

# EWOP.ΣPRACTICE

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## Editorial

### Angela J. Carter

Hello readers,

Welcome to the 8<sup>th</sup> issue of EWOP In-Practice with papers on the application of Work and Organizational Psychology. We hope you will enjoy this issue containing four journal articles and a new feature *Latest News*; containing an interview clarifying the progress of the Specialised Certificate in Work and Organizational Psychology. As an added feature of this edition we are offering individual paper downloads for each of the articles and features. You will find individual links to each of the papers on the contents page.

We open with a fascinating paper from *Yasen Dimitrov and Ivo Vlaev* about an organizational intervention to improve lunch-time food selection by workers in a factory in Bulgaria. The nudge intervention described shows promise in shaping healthy eating behaviours that you may want to apply in other contexts.

Next, we have the opportunity to examine a new method of exploring the relationship between extrinsic and intrinsic job satisfaction and well-being. *Rosanna Maxwell* demonstrates the importance of employees' attribute to different aspects of job satisfaction that is likely to influence impact on well-being. There are a number of interesting implications of these findings that will interest readers concerned with organizational well-being.

We follow with an absorbing study from *Charlotte Axon and Anna Topakas* looking at leadership emergence. This paper moves beyond notions of personality to explore the role of motivations, self-evaluation and values in becoming a leader. There are numerous practical recommendations that will interest readers looking at emergent leaders and talent management.

Staying with the topic of leadership *Nora Kariluoma* and her colleagues from Finland explore Leader-Member Exchange (LMX) finding that personality, core self-evaluation and communication skills are more likely to influence the quality of relationships between managers and workers than demographic variables. The authors examine these in findings within the context of organizational culture.

Finally, we offer *Latest News* describing the prepress of the Specialised Certificate in Work and Organizational Psychology. Salvatore Zappalà, Chair of the Specialist Certificate Awarding Committee, is interviewed by EAWOP's Executive Committee member and Treasurer José Ramos.

We hope this collection of papers and *Latest News* will stimulate thinking about your own practice and day-to-day working activities. We thank the authors and contributors for their insightful inputs to In-Practice. We hope that these articles will inspire you to reflect and comment. You can contact the authors directly by email to continue discussion; or use EAWOP's LinkedIn Group (with the author's permission).

In-Practice is a journal that is for you, the EAWOP Practitioner and Scientist; and is made by your contributions. Please think about writing for the journal yourself. We publish papers about the practice of Work and Organizational Psychology, your reflections and discoveries, new and well-tested applications, and comments about things that may not work too well. Through this discussion and exploration Work and Organizational Psychologists will strengthen their community of practice. As for the length of article, a two to three page contribution is perfect; or more if you wish. The format for the papers is described in the style guide associated with this page. If you would like to discuss any ideas for a contribution (either an article or *Latest News*) or send us an outline we would be happy to comment on this and assist you in the preparation of your article.

Best wishes for the up and coming festive season. We look forward to seeing you in Dublin in May, 2017 and bringing you more articles about the application of Work and Organizational Psychology.

A handwritten signature in black ink that reads "Angela Carter". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

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## **Nudging workers to make healthier food choices**

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### **Abstract**

This article describes a nudging-type behaviour change intervention as part of an organization's global initiative promoting healthier life-style and eating habits for employees. Consumption was influenced by re-arranging food in the canteen so that healthier foods were more visible and accessible; activating mental representations associated with eating. Outcomes showed increased consumption of nuts and fruit during the intervention revealing the usefulness of behavioural science in assistance of corporate policies. This is one the first reports of the effects of a nudging-type intervention in an organizational setting.

### **Introduction**

Recent years have seen enormous interest amongst researchers, psychologists, managers and policy makers for new insights from behavioural sciences. This includes behavioural economics where sophisticated techniques promise an unparalleled window into the engine of our motives and choices (Glimcher, Camerer, Fehr & Poldrack, 2009; Vlaev & Dolan, 2015). In contrast to economic models of rational choice that suggest we respond to information and price signals; insights from behavioural economics advise that human behaviour is greatly influenced by the context or environment within which many of our decisions are taken. This is because the human brain uses a number of heuristics to simplify our decision-

making; but these rules can also lead people into predictable systematic biases and errors (Kahneman, 2003; 2011) in their choices.

Increasingly new developments in behavioural economics are becoming matched by a willingness of behavioural scientists to translate the practical implications of their work. Since Thaler and Sunstein's (2008) book *Nudge: Improving Decisions about Health, Wealth, and Happiness* the applied interest towards behavioural economics has drastically increased. The authors describe Nudge theory as a type of behaviour change approach that uses different psychological effects to influence our choices. Nudges are a class of behaviour change techniques (Michie et al., 2013) defined as "Any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives" (Thaler & Sunstein 2008, p. 6). Hollands and colleagues (Hollands et al., 2013, p. 3) define nudges as techniques involving altering stimuli within micro-environments with the intention of changing behaviours in that environment, that require minimal conscious engagement, and are not individually tailored. For example, changing the size of plates or placing less healthy foods further away from customers may influence the amounts and types of food consumed (Rozin et al., 2011). Similarly, King and colleagues (King et al., 2016) show that the smell of washing liquid can motivate hand hygiene compliance in clinical environments. In terms of the dual-process theory of human cognition (Evans, 2008; Evans & Stanovich, 2013) nudges are thought to work through automatic rather than reflective, psychological processes.

In recent years nudging has become a popular subject of academic study and policy initiative (Dolan et al., 2012; Vlaev, King, Dolan, & Darzi, 2016). Derived from behavioural economics nudging seeks to improve people's welfare-related choices by using environmental design instead of legislation. Today we can see usage of nudging interventions regularly in governmental policies concerning, for example, health or environmental issues (Dolan et al. 2010; 2012; Marteau, Hollands & Fletcher, 2012) in the: financial field and loan collection (Hallsworth, List, Metcalfe & Vlaev, 2015); correcting risky life-style behaviours (Burgess, 2012); and in charitable giving (Small et al., 2007). However, the art of nudging is still searching for a place in the corporate world as part of Human Resource (HR) activities.

The encouragement of healthy eating, and nudging healthy food choices in particular, are issues gaining in importance; not just because of the obesity syndrome, but also because many governments are assuming that the healthier their citizens, the more efficiently they can function and contribute to the public good (Marteau, Ogilvie, Roland, Suhrcke & Kelly, 2011). The same logic will be relevant for the health and welfare of employees in any company or organization.

During 2012-2013 the managerial board of Liebherr group agreed a global strategy for improving health, wellness and life-style among their employees. The strategy included easy access to various sport and wellness activities. An important part of that strategy was modification of dining in the factory; including the meals provided in them. The fridge factory, employing over 1,000 people in Radinovo, Bulgaria implemented the global strategy in detail. Many staff took up sports' activities like yoga lessons, football, table tennis tournaments, and dancing. The canteen menu

was improved offering the workers a wider selection of healthy foods and drinks. For better traceability of staff eating habits the company issued plastic cards holding credits for free meals available at the beginning of every month. If credits were not used by the end of each month for meals; employees could take some snacks, sweets, soft drinks and foodstuffs instead. Despite all the improvements, however, the consumption of the healthy foods, such as fresh fruit and nuts, remained low and did not increase from the first month of the programme implementation until its end in 2013. In order to increase the consumption of healthier food the HR department supported by external consultants applied a nudge-type intervention.

### The Intervention

The intervention was based on the influence of priming, or triggering, aiming to influence impulsive consumption by the re-arrangement of meals at the food board; so that the healthier foods are more noticeable and accessible. Visibility of food stimuli can activate (or prime) specific mental representations associated with eating. Priming stimuli send excitatory signals between perceptual features and motor programmes in connection with behavioural schemata or motor habits (Strack & Deutsch, 2004). Thus, a behaviour can be altered when an intervention exposes the individual to priming stimuli such as words, sights and smells (see Dolan et al., 2012). A key finding informing our design is the importance of impulsive behaviour in creating healthy eating habits (Ng, 2012; Verdejo-Garcia, 2014); which is, paradoxically, based on the assumption that impulsivity is often prerequisite for overeating (Guerrieri, Nederkoorn, Jansen, 2008). The essence of impulsive eating is the urge to take the first food in the range of vision, often because the feeling of hunger is experienced subjectively stronger (Guerrieri, Nederkoorn, Schrooten, Martijn, & Jansen, 2009; Meule, 2013). Following this logic the healthy foods were lined up first in the canteen display. In that way, we targeted the employees with most impulsive behaviour or ravenous appetite, nudging them to have healthy foods as their first choice; thus targeting their impulsive (as the opposite to reflective) system for decision-making (Strack & Deutsch, 2004).

There is already developing evidence that making the healthy choice options more visible and accessible have proven effective in field settings. Recent studies have focused on provoking healthier eating in schools showing the effect of special buffet rearrangements. Hanks and colleagues (Hanks et al., 2012) conducted an experiment in which the healthy foods were placed on shelves with easy excess compared to less healthy foods. This study reports an 18% increase of healthy food sales as an effect of such rearrangements. Rozin and colleagues (Rozin et al., 2011) achieved similar results proving that with placing the unhealthy foods on difficult to reach places their consumption can be reduced. Related evidence is seen in the sales impact of displaying alcoholic and non-alcoholic beverages at end-of-aisle locations (Nakamura, Pechey, Suhrcke, Jebb, & Marteau, 2014). However, there are still few studies of interventions in organizational settings.

### Method

Re-arrangements were made in presenting foodstuffs in the factory canteen. Healthy options of nuts and fruit were placed on front shelves, while soft and soda drinks, biscuits and sweets were placed on the bottom shelves where they were less easy to

see. These arrangements were maintained for the whole period of the intervention (19 working days); with control measurements for 19 days being made when the previous presentation arrangements were in place. Thus, the study was carried out using a before and after design over two consecutive months.

On average 200 employees used the canteen every day; so following each employee's daily choice of food purchases would have been difficult. Instead we measured the aggregated purchases of fruit and nuts in the canteen. The primary outcome measures, as indicators of the effect, were the quantity (in terms of kilograms) of fruit and nuts sold in the canteen. Data was collected daily during the month before the intervention (i.e., serving as a control measure) and also during the month of the intervention. For the purpose of the data analysis, the unit of analysis was the day (i.e., 19 observations in each condition, 38 in total), while the outcome measure was the quantity of purchased foods in each category.

### Analyses

Differences between the control condition and the intervention condition were examined with non-parametric statistical analyses, because the outcome variables (quantity of purchased foods), measured daily, were not normally distributed according to the Kolmogorov-Smirnov test of normality for Fruit during Control ( $D = 0.28$ ,  $p < .001$ ) and Intervention respectively ( $D = 0.25$ ,  $p = .003$ ); and also for Nuts during Control ( $D = 0.21$ ,  $p = .026$ ) and Intervention ( $D = 0.22$ ,  $p = .013$ ).

In line with the hypothesis that in the intervention condition consumption of healthy foods would increase, a one-tailed non-parametric test was used to test the null hypothesis that one population median was greater than or equal to the other; allotting all of the alpha to testing the statistical significance in the direction of interest and thus increasing the power of detection. A significance level of 0.05 was chosen (the  $p$ -value provides an objective measure of the strength of evidence which the data supplies in favour of the null hypothesis, and is the probability of getting a result as extreme or more extreme than the one observed if the proposed null hypothesis is correct).

### Ethical approval

All procedures were performed in accordance with the ethical standards of the institutional and national research committee and with the 1964 Helsinki declaration and its later amendments of ethical standards. Informed consent was obtained from all participants included in the study.

## Results

The intervention effect was measured by comparing the purchase of fruit and nuts before and during the intervention. Table 1 below presents the daily consumption of fruit and nuts during the month before the intervention and for the month during intervention.

**Table 1. Daily Consumption of Healthy Food Before and During the Intervention**

Healthy Food	Daily Consumption			
	Before Intervention		During Intervention	
	Mean	SD	Mean	SD
Nuts (kg)	3.23	0.73	3.82	1.33
Fruits (kg)	128.11	34.82	145.06	29.97

The Mann–Whitney U test revealed that the employees consumed significantly more fruit during the intervention condition compared to the control period,  $Z = 2.32$ ,  $p = .011$  (1-tailed) and significantly more nuts during the intervention period,  $Z = 1.91$ ,  $p = .026$  (1-tailed) when compared to the control period.

### Discussion

The intervention showed a significant increase in consumption of fruit and nuts during the month of the intervention suggesting factory workers were encouraged to make healthier decisions. Even though we did not follow individual workers to measure whether the manipulation affected healthy eating overall, increasing the overall consumption of healthier food is known to improve health in the long-term (Oyebode, Gordon-Dseagu, Walker, Mindell, 2014). This outcome is in line with the organizational policy our intervention was aiming to support suggesting nudge approaches can be applied to support organizational strategy and intervention.

Retention of higher levels of consumption of fruit and nuts could be interpreted as an indication for habit formation. We recognise as a working definition of habit formation as the repetition of behaviour in stable context, indicating the extent of which decision-making about that behaviour is reduced to automation (Wood & Neal, 2007). Commonly accepted methods of measuring habits is by assessment of past behaviour repeatability, manifested at the present situation (Ajzen, 2002). However, repeating a pattern for a month is not a proof for such automatised behavioural responses. But, how long does it take to form a habit? We have not come across clear evidence, or a solid definition, and several authors debate this issue (Verplanken, 2006; Lally, van Jaarsveld, Potts, & Wardle, 2010). However, in the organizational field there are many factors that will distort, twist, intensify or enhance the effects of this type of intervention; meaning such a debate could not easily be resolved. On the other hand, using specially designed nudge interventions we have an opportunity to influence behaviours related with issues important for many different organizations. They could be in the area of safety procedures in heavy industries, or supporting ‘green causes’, or volunteering in charity initiatives embraced by the socially active organizations. In each of those cases influencing even small percentage of the employees could be a major factor for implementation of corporate rules, initiatives or policies.

A research limitation of this study is the absence of a control group comparison who were not subjected to the effects of the nudge intervention. However, in the real line of consulting work, it is almost impossible to follow all the requirements applicable for laboratory experiments conducted in controlled environments. After all, the purpose of our intervention was to influence the healthy behaviour of as many employees as possible, and taking away that opportunity for any of the employees would have been against the company's values and culture. Nevertheless, we used the findings of the 'before' period as a control; an activity used in large group interventions in a non-controlled environment (Kirk, 1982). Future research should use longer follow-up measures (e.g., three to six months later) in order to establish that behaviours have been maintained.

### Conclusion

More and more often, modern organizations are facing different challenges associated with internal values, missions or strategies that employees are not overly enthusiastic to embrace and follow. The specialist working in the field of Business Psychology or HR have already understood that directive approaches rarely produce any significant effect in terms of behaviour change, in that context. Therefore, there is growing need for different unconventional methods to trigger different behavioural responses; including techniques that influence at a subconscious level such as priming. We have described a priming intervention that was, in the short-term, successful at changing factory workers eating habits in their canteen food selection. We conclude there are many possibilities for application methods of modern behavioural science to support corporate change policies.

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# **A New Way of Examining Job Satisfaction and Employee Well-Being: The Value of Employee Attributed Importance**

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## **About the Author**

Rosanna Maxwell completed her MSc in Organisational Psychiatry and Psychology at the Institute of Psychology, Psychiatry and Neuroscience, King's College London in 2015; this paper is based on her master's dissertation. She has a keen interest in interventions in work practices to increase employee well-being and promote positive business impact.

## **Abstract**

This study proposes a new way of examining the link between employee well-being and job satisfaction through evaluating which aspects of satisfaction employees deem important. For example, if employees believe recognition for good work is important, however, are dissatisfied with the amount recognition they receive this will detrimentally impact employee well-being compared to employees who do not think this feature of satisfaction to be important. By examining employee attributed importance organizations could to more effectively target interventions to improve employee well-being by focusing on features of satisfaction their employees consider important.

## **Introduction**

In the challenging and evolving economic climate of today's business it is crucial for organizations to nurture an effective workforce to ensure their survival (Todnem, 2005). A major factor contributing to the ability of organizations to cope with relentless turbulence is the promotion of satisfaction and employee well-being promoting effective adaptation to change; and ultimately a more productive workforce (Stride, Wall & Catley, 2007). However, within the relationship of satisfaction and well-being, current measures fail to account for different employees finding certain aspects of satisfaction more important than others. For instance, an employee with sole responsibility for children may value flexibility in the workplace more highly than an employee with financial responsibilities for whom rate of pay may be a priority. The degree to which these different needs are addressed by an organization are likely to influence the level of satisfaction experienced by employees, and this may have a direct impact on employee well-being.

This paper examines the complex concepts of employee well-being and job satisfaction and the relationship of these concepts to overall job satisfaction. It is critical to examine the importance employees themselves attribute to features of satisfaction and the impact this may have on employee well-being. By considering these multi-faceted relationships, interventions can be identified and employed to

promote the development and maintenance of an efficient workforce, ultimately enhancing productivity and adaptability to the changing organizational climate.

### Employee Well-Being

The way people feel at work is a critical factor for any organization to examine, not only in view of the humanistic aspects, but also with regard to the economic burden resulting from decreased well-being. Decreased well-being is associated with sickness absence, and lowered work productivity. The impact of these factors has an estimated cost to businesses of €1220 per employee per year with €400 due to absence from work and €710 attributed to lowered work productivity (European Agency for Safety and Health at Work, 2014; Sainsbury Centre for Mental Health, 2007). These huge costs highlight the necessity for organizations to examine employee well-being and evaluate the factors that influence these elements in order to maintain an optimal workforce.

It is critical to examine well-being in the context of the working environment to gain an accurate representation of its relationship to the workplace and therefore enabling organizations to effectively target interventions to promote optimal well-being within their workforce. General measures of well-being that relate to every-day life (often called context-free) are intentionally broad, and do not lend themselves easily to occupational research as they describe general well-being rather than well-being that is directly linked with employment (Warr, 1990). Evidence suggests that context-specific well-being measures account for more of the variance within results compared to context-free measures (Watson & Tellegen, 1985; Watson, Clark & Tellegen, 1988). Two specific dimensions focusing directly on well-being at work context are anxiety-contentment, and depression-enthusiasm in which feelings of depression combine low pleasure with low mental arousal, whereas feelings of anxiety combine low pleasure with high mental arousal (Warr, 1990; 2002; 2007; Rothmann, 2008). This difference between pleasure and arousal underlines the need to examine the two constructs individually and provides a further dimension to enable organizations to enhance their workforce (Holman, 2002). Research has shown that although the two dimensions of anxiety and depression are significantly correlated, their differential influence and interaction with other features marks their importance to be examined separately (Dobson, 1985; Rothmann, 2008; Warr, 1990; 2002).

### Employee Job Satisfaction

It is crucial for organizations to assess employee job satisfaction, since low satisfaction may initiate detrimental responses amongst the workforce, resulting in significant economic burden. Satisfaction has been found to be consistently linked with levels of employee performance, with decreased satisfaction leading to decreased performance (Judge, Thoresen, Bono, & Patton, 2001). It is in an organization's best economic interest to promote satisfaction, since satisfied workers are more likely to deliver an increased level of performance. Although research has found a substantial link between satisfaction and performance, this relationship is far more complex than it was first supposed with evidence suggesting that well-being is a significant moderator within this relationship (Wright & Cropanzano, 2000; Wright, Cropanzano & Bonett, 2007). This marks the need to explore links between satisfaction and well-being.

Job satisfaction, and its critical relationship with employee well-being, has been extensively documented across the literature (e.g., Faragher, Cass & Cooper, 2005; Iaffaldano & Muchinsky, 1985; Judge, et al., 2001; Warr, 2009). Significant correlations between these two domains, showing employees experiencing low levels of satisfaction exhibit decreased well-being, and in particular reporting elevated levels of anxiety and depression (Faragher et al., 2005). The entwined, complex, moderating nature of the concepts of satisfaction and well-being emphasises their importance for study in an organizational context.

Just as it is critical for organizational research to focus on employing context-specific well-being, it is also important to evaluate satisfaction within the organizational environment. By examining these factors in context, a more accurate representation of the interaction between satisfaction and well-being can be realised; enabling organizations to more effectively target interventions to achieve an optimal workforce. A measure of satisfaction specifically designed for use within the working environment consists of fifteen distinct features: physical working conditions, freedom to choose your own method of working, fellow workers, recognition for good work, immediate boss, amount of responsibility, rate of pay, opportunity to use abilities, relations between management and workers, chance of promotion, the way your organization is managed, attention paid to your suggestions, hours of work, variety of work and job security (Warr, Cook, & Wall, 1979). Each of these features of the workplace has received extensive recognition of its impact on overall job satisfaction (Warr, 2007; 2009; Warr & Clapperton, 2010); with the elements of opportunity for skill use, variety of tasks, level of pay, contact with others and supportive supervision being found to significantly influence well-being (Abramis, 1994; Bakker & Demerouti, 2007; Baruch-Feldman, Brondolo, Ben-Dayan & Schwartz, 2002; Demerouti, Bakker, Nachreiner & Schaufeli, 2001; Ducharme & Martin, 2000; Greenberger, Strasser, Cummings & Dunham, 1989; Janssen & Van Yperen, 2004; Morrison, Cordery, Girardi & Payne, 2005; Sonnentag & Schmidt-Braße, 1998; Sparks, Faragher & Cooper, 2001; Terry, Nielsen & Perchard, 1993; Van Yperen & Janssen, 2002).

When considering employee well-being individual features of job satisfaction are of particular value as they can be distinguished as being intrinsic or extrinsic. Intrinsic job satisfaction refers to how employees feel about the nature of the job tasks themselves, while extrinsic satisfaction refers to how employees feel about aspects of the work situation that are external to the job tasks (Hirschfeld, 2000; Rothmann, 2008). Freedom to choose your own method of working, recognition for good work, amount of responsibility, opportunity to use abilities, chance of promotion, attention paid to your suggestions and variety of work represent intrinsic satisfaction while, examples of extrinsic items include physical working conditions, fellow workers, immediate boss, rate of pay, relations between management and workers, the way your organization is managed, hours of work, and job security (Warr et al., 1979). Research suggests that extrinsic factors create dissatisfaction when not met, but do not increase satisfaction beyond a threshold when they are met. However, intrinsic features of satisfaction, do generate further satisfaction when increased (Herzberg, Mausner & Snyderman, 1959; Herzberg, 1966).

Distinguishing between intrinsic and extrinsic features allows a further layer in the consideration of the relationship between job satisfaction and employee well-being to

be explored. Compared with extrinsic features, intrinsic features have been found to be more significantly associated with overall satisfaction and well-being (Campion, 1988; Houkes, Janssen, de Jonge, & Bakker, 2003; Lee & Allan, 2002; Taris, Feij & van Vianen, 2005; Xie & Johns, 1995). There is also a significant association between intrinsic satisfaction and the specific well-being measure of depression-enthusiasm (Warr, 1990). This may be of particular interest to organizations as it suggests they would benefit from tailoring their interventions toward intrinsic features of satisfaction to most effectively impact employee well-being, particularly on a scale of depression-enthusiasm. By examining satisfaction and well-being through the use of these composites, a greater depth of information and understanding of the relationship between job satisfaction and employee well-being is achieved.

### Why Employee Attributed Importance Matters

Although there is a significant relationship between satisfaction and well-being, the degree of importance employees place on different features of satisfaction may be a moderating factor. It is therefore crucial to examine the discrepancy between an employee's attainment of different features of job satisfaction and how important the employee feels each feature to be. Research suggests that the level of importance an employee attributes to varying aspects of job satisfaction may impact their overall satisfaction (Locke, 1969; McFarlin & Rice, 1992; Jackson & Corr, 2002). The more important an aspect is to the employee, the more it affects their overall satisfaction. When an employee believes a feature of satisfaction is important and they are satisfied with the feature, then the discrepancy between the two is small, positively impacting on satisfaction. However, when a feature of satisfaction is deemed important yet the employee is dissatisfied, the discrepancy between the two is large, negatively impacting satisfaction (Locke, 1969; McFarlin & Rice, 1992; McFarlin, Coster, Rice, & Cooper, 1995; Mobley & Locke, 1970). For example, if an employee thinks 'recognition for good work' is important to them and they feel they are experiencing a high amount of recognition in the workplace, this will positively influence satisfaction. Whereas if an employee thinks recognition to be important but feels they are not satisfied with the amount of recognition they receive, this will negatively impact satisfaction. Current research has failed to demonstrate that a discrepancy between the level of importance employees attribute to features of job satisfaction and their experienced job satisfaction directly influences overall satisfaction. Instead the discrepancy simply influences the single feature of satisfaction in question (Mobley & Locke, 1970). For example, if an employee considers 'level of responsibility' high in importance and is displeased with the amount they receive, this would only impact satisfaction for the individual feature, not overall experienced satisfaction. This lack of transference to overall satisfaction may be due to the way in which the discrepancy between importance and satisfaction is currently measured. Research has determined that single-item examinations of satisfaction do not hold the same reliability and validity as composite measures (Faragher et al., 2005; Oshagbemi, 1999; Warr et al., 1979). Therefore, it would be beneficial for research to employ composite measures of satisfaction to most reliably examine their impact on overall satisfaction. It would be in an organization's best interests to reliably identify the features of job satisfaction employees deem important to target more specific interventions and most efficiently increase satisfaction, marking this a key area for study.

Although there is a well-supported link between the importance individuals place upon features of satisfaction and satisfaction itself, the relationship between employee attributed importance and well-being is understudied. Research suggests that well-being is likely to be affected by the degree of importance an individual attaches to a feature of satisfaction. This implies that employees who perceive a particular feature of satisfaction, for example 'recognition for good work', as important will exhibit a stronger correlation between satisfaction and well-being in the presence or absence of that feature than those for whom 'recognition for good work' is less important (Warr, 2007). When a feature of job satisfaction is considered important by an employee and they experience a low level of satisfaction in that feature, this would detrimentally affect employee well-being. Whereas if the employee is experiencing low satisfaction in a feature they feel is unimportant, overall wellbeing is impacted less. By examining the discrepancy between features of job satisfaction and employee attributed importance to features of satisfaction and the impact this has on employee well-being, a further dimension is created and could be employed as a tool for organizations to ultimately achieve an optimum workforce.

### Research Question

The present study attempts to address a gap within current research that fails to account for how important employees feel features of satisfaction are and the impact this has on their well-being. This paper will investigate the relationship between job satisfaction and well-being, the relationship between employee attributed importance to features of job satisfaction and overall job satisfaction, and the relationship between the discrepancy of employee attributed importance and experienced job satisfaction has on employee well-being. For enhanced reliability each relationship will be examined utilising context-specific composite constructs of intrinsic, extrinsic and overall satisfaction, intrinsic, extrinsic and overall employee attributed importance, and well-being composites of depression-enthusiasm and anxiety-contentment. This new avenue of examination creates a greater scope, breadth and depth of information which can be accessed by organizations to more efficiently target interventions.

### Method

The current study consisted of a non-experimental, cross-sectional design, where participants were required to complete an on-line questionnaire using Survey-Monkey. Participants were volunteers and were offered entry into a £50 prize draw as an incentive.

### Participants

The sample comprised 151 employees of two professional organizations, both involved in defence, aerospace, safety and security technology, who remain anonymous in line with their corporate security measures. Twenty-four participants were excluded from the study as their responses had missing data; leaving a final sample of 127 people. Participants were aged between 21 and 66 years ( $M = 39.77$ ,  $SD = 11.63$ ), 83 were male and 42 female. The majority of participants attended higher education (78.4%) and categorised themselves as middle management or

supervisors (61.6%). Participants had been in their current occupation a matter of months up to 38 years ( $M = 2.32$  years,  $SD = 7.70$ ).

## Measures

The questionnaire examined job satisfaction, employee attributed importance to features of job satisfaction, employee well-being and specific demographic variables. Job Satisfaction was examined using the Warr, Cook and Wall (1979) Job Satisfaction Scale (JSS) was used. The JSS is a 15 item fixed-response measure of global job satisfaction consisting of two subscales which assess extrinsic (eight items) and intrinsic (seven items) aspects of the workplace. Intrinsic items explore freedom to choose your own method of working, recognition for good work, amount of responsibility, opportunity to use abilities, chance of promotion, attention paid to your suggestions and variety of work. Extrinsic items explore physical working conditions, fellow workers, immediate boss, rate of pay, relations between management and workers, the way the organization is managed, hours of work, and job security. Responses are noted on a seven-point Likert scale ranging from 1 (*Extremely Dissatisfied*) to 7 (*Extremely Satisfied*). Validity of the JSS has been extensively reported (Cook, Hepworth, Wall & Warr, 1981; Fields, 2002), and confirmatory factor analysis has established validity in occupational and industrial settings (Heritage, Pollock & Roberts, 2015). Research has found internal reliability for the scale overall satisfaction ranging from  $\alpha = .80$  to  $\alpha = .91$ , with the intrinsic subscale ranging from  $\alpha = .84$  to  $\alpha = .88$ , and extrinsic subscale to be  $\alpha = .76$  (Cook et al., 1981; Fields, 2002). The current study held comparable scores of internal reliability with  $\alpha = .92$  for the overall scale,  $\alpha = .89$  for the intrinsic subscale and  $\alpha = .83$  for the extrinsic subscale.

The importance employee' attributed to features of satisfaction was measured using an adapted version of the JSS (Warr, Cook & Wall, 1979) retaining the original features of the 15 item measure, with two subscales to assess extrinsic (eight items) and intrinsic (seven items) satisfaction with the seven point Likert response scale ranging from 1 (*Extremely Unimportant*) to 7 (*Extremely Important*). The adapted version of the JSS changed the wording of the questionnaire to reflect employee attributed importance to features of job satisfaction, rather than simply satisfaction itself. For example the JSS asks '*Please indicate how satisfied or dissatisfied you are with each of these features are in your present job*', whereas, the adapted JSS asks, '*Please indicate how important or unimportant each of these features are in your present job*' both using the same 15 items. Full copies of the scale can be obtained from the author. Internal reliability found in the current study was  $\alpha = .87$  for overall importance,  $\alpha = .76$  for intrinsic importance and  $\alpha = .81$  for extrinsic importance. A pilot study was conducted with 25 post-graduate students and an acceptable internal reliability of  $\alpha = .91$  was found.

Job-Related Well-being was examined using Warr's (1990) Job Related Affective Well-being Scale (JRAWS). The JRAWS includes sub-scales of anxiety-contentment (six items) and depression-enthusiasm (six items) measures of job specific well-being using a six-point Likert scale ranging from 1 (*Never*) to 6 (*All the time*). The JRAWS has been found to be significantly associated with job satisfaction (Van Katwyk, Fox, Spector, & Kelloway 2000). Internal reliability of depression-enthusiasm has been

found to range from  $\alpha = .71$  to  $\alpha = .90$  and anxiety-contentment has been found to range from  $\alpha = .71$  to  $\alpha = .90$  (Stride, Wall & Catley, 2007). The current study held comparable scores of internal reliability with  $\alpha = .86$  for anxiety,  $\alpha = .75$  for contentment,  $\alpha = .90$  for depression and  $\alpha = .91$  for enthusiasm subscales. Demographic variables examined were employee age, gender, education level, employment level and current tenure (in years). These variables were specifically included to account for theoretical significance and potential confounding influence (Boswell, Boudreau, & Tichy, 2005; Clark, 1997; Clark, Oswald & Warr, 1996; Glenn, Taylor & Weaver, 1977; Lee & Wilber, 1985; Ross & Reskin, 1992; Warr, 1992; Worrall & Cooper, 1998).

## Procedure

Participants were sent an e-mail from their Human Resources Department detailing the nature of the study along with incentives, risks, assurance of confidentiality and anonymity. Participants were given 24 hours to read the information, after which a second e-mail was sent with the link to complete the questionnaire. On completion participants were provided with an opportunity to enter their e-mail address to participate in a prize draw to win a £50 voucher.

## Analyses

Prior to the main analysis all variables were checked for missing values, outliers and violations of normality assumptions. Dummy variables were created for non-dichotomous items within demographics including: gender, education level and employment level.

Pearson's correlational analysis was run to examine associations between job satisfaction and employee well-being. Composite variables were created to produce scales for intrinsic, extrinsic and overall satisfaction and for well-being scales depression-enthusiasm and anxiety-contentment. Multiple regression analyses examined differential influence intrinsic and extrinsic satisfaction exerted on the well-being scales of depression-enthusiasm and anxiety-contentment.

Pearson's correlational analysis examined associations between employee attributed importance and job satisfaction. Composite variables of for intrinsic, extrinsic and overall satisfaction were used. Additional composite variables were created to examine the discrepancy between scores of intrinsic, extrinsic and overall employee attributed importance with intrinsic, extrinsic and overall job satisfaction. These variables were created through subtracting scores of employee attributed importance from scores of job satisfaction. Multiple regression analyses examined the differential influence intrinsic and extrinsic employee attributed importance exerted on intrinsic, extrinsic and overall satisfaction.

Pearson's correlational analysis was run to examine associations of the disparity between employee attributed importance and job satisfaction to employee well-being. Well-being composite variables of depression-enthusiasm and anxiety-contentment were used along with composites examining the disparity between employee attributed importance and job satisfaction. Multiple regression analyses examined the differential influence of the disparity between intrinsic, extrinsic and overall employee

attributed importance and satisfaction on the well-being scales of depression-enthusiasm and anxiety-contentment.

Demographic variables were included in regression analyses to examine potential confounding influence. The main variables of interest were added to the regression analyses at step one, demographic variables age and gender were added at step two, and demographic variables education level, employment level and length of time in current position were added at step three. Demographic variables were grouped according to their theoretical significance.

## Results

### Job Satisfaction and Employee Well-Being

Pearson's correlational analysis found all measures of satisfaction were significantly correlated with depression-enthusiasm and anxiety-contentment scores. Depression-enthusiasm; intrinsic satisfaction  $r(122) = .63$ ,  $p < .001$ , extrinsic satisfaction  $r(122) = .51$ ,  $p < .001$ , and overall satisfaction  $r(121) = .60$ ,  $p < .001$ . Anxiety-contentment scores; intrinsic satisfaction  $r(122) = .39$ ,  $p < .001$ , extrinsic satisfaction  $r(122) = .41$ ,  $p < .001$ , and overall satisfaction  $r(121) = .41$ ,  $p < .001$ . These results show a strong positive correlation between all measures of satisfaction and scales of depression-enthusiasm and anxiety-contentment; increases in satisfaction are associated with increases in scores of enthusiasm and scores of contentment.

Regression analyses, including demographic variables, were conducted to examine the influence of overall job satisfaction on the well-being scales of anxiety-contentment and depression-enthusiasm. Overall satisfaction was found to be the only significant predictor, and accounted for a significant proportion of the variance found, for depression-enthusiasm =  $-.60$ ,  $t(116) = 8.00$ ,  $p < .001$ ,  $R^2_{adj} = .35$ ,  $F(1, 118) = 63.97$ ,  $p < .001$  and anxiety-contentment =  $-.40$ ,  $t(116) = 4.68$ ,  $p < .001$ ,  $R^2_{adj} = .15$ ,  $F(1, 118) = 21.85$ ,  $p < .001$ . As overall satisfaction increases so do scores of depression-enthusiasm and anxiety-contentment.

A multiple regression analysis, including demographic variables, was conducted to examine the differential influence of intrinsic and extrinsic satisfaction on the well-being scales of anxiety-contentment and depression-enthusiasm. Intrinsic and extrinsic satisfaction explained a significant proportion of the variance in depression-enthusiasm scores  $R^2_{adj} = .38$ ,  $F(2, 118) = 36.42$ ,  $p < .001$ , and anxiety-contentment scores  $R^2_{adj} = .15$ ,  $F(2, 118) = 11.01$ ,  $p < .001$ . Intrinsic satisfaction was found to be the sole significant predictor of depression-enthusiasm =  $.62$ ,  $t(115) = 4.97$ ,  $p < .001$  whereas extrinsic satisfaction was found to be the sole significant predictor of anxiety-contentment =  $.29$ ,  $t(115) = 1.99$ ,  $p = .05$ . These results demonstrate that as scores of intrinsic satisfaction increase, scores of depression-enthusiasm increase, and as scores of extrinsic satisfaction increase, scores of anxiety-contentment increase.

### Employee Attributed Importance and Job Satisfaction

Pearson's correlational analysis found all measures of employee attributed importance to be significantly associated with overall satisfaction; intrinsic importance  $r(120) = .31$ ,  $p < .001$ , extrinsic importance  $r(199) = .34$ ,  $p < .001$ , and overall

importance  $r(198) = .36, p < .001$ . These results show a strong positive correlation between all measures of employee attributed importance and overall job satisfaction; increases in the level of importance employees attribute to satisfaction are associated with increases in overall job satisfaction.

Regression analyses, including demographic variables examined the influence of overall importance, as attributed by employees themselves, on overall satisfaction. When demographic variables were included this model significantly explained the greatest proportion of variance in overall scores of satisfaction  $R^2_{adj} = .18, F(6, 115) = 5.19, p < .001$ . Both overall employee attributed importance and age were found to be significant predictors of overall satisfaction =  $.34, t(108) = 3.64, p < .001$  and =  $-.22, t(108) = -2.22, p = .03$  respectively.

A multiple regression analysis was conducted to examine the differential influence of intrinsic and extrinsic employee attributed importance on overall satisfaction. When demographic variables were included in the regression analysis, this model significantly explained the greatest proportion of variance in overall satisfaction scores  $R^2_{adj} = .17, F(4, 115) = 4.42, p < .001$ . The variables extrinsic importance and age were found to be significant predictors of overall satisfaction =  $.24, t(108) = 1.97, p = .05$  and =  $-.22, t(108) = -2.15, p = .03$  respectively. As overall importance and extrinsic importance scores increase, so do scores of overall satisfaction and as age increases, scores of overall and extrinsic satisfaction decrease.

#### Disparity between Employee Attributed Importance and Job Satisfaction on Employee Well-Being

Pearson's correlational analyses found all scales measuring the disparity between job satisfaction and employee attributed importance were significantly associated with depression-enthusiasm scores and anxiety-contentment scores. Depression-enthusiasm; intrinsic disparity  $r(121) = -.56, p < .001$ , extrinsic disparity  $r(120) = -.44, p < .001$ , overall disparity  $r(198) = -.55, p < .001$ . Anxiety-contentment; intrinsic disparity  $r(121) = -.40, p < .001$ , extrinsic disparity  $r(120) = -.45, p < .001$ , overall disparity  $r(198) = -.45, p < .001$ . These results demonstrate a strong negative correlation between all measures of disparity and scores of depression-enthusiasm and anxiety contentment; increases in disparity between measures of employee attributed importance and job satisfaction are associated with decreases in scores of enthusiasm and scores of contentment.

Regression analyses examined the influence of the overall disparity between scores of satisfaction and employee attributed importance on well-being indicators, depression-enthusiasm and anxiety-contentment. The overall disparity between scores of satisfaction and employee attributed importance explained a significant proportion of the variance of depression-enthusiasm  $R^2_{adj} = .27, F(1, 115) = 42.68, p < .001$ , and was found to be the sole significant predictor of depression-enthusiasm =  $-.52, t(113) = -6.53, p < .001$ . With regard to anxiety-contentment the greatest proportion of variance was explained when demographic variables were included,  $R^2_{adj} = .19, F(6, 115) = 5.38, p < .001$ . Both overall disparity and education level were found to be significant predictors of anxiety-contentment =  $-.43, t(108) = -4.98, p < .001$  and =  $-.19, t(108) = -2.06, p = .04$  respectively. As scores in disparity between employee attributed importance and job satisfaction increase, scores of

depression-enthusiasm and anxiety contentment decrease and/furthermore as education level increases, scores of anxiety-contentment decrease.

A multiple regression analysis examined the differential influence of intrinsic and extrinsic disparity between scores of satisfaction and employee attributed importance on well-being scales depression-enthusiasm and anxiety-contentment. Intrinsic and extrinsic disparity explained a significant proportion of the variance in depression-enthusiasm scores  $R^2_{adj} = .28$ ,  $F(2, 115) = 23.19$ ,  $p < .001$ , intrinsic disparity was found to be the sole significant predictor of depression-enthusiasm scores =  $-.46$ ,  $t(112) = -4.58$ ,  $p = <.001$ . With regard to anxiety-contentment the greatest proportion of variance was explained when demographic variables were included,  $R^2_{adj} = .18$ ,  $F(7, 115) = 4.70$ ,  $p = .006$ . Both extrinsic disparity and education level were found to be significant predictors of anxiety-contentment =  $-.31$ ,  $t(107) = -2.79$ ,  $p = .05$  and =  $-.19$ ,  $t(107) = -2.08$ ,  $p = .04$  respectively. In line with expectations, intrinsic disparity between employee attributed importance and job satisfaction was a significant predictor of depression-enthusiasm; as intrinsic disparity increases scores of depression-enthusiasm decrease. Interestingly, extrinsic disparity between employee attributed importance and job satisfaction, coupled with education level, were found to be significant predictors of anxiety-contentment; as extrinsic disparity increases scores of anxiety-contentment decrease and as education level increases scores of anxiety-contentment decrease.

### Summary of Findings

In line with expectations, overall satisfaction was found to significantly predict levels of both depression-enthusiasm and anxiety-contentment with intrinsic satisfaction being the sole significant predictor of depression-enthusiasm. Interestingly, extrinsic satisfaction was found to be the sole significant predictor of anxiety-contentment. Overall and extrinsic employee attributed importance and the demographic variable of age were found to significantly predict overall satisfaction. In line with expectations the disparity between employee attributed importance and job satisfaction was found to significantly predict scores of depression-enthusiasm and anxiety-contentment. Interestingly, education level was also found to significantly predict scores in anxiety-contentment. Furthermore, intrinsic disparity between employee attributed importance and job satisfaction was found to be a significant predictor of depression-enthusiasm. Extrinsic disparity, coupled with education level, was found to be a significant predictor of anxiety-contentment. All findings will be discussed in detail and implications for organizations will be proposed.

### Discussion

The aim of the current study was to investigate associations between job satisfaction, employee attributed importance of features of job satisfaction, and their relationship to well-being. Results indicated significant correlations between all measures of satisfaction and both anxiety-contentment and depression-enthusiasm measures of well-being. These results suggest that as satisfaction increases so does well-being, fully supporting previous literature which details this positive relationship (Faragher, Cass & Cooper, 2005; Iaffaldano & Muchinsky, 1985; Judge et al., 2001; Warr, 2009). The results of this study also highlight an interesting distinction. When examining the differential effect between intrinsic and extrinsic satisfaction on depression-enthusiasm and anxiety-contentment scales, results found intrinsic

satisfaction the sole significant predictor of depression-enthusiasm and extrinsic satisfaction the sole significant predictor of anxiety-contentment. Research demonstrates that intrinsic and extrinsic features are not additive, meaning that examining them separately is the best predictor of an individual's experience (Deci & Ryan, 2008). This provides support for the need to apply the distinction of intrinsic and extrinsic satisfaction; as the interesting variance of results found within this study would otherwise not have been exposed. These findings support previous research that has found specific links between intrinsic satisfaction and depression-enthusiasm (Warr, 1990). However, this double distinction has never been examined before. The difference in findings may be attributed to the sample used in the current study, as previous research enlisted blue-collar workers, while the current study consisted of white-collar workers. Research has found that blue-collar and white-collar workers value intrinsic and extrinsic features differently, providing potential explanation for the current study's findings (Centers, & Bugental, 1996; Locke, 1973).

Intuitively, an explanation for this distinction could be that extrinsic features such as rate of pay and fellow workers may cause anxiety due to their external and uncontrollable nature, whereas intrinsic features such as level of responsibility and the degree of recognition an employee receives for their work may lead to more depressive symptoms as they are internal to self-engagement within the workplace. Research suggests that both anxiety and occupational stress can be described as states that combine low pleasure with high mental arousal, and occupational stress has specifically been defined as a disruption of equilibrium caused by external factors (Lazarus & Folkman, 1984; Rothmann, 2008; Warr, 2007). With regard to the finding that extrinsic satisfaction influences anxiety-contentment, it could be suggested that the same external factors that influence occupational stress also influence anxiety, and it is these external factors are akin to extrinsic satisfaction. Furthermore, research has found that organizational structure, an extrinsic factor, specifically influences anxiety alongside satisfaction, thus providing support for the relationship found between extrinsic satisfaction and anxiety-contentment (Ivancevich & Donnelly, 1975). Research has also suggested that work engagement is an aspect of the depression-enthusiasm scale and is considered a positive and fulfilling work-related state characterised by vigour (Schaufeli, Salanova, González-Romá & Bakker, 2002). Employee engagement has been found to be specifically linked to intrinsic satisfaction, suggesting intrinsic aspects such as the recognition employees obtain for good work, and the degree of responsibility employees receive, influence employee engagement and therefore depression-enthusiasm (Holman, 2002).

Employee attributed importance to features of job satisfaction was found to be positively associated with overall satisfaction, suggesting that when employees think features of satisfaction to be important, this increases their overall level of job satisfaction. This finding is in alignment with previous research that suggests the greater the importance attributed, the greater the impact on overall satisfaction, which provides evidence that through utilising composite measures a depth of information can be obtained (McFarlin & Rice, 1992; Jackson & Corr, 2002). A finding of particular interest is the distinction between intrinsic and extrinsic employee attributed importance. When examined together, extrinsic employee attributed importance was found to be the only significant predictor of overall job satisfaction. These findings suggest that employees may feel extrinsic features of satisfaction are

more important to them, and therefore these features may exert a stronger influence on satisfaction. An intuitive explanation for this result is that extrinsic features such as pay, fellow workers, management structure and so on influence overall job satisfaction because they are essential to life. Previous research has found money and environment are vital to employees, when compared to intrinsic features (Rothmann, 2008).

Results found a significant association between the difference in scores of job satisfaction and scores of employee attributed importance on employee well-being. This suggests that when employees experience a broad discrepancy between attributed importance and job satisfaction, this considerably influences overall well-being. For example, if an employee attributes particular importance to a feature of satisfaction, yet experiences dissatisfaction with this feature in the workplace, their well-being will be negatively impacted. This finding provides initial support for the theory that subjective well-being is likely to be affected by employee attributed importance to specific features of job satisfaction and provides new insight into the relationship between job satisfaction and employee well-being (Warr, 2007). When examining intrinsic and extrinsic disparity between employee attributed importance and job satisfaction, an interesting variance occurs. With regard to depression-enthusiasm, intrinsic difference is the only significant predictor, yet with regard to anxiety-contentment, it is extrinsic difference that is the only significant predictor. These results are similar to the relationship found between job satisfaction and employee well-being, in which intrinsic satisfaction was found to be the sole significant predictor of depression-enthusiasm, and extrinsic satisfaction was found to be the sole significant predictor of anxiety-contentment. Similar explanations may be applied to account for the variance here.

#### Strengths, Limitations and Considerations of the Current Study

A strength of the current study arises from the novel examination of the relationship between job satisfaction, employee attributed importance to features of job satisfaction and employee well-being. By examining satisfaction and employee attributed importance using intrinsic and extrinsic composites, and examining well-being through anxiety-contentment and depression-enthusiasm, this study provides results that yield markedly enriched information and highlights the value of examining the two independently.

Although the originality of this study embodies strength, it is not without weakness. As no current measure exists to examine intrinsic and extrinsic composites of employee attributed importance to features of job satisfaction a new measure was tailored specifically for use within this study. Although the limitation of a newly customised measure is that its reliability and validity have not been robustly tested, both the pilot and the current study have high internal reliability, paving the way for the future use of this new measure in unpacking the complex interaction between satisfaction and well-being. While the measure employed to examine employee attributed importance on features of job satisfaction may be new, a strength of this study is that the remaining questionnaire measures have previously been rigorously psychometrically tested enhancing their reliability and validity (Cook et al., 1981; Fields, 2002; Stride, Wall & Catley, 2007).

A potential confound that was not examined in the current study is participant personality. Research has found that anxiety and depression scores are significantly correlated with the personality trait of neuroticism in both men and women (Newbury-Birch & Kamali, 2001). Furthermore, neuroticism and extraversion have both been found to be significantly correlated with job satisfaction, and are thought to be key components of the 'happy personality' which incorporates being emotionally stable (low neuroticism) and extraverted (DeNeve & Cooper, 1998; Judge, Heller, & Mount, 2002). Furthermore, personality may play a confounding role within all relationships examined in the current study, as certain employees may simply be more intrinsically or extrinsically motivated than others (Elliot & Churuch, 1997). Research has found that employees who place emphasis on intrinsic aspirations generally display higher levels of work-related well-being, however, employees who are extrinsically orientated have been found to experience higher levels of well-being and job satisfaction in relation to their income (Deci & Ryan, 2008; Malka & Chatman, 2003). These personality traits may influence the results of the current study, therefore future research would benefit from examining such personality variables and assessing their influence on employee attributed importance, job satisfaction and employee well-being.

There are several methodological considerations that warrant discussion. A strength of the current study is that a large sample size from two different companies was obtained, enhancing the reliability and generalisability of the results. However, due to the nature of the study, and as both organizations focus on defence, aerospace and security technology and are comprised of white-collar workers who categorise themselves in management roles; the findings cannot be fully generalised outside this context. Therefore, to enhance the robustness of the findings, further research should be conducted in a variety of industries to determine whether the effects observed by this study are applicable across contexts. The limitation of this sample may go some way to account for the confounds of age and education within certain analyses, as these findings may have occurred due to the context within which they were examined and further research is warranted to fully unpack these confounding relationships. Furthermore, due to the cross sectional and correlational nature of the current study, conclusions of causality cannot be made. It cannot, therefore, be decisively concluded whether the level of satisfaction experienced by employees influences their well-being, or whether well-being influences the level of satisfaction employees experience. The same may be said for the other associations examined in the current study. Future research would benefit from employing longitudinal methods to more conclusively draw directions of causality.

The self-report nature of the study should also be taken into account due to potential self-report bias. These include social desirability bias, which is the tendency for individuals to present a favourable image of themselves, and negative biases, which are commonly found amongst those with low well-being (Beck, 1972; Donaldson & Grant-Vallone, 2002; Van de Mortel, 2008). However, through comparisons of family/friend and participant reports on subjective well-being, research has demonstrated considerable cross-sectional consistency, supporting the validity of self-report measures (Sandvik, Diener & Seidlitz, 1993). Although the study is marginally curbed by the limitations discussed, its strength lies in the practical application findings offer for intervention.

## Implications

The findings of the current study have implications for the domain of organizational psychology. By examining the distinct effects that intrinsic and extrinsic job satisfaction have on measures of employee well-being, this can provide an avenue for organizations to target interventions to improve employee well-being more effectively. For example, it would be beneficial to examine the areas in which employees report the lowest well-being and satisfaction scores, and utilise this information to introduce measures to increase satisfaction, intrinsically or extrinsically, depending on which is more appropriate. If an organization found that employees reported elevated anxiety scores, interventions targeting extrinsic aspects of satisfaction would prove most beneficial. For example, the management structure could be assessed to improve satisfaction for extrinsic features of 'relationship between management and workers' and 'the way your organisation is managed' with a view to restructure or even to enable a more employee empowered culture. Team building days could be scheduled to improve satisfaction with 'fellow workers', and the extrinsic feature 'hours of work' could be improved through redesigning tasks and job demands and increasing flexibility. Satisfaction for 'job security' may be improved through clear contracting or effective communication through periods of organizational change and simply improving the 'physical working environment' could improve satisfaction for the feature. Furthermore, addressing remuneration issues, such as 'rate of pay', could increase satisfaction on this feature. The implementation of these suggestions would ultimately aim to increase extrinsic satisfaction and decrease scores of anxiety.

If an organization found that their employees reported elevated depressive scores, interventions targeting intrinsic satisfaction would be most beneficial. For example; satisfaction for intrinsic features 'recognition for good work', 'amount of responsibility', 'attention paid to suggestions' and 'chance of promotion' could be improved through effective employee appraisals to positively discuss current situation, progress, career outlook and chance of promotion. To improve satisfaction on intrinsic features 'opportunity to use own abilities', 'variety of work' and 'freedom to choose own method of working', tasks could be redesigned to allow greater flexibility for employees. The implementation of these suggestions would ultimately aim to increase intrinsic satisfaction and decrease scores of depression. Many of the interventions discussed for both intrinsic and extrinsic features have already been supported by previous research (Birx, LaSala, & Wagstaff, 2011; Callan, 1993; Cooper & Cartwright, 1994; Deci, Koestner, & Ryan, 1999; DiMeglio, et al., 2005; Elkin & Rosch, 1990; Ryan & Deci, 2000). Utilising the measures employed in this study would enable organizations to more appropriately target interventions depending on individual organizational analysis.

This new way of considering satisfaction and well-being could be employed in a variety of ways within organizational settings. Using the information obtained from the proposed methods, organizations could target interventions to increase intrinsic or extrinsic satisfaction, or increase anxiety-contentment or depression-enthusiasm. For example, if an organization found that employees valued intrinsic features, and showed low levels of satisfaction, intrinsically orientated interventions could be implemented to most effectively increase job satisfaction and employee well-being.

Further to this the added layer of employee attributed importance implies that implementation of interventions on features of job satisfaction an employee believes unimportant, even if dissatisfaction is experienced, would be inadvisable as the intervention would have minimal influence on employee well-being. Rather, efforts for interventions should focus on aspects of satisfaction an employee considers important. These interventions could be administered to the organization as a whole, departmentally, or at team level depending on the business needs of the organization. This method of examining satisfaction and well-being could also be effectively utilised with individual employees, to provide insight into their own levels of job satisfaction, the features of job satisfaction they consider most important and the subsequent impact on their well-being. Interventions could then be targeted to improve individual employee job satisfaction and well-being. The possibilities for applying this research are extensive, however future research is necessary to design an appropriate model to enable tailored interventions to be implemented within an organizational setting.

The relationships discovered in this study have significant implications, not only for the current body of research but also for organizations' aiming to improve working practices to increase employee well-being and, in turn, the success of the organization. By effectively targeting interventions to increase job satisfaction and employee well-being, this would help to reduce sickness absence and also increase employee productivity and performance.

### **Conclusion**

The results of the current study show that through examining employee attributed importance to features of job satisfaction, an innovative way of examining the relationship between job satisfaction and well-being is proposed. This novel area is enhanced through utilising composite variables of intrinsic and extrinsