling at ease within a group.

Cautiousness

Evaluates precaution, reflection and the ability to take a step back before acting or making a decision.

Original Thinking

Evaluates ease when thinking about complex issues, engaging in stimulating discussions or with all things new and original.

Personal Relations

Evaluates tolerance, understanding of others, open-mindedness and the ability to challenge one's beliefs.

Vigour

Evaluates the energy, dynamism, efficiency and working power.

INTERPERSONAL VALUES

Support

This value focuses on the importance given to friendliness, help, support and understanding in the workplace.

Conformity

This value deals with the importance given to respecting rules and social norms.

Recognition

This value focuses on the importance given to social recognition, in terms of praise, consideration or status.

Independence

This value focuses on the importance given to independence, with regard to actions or decisions.

Benevolence

This value deals with the importance given to generosity and helping others.

Power

This value focuses on the importance given to power and the desire to lead others.

PERSONAL VALUES**Materialism**

This value deals with the importance given to profit, material goods or immediate results.

Achievement

This value deals with the importance given to reaching personal goals, progression and success.

Variety

This value focuses on the importance given to change, variety, novelty or even a certain degree of risk.

Conviction

This value deals with the importance given to personal commitment to decisions.

Orderliness

This value deals with the importance given to structured organisations, procedures and methods.

Goal Orientation

This value addresses the importance given to having clear, precise and relatively stable objectives.

The questionnaire was adapted for usage in each country and archival data based on individuals completing the assessment for research, selection and development purposes was analysed. Sample sizes are in Table 1 below.

Table 1: Sample sizes for the 12 countries.

Country	N	Country	N	Country	N
Australia	427	Germany	476	Singapore	229
Brazil	448	India	157	Sweden	250
Denmark	247	Netherlands	232	UK	300
France	4063	Norway	146	US	154

Results

The means of the twenty scales were compared across countries. Table 2 shows the number of statistical differences between countries with large or medium effect sizes for each scale. Effect size was calculated using Cohen's d (Cohen, 1988). The Rate column indicates the percentage of 'Large + Medium' effect sizes found as a percentage of the comparisons made. For example, for Dominance, 27.3% of the comparisons made between countries were significant with Medium or Large effects found.

Table 2: Scales differences between countries

Scales	Medium	Large	Large + Medium	Rate
1. Dominance	12	6	18	27.3
2. Responsibility	21	10	31	47
3. Stress Resistance	7	1	8	12.1
4. Sociability	10	3	13	19.7
5. Cautiousness	17	6	23	34.8
6. Original Thinking	14	9	23	34.8
7. Personal Relations	4	0	4	6.1
8. Vigour	17	4	21	31.8
	102	39	141	26.7
9. Support	21	21	42	63.6
10. Conformity	15	24	39	59.1
11. Recognition	19	4	23	34.8
12. Independence	21	15	36	54.5
13. Benevolence	13	8	21	31.8
14. Power	15	13	28	42.4
	104	85	189	47.7
15. Materialism	23	10	33	50
16. Achievement	4	8	12	18.2
17. Variety	9	2	11	16.7
18. Conviction	13	0	13	19.7
19. Orderliness	16	0	16	24.2
20. Goal Orientation	20	10	30	45.5
	85	30	115	29
Total	291	154	445	
%	22	11.7	33.7	

Overall, the rate of differences was 26.7% across comparisons for the Personality Traits, 47.7% for the interpersonal values and 29% for the personal values. This indicates that the differences between countries are more pronounced for interpersonal values than personal values or personality traits.

The mean differences on all scales across countries are displayed in Tables 3 and 4.

Table 3. Means and SDs by country (Australia to India)

Scales	Australia N=427		Brazil N=448		Denmark N=247		France N=4 063		Germany N=476		India N=157	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
1. Dominance	18.6	4.8	20.5	4.0	20.0	5.6	19.0	4.1	20.1	5.5	20.8	4.3
2. Responsibility	22.4	3.7	23.3	3.9	20.5	4.2	24.0	3.5	21.2	3.5	23.0	3.6
3. Stress Resistance	20.5	4.6	18.6	4.6	20.0	4.6	21.7	4.2	20.1	4.4	20.6	4.3
4. Sociability	16.2	5.1	18.2	4.0	17.4	5.5	17.4	3.6	16.4	5.4	17.9	3.8
5. Cautiousness	19.9	5.1	19.7	4.7	18.1	5.1	21.3	4.1	17.5	4.1	20.2	4.3
6. Original Thinking	22.6	4.8	21.8	4.2	22.0	4.4	22.9	4.0	24.8	4.0	23.2	3.7
7. Personal Relations	18.4	5.3	18.0	5.0	18.1	5.2	19.3	4.1	17.2	4.0	19.7	4.2
8. Vigour	21.5	4.5	22.0	4.3	20.8	5.1	22.0	3.8	23.5	3.6	22.1	4.3
9. Support	15.2	3.9	13.3	3.6	14.5	3.8	10.8	4.0	14.4	4.0	9.0	3.8
10. Conformity	8.3	4.3	11.5	4.9	8.3	4.1	12.3	5.3	6.6	4.1	12.1	5.6
11. Recognition	10.4	4.3	11.3	4.4	8.5	4.1	7.7	3.7	9.9	4.5	10.5	4.5
12. Independence	13.2	4.8	10.4	5.2	15.1	4.8	12.6	4.8	16.3	4.4	11.8	4.8
13. Benevolence	14.5	5.3	15.9	4.4	14.7	4.6	15.7	4.0	10.3	5.0	13.9	4.7
14. Power	10.4	4.5	9.6	4.6	10.8	5.1	12.9	5.4	14.5	5.4	14.7	4.2
15. Materialism	11.6	4.7	12.0	3.6	9.5	4.7	7.7	3.7	11.0	3.6	9.5	3.7
16. Achievement	15.5	4.6	14.1	4.5	15.6	4.7	14.5	4.7	15.1	4.3	14.7	4.4
17. Variety	11.9	6.6	11.3	6.0	12.2	6.2	12.4	5.5	12.1	5.7	10.5	6.2
18. Conviction	10.5	4.4	10.3	3.8	12.4	4.5	11.9	4.0	11.3	3.5	11.6	3.2
19. Orderliness	11.6	5.1	10.7	4.4	12.6	5.4	11.6	4.6	11.4	4.5	13.5	4.9
20. Goal Orientation	13.9	4.6	16.6	4.7	12.6	4.3	16.9	4.1	14.1	5.2	15.2	5.2

Note. Highest and lowest means for each scale are in bold (red for the lowest and blue for the highest).

Table 4. Means and SDs by country (Netherlands to US)

Scales	Netherlands N=232		Norway N=146		Singapore N=229		Sweden N=250		UK N=300		US N=154	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
1. Dominance	21.0	5.0	19.9	4.5	16.4	5.1	20.3	4.9	19.9	5.0	20.8	4.0
2. Responsibility	21.6	3.2	19.9	4.3	21.2	4.4	20.3	4.5	22.2	3.6	23.1	4.3
3. Stress Resistance	21.2	3.9	19.6	4.8	20.3	4.3	20.2	4.8	21.2	4.1	21.4	3.7
4. Sociability	19.0	3.9	17.8	4.5	14.4	5.5	17.5	4.5	17.6	4.6	17.9	4.4
5. Cautiousness	18.6	3.7	17.8	5.5	19.9	4.5	17.5	5.1	18.2	4.5	19.5	4.2
6. Original Thinking	23.1	4.3	21.2	5.1	19.3	5.4	23.3	4.6	23.6	4.2	23.3	4.2
7. Personal Relations	19.6	4.5	18.9	5.0	18.0	4.9	18.6	4.9	18.4	4.7	19.6	4.6
8. Vigour	22.5	4.3	20.0	4.9	19.5	5.3	21.3	4.7	22.9	4.3	22.7	3.9
9. Support	12.5	3.9	14.3	3.1	12.5	4.0	15.2	3.4	12.7	4.6	11.5	4.1
10. Conformity	8.6	4.5	8.1	5.0	11.6	4.8	6.5	4.4	10.4	5.5	10.1	5.4
11. Recognition	8.0	4.4	10.0	5.0	10.6	5.1	9.2	4.4	11.3	4.4	10.2	4.4
12. Independence	15.0	4.3	13.5	4.7	13.0	4.8	15.1	4.7	11.1	4.7	12.5	5.2
13. Benevolence	13.1	4.6	15.1	4.4	13.2	5.3	14.6	5.2	13.5	5.1	14.9	5.4
14. Power	14.9	5.6	11.0	5.3	11.1	5.5	11.5	5.4	13.0	5.0	12.8	4.9
15. Materialism	10.4	4.4	9.4	4.7	12.4	4.2	8.8	4.2	9.6	4.4	12.0	4.8
16. Achievement	15.1	4.5	15.6	4.7	12.0	4.2	16.2	5.1	15.6	4.6	15.2	4.6
17. Variety	10.6	6.4	13.3	6.9	11.0	5.7	15.2	6.6	12.7	6.8	10.9	6.7
18. Conviction	12.5	4.2	10.8	4.4	10.5	4.0	12.7	4.1	11.7	3.9	10.9	4.0
19. Orderliness	12.0	4.3	13.5	5.6	13.7	4.9	10.6	4.7	11.5	4.8	11.8	4.4
20. Goal Orientation	14.4	3.7	12.5	4.9	15.6	4.3	11.5	4.5	13.9	4.5	14.2	4.7

Note. Highest and lowest means for each scale are in bold (red for the lowest and blue for the highest).

Focusing on the six Interpersonal Values, the following patterns are evident:

Support – Australia and Sweden highest means, India lowest mean

Conformity – France highest mean, Sweden lowest mean

Recognition – Brazil and the UK highest means, France lowest mean

Independence – Germany highest mean, Brazil lowest mean

Benevolence – Brazil highest mean, Germany lowest mean

Power – Netherlands highest mean, Brazil lowest mean

Conclusions

Results show significant differences evident across countries for personality traits, interpersonal values and personal values. Interestingly, the most pronounced differences were found in the Interpersonal Values area, perhaps suggesting that these factors are most likely to be different across global teams. Whilst each global team member will have a unique profile of personality traits and values, there are local value trends that should be considered. For example, someone in Australia is much more likely to value Support than someone working in India. Conformity is likely to be more important to those working in French offices than those in Sweden and so on. Whilst personality traits and personal values are important, Managers should pay particular consideration to the interpersonal values of their team in order to ensure effective management and team collaboration.

Submission Questions

1. What are the main psychological theories, models and research underpinning your session?

This session is underpinned by previous research exploring country-level differences in personality traits and values.

2. How do you see your proposal linking with the main conference theme of Learning, Sharing, Impacting?

This session should be a good learning opportunity to enhance delegate's knowledge of cross-cultural differences. Many do, or will, work in global teams where this type of research is applicable, so it should have an impact.

Why is the submission appropriate for the particular strand you have chosen?

This session fits into the Work Design, Organisational Change and Development strand, under the topics: globalization; organisational culture; and teamwork. These are all issues that will be discussed in the session.

What do you consider to be the most novel or innovative aspects of the ideas being presented?

This research compares personality traits and values across countries, rather than purely personality traits or values. This allows for the assessment of the size of differences between personality traits versus interpersonal and personal values, which is a novel idea.

What might the public find interesting about your paper or session?

Many people have to work in teams with international colleagues. I think there will be interest in the finding that Interpersonal Values are so different across countries.

If any, what materials do you intend to make available to attendees and in what format (e.g., printed hand-outs, electronic copies of slides)?

Electronic copies of the slides.

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F20

Short Paper

Achieving recovery from work: Its importance in physical health, mental well-being and work outcomes.

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Strand **Well Being and Work**

Introduction

The research on recovery from work has been increasing steadily over the past few decades. The concept of time to rest after work to recuperate from life's daily stressors and thereby achieve work-life balance is more of an ongoing discussion. However, with the increase of technology, smart phones, the Internet, working at home and telecommuting; the boundaries between work and life have become ever more tenuous. This can make it more difficult to step away from work situations at the end of a day to allow the

'down time' that is needed to be able to deal with those new and continuing situations that arise as part of the work environment, when next at work.

The workplace is intense and as proposed in the Effort-Recovery (E-R) model (Meijman & Mulder, 1998), individuals invest considerably over the short-term in work situations that involves changes at the physiological, behavioural and subjective levels. When they remove themselves from that environment, they expect their psychobiological systems to return to a normal state and so recover from those particular stressors. If this does not occur, their well-being could decline and the need for recovery increases. Another model, the conservation of resources model (Hobfoll, 1989) states that people tend to conserve and protect their resources, such as personal characteristics and energies. When these resources are threatened, stress could occur; in addition if people cannot gain new resources, they become vulnerable. In this respect, if individuals are not able to recover during the time away from work, it may require them to draw on more of their resources to work with the macro and micro work stressors that may occur (Binnewies *et al.*, 2009); thus not being able to recover adequately. It has become more challenging to detach from the workplace due to the advances in technology that has blurred the lines between these two distinct environments, but it is essential to detach and regain the work-life balance that is required to recover from work-related stress (Park, 2013).

The inability to detach from work has been linked to subjective health complaints (Sluiter *et al.*, 2003), cardiovascular disease (Van Amelsvoort *et al.*, 2003), and higher fatigue levels (Sonnentag *et al.*, 2008); which might be comparable to the established detrimental effects of working long hours (van der Hulst, 2003). Sleep is considered as the most restorative function in recovery (Demerouti *et al.*, 2013), and conversely the inability to recover is linked to sleep problems (Sonnentag & Fritz, 2007). Other research shows that individuals who are able to detach from the workplace, achieve higher levels of satisfaction with life and job performance (Fritz *et al.*, 2010), while relaxation is associated with increased positive affect (Stone *et al.*, 1995).

The present research explored recovery on various outcome measures, such as affective well-being (Warr, 2012), using measures of depression, anxiety and stress, work characteristics, e.g., social support, and personal resources. It is expected that these variables will allow an exploration of the various constructs. The research question for this study asked, "Would recovery from work increase workers' well-being, and their performance and job satisfaction levels?"

Method

Participants and Procedure

Employed women were invited to participate in an online questionnaire and asked to complete scales to measure: depression, anxiety, stress, positive affect, negative affect, recovery from work, perception of health, job autonomy, general self-efficacy, work locus of control, job satisfaction, work climate, skill discretion, social support, satisfaction with life, work performance and demographic information. The women ($N = 461$) were slightly older on average ($M = 51.38$, $SD = 6.26$), were more likely to be married/living with a partner than single or divorced ($M = 2.06$, $SD = .56$), had around two children each ($M = 1.92$, $SD = 1.40$), worked an average week ($M = 36.07$, $SD = 10.97$) and had worked for their respective organisations for just over a decade ($M = 11.20$, $SD = 8.55$).

Data Analysis

The data were subjected to reliability and correlation analyses. The size of the sample allowed the use of hierarchical multiple regressions to test the research question as stated.

Results

The correlation analysis showed that the relationships were in the expected direction, such as recovery from work contributing to lower anxiety ($r = -.42$, $p < .001$) and depression ($r = -.52$, $p < .001$), while those with higher recovery levels reflected being able to attain higher sleep levels ($r = .31$, $p < .001$).

Hierarchical multiple regressions were conducted for depression, anxiety, stress, performance, job satisfaction and satisfaction with life. Background variables i.e. age, marital status and number of children, were entered on the first step, the second step consisted of recovery from work, amount of sleep gained, frequency of exercise, perception of health and amount of alcohol consumed. The third step included work climate, skill discretion and social support. On the fourth step work locus of control and job autonomy were entered, with the fifth and final step including positive affect (PA) and negative affect (NA).

The model assessing depression was statistically significant ($\text{Adj } R^2 = .57$, $\Delta R^2 = .23$, $F[14, 332] = 33.96$, $p < .001$), and reflected that recovery from work ($\beta = -.14$, $p < .01$), influenced depression. Other predictors were job autonomy ($\beta = -.12$, $p < .01$), positive affect ($\beta = -.22$, $p < .001$), and negative affect ($\beta = .51$, $p < .001$). Similar results were found for anxiety, with the overall model achieving significance ($\text{Adj } R^2 = .44$, $\Delta R^2 = .21$, $F[14, 332] = 20.07$, $p < .001$). Recovery from work remained significant until the fourth step of the model ($\beta = -.24$, $p < .001$). The amount of sleep gained was important in reducing anxiety ($\beta = -.11$, $p < .05$), as was exercise ($\beta = -.16$, $p < .01$), and the work climate ($\beta = -.14$, $p < .01$). For stress, the overall model reflected that recovery from work was a predictor ($\text{Adj } R^2 = .54$, $\Delta R^2 = .22$, $F[14, 332] = 30.17$, $p < .001$). It remained significant throughout the model ($\beta = -.29$, $p < .001$), as did the consumption of alcohol ($\beta = .10$, $p < .05$).

The exploration of perception of health showed overall significance ($\text{Adj } R^2 = .28$, $\Delta R^2 = .05$, $F[14, 323] = 10.46$, $p < .001$), with recovery from work remaining significant throughout the model ($\beta = .17$, $p < .01$), as did the frequency of exercise ($\beta = .23$, $p < .01$). The other predictors in the model were social support ($\beta = .14$, $p < .05$) and positive affect ($\beta = .28$, $p < .001$). The examination of performance showed that recovery is an important component ($\text{Adj } R^2 = .28$, $\Delta R^2 = .03$, $F[14, 332] = 10.72$, $p < .001$), remaining significant throughout the model ($\beta = .31$, $p < .001$), as did the amount of sleep that the participants were able to obtain ($\beta = -.21$, $p < .001$). The other predictors in the model were social support ($\beta = .24$, $p < .001$), which remained significant throughout the model, positive affect ($\beta = .14$, $p < .01$) and negative affect ($\beta = -.16$, $p < .01$).

Job satisfaction showed that recovery is an important component ($\text{Adj } R^2 = .71$, $\Delta R^2 = .01$, $F[14, 332] = 60.60$, $p < .001$). It was significant ($\beta = .28$, $p < .001$), as was the amount of sleep that the participants obtained ($\beta = -.21$, $p < .001$). The other predictors in the model were work climate ($\beta = .44$, $p < .001$), skill discretion ($\beta = .31$, $p < .001$), social support ($\beta = .19$, $p < .001$), work locus of control ($\beta = -.16$, $p < .01$) and job autonomy ($\beta = .27$, $p < .01$). Finally, while negative affect did not influence job satisfaction, positive affect did ($\beta = -.09$, $p < .05$).

The examination of satisfaction with life ($\text{Adj } R^2 = .38$, $\Delta R^2 = .10$, $F[14, 330] = 16.12$, $p < .001$) showed that recovery is an important component, as it was significant ($\beta = .35$, $p < .001$), as was the frequency of exercise ($\beta = .11$, $p < .05$). The other predictors in the model were skill discretion ($\beta = .20$, $p < .001$), work locus of control ($\beta = -.19$, $p < .001$), positive affect ($\beta = .31$, $p < .001$) and negative affect ($\beta = -.18$, $p < .001$).

Across all of the dependent variables, the background variables of age, marital status and the number of children were not contributing factors to physical health, mental well-being, performance nor job satisfaction, but did influence satisfaction with life.

Discussion

Recovery from work was a strong predictor across all of the outcome variables. In respect of depression, stress, perception of health and performance, it remained significant throughout the model and for the others achieved significance for most of the model. These results support previous research highlighting the relevance of recovery from work as an important component in maintaining well-being. The present study has shown that recovery from work should be considered as a resource that workers could use to support their well-being; the importance of resources within the work environment has been stated previously (Schaufeli *et al.*, 2009). These findings will be discussed further.

Limitations

This sample consisted only of women, which reduces its generalisation to the working population. Moreover, it is a cross-sectional study, which does not allow causation to be made. However, the sample was fairly large and the findings illustrate that recovery from work is an important construct to consider within the workplace.

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F21

Short Paper

How leadership and culture mediates the efficacy of strategic workplace bullying interventions.

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Strand **Work Design, Organisational Change and Development**

Workplace bullying presents a significant challenge for organisations. Practitioners have adopted a range of interventions to address this destructive problem. Despite widespread use by practitioners, the existing evidence for interventions lacks a robust foundation. Bullying prevalence levels have remained constant for over a decade with little sign of improvement. The study aims to outline a strategic approach to tackling workplace bullying and describe how leadership and cultural factors can act as enablers and barriers. The process and outcome evaluation of a single case study is provided to illustrate these factors during the implementation of a workplace bullying strategy.

Workplace bullying presents multi-level and complex challenges to organisations (Bloom, 2012). Strategies that adopt integrated layered solutions are recommended (Rayner and Mclvor, 2008; Stevens, 2002). However, the evidence base demonstrating that these strategies effectively tackle workplace bullying is lacking with an absence of any one single evidence based solution. This study aims to highlight, through examining a single case study, how leadership and cultural factors can mediate the efficacy of an organizational level strategy.

Introduction/Background

Workplace bullying is a significant and persistent problem in many organisations healthcare organisations (Carter et al, 2013; Fevre et al, 2008; Hoel and Cooper; Rayner, 1999). For individuals, being exposed to bullying can have serious implications for mental and physical health including depression, helplessness, anxiety, and despair (Adams, 1992); suicide ideation (Einarsen, 2011a); psychosomatic and musculo-skeletal complaints (Einarsen et al, 1994) and risk of cardiovascular disease (Leymann, 1996). Despite

these multi-level concerns there remains a lack of an evidence base for workplace bullying interventions in general (Illing et al, 2013).

Workplace bullying strategies have been conceptualized as 'complex interventions' (Anderson, 2008; Gray et al, 2008). Complex interventions consist of multiple human components (in this case; perpetrators, targets, bystanders, interventionists etc), that interact in a non linear fashion to produce outcomes which are highly context dependent. Leadership and organizational culture have been recognized as two contextual factors that mediate the effectiveness of workplace bullying interventions (Illing et al, 2013). Leadership can ensure that an organizational intervention thrives or stalls (Meloni and Austin, 2011; Hoel and Giga, 2006). Organisational cultures may permit or even indirectly reward negative behaviours (Salin, 2003) limiting the efficacy of any intervention.

Aims and Objectives

The aims of the current paper were:

- To critically consider how leadership and culture mediate the efficacy of a strategic workplace bullying intervention
- To describe conducting a process and outcome evaluation on a complex intervention
- To identify contextual factors that can be considered in order to improve the effective implementation of workplace bullying interventions

Method

An NHS organization designed an evidence based strategy to address the bullying of trainee doctors, including interventions targeted at the organizational, team and individual level.

A process evaluation and an outcome evaluation were conducted on the strategy. The process evaluation investigated factors that affected the progress and implementation of the interventions (e.g. barriers, enablers, contextual factors) using questionnaires, telephone interviews and analysis of documentary evidence. A baseline questionnaire was administered to assess the prevalence and impact of bullying, including on psychological wellbeing and sickness absence.

Findings

The organizational strategy and intervention will be described and results from the baseline questionnaire and the process evaluation will be presented. The questionnaire results indicated that many trainee doctors experience and witness bullying. Workplace bullying were associated with a range of negative outcomes, including higher levels of psychological distress and sickness absence, as well as lower job satisfaction and lower satisfaction with the leadership climate. Qualitative and quantitative findings also suggest that bullying may negatively affect patient care.

The process evaluation identified enablers and barriers to the progress of the strategy as well as potential solutions. Several factors have been identified as critical for intervention success including senior leadership support, organizational ownership of the project and the importance of external facilitation and expertise.

Conclusions

Findings confirm the mediating role that leadership and culture can play in the implementation and overall efficacy of a strategic workplace bullying intervention. This offers some explanation as to the limited impact of many existing approaches. The importance of using process and outcome evaluations is evident as key contextual factors can only be measures through monitoring process issues. The lack of evidence from practitioners and academics as to the factors that contribute to intervention efficacy mean that these findings offer to broaden the existing limited knowledge base. Practitioners should be mindful that the organizational conditions such as culture and leadership are conducive to enabling interventions to thrive before embarking on any planned strategy. Further implications for future research will be discussed.

Links to the conference theme

Linking to the conference theme of 'learning, sharing and impacting' this research aims to describe the contextual factors around a large scale intervention. To those involved in related practitioner work this will be particularly relevant as it will be framed within a real world case study. Our understanding of tackling workplace bullying remains limited and the study is original as it offers one of the few studies to provide insight into an intervention at an organizational level. The use of a process and outcome evaluation will

offer a greater insight into implementation issues as well as efficacy and will be of interest to organisations faced with workplace bullying concerns or attempting to evaluate complex interventions.

F22 Keynote Session

The Organisational Change Agent of the Future

Dr Helen Bevan, *Chief Transformation Officer, NHS Improving Quality*

In this talk, Helen Bevan will explore the skills and capabilities that change agents are likely to need in the future; for a world where the power of hierarchy is diminishing in the face of complexity and change is happening faster and becoming more disruptive. The key new competencies are the ability to connect people who are currently disconnected and to curate, rather than create, knowledge for change. She will describe the new breed of change leaders who are rewriting the rules and leading change from the future.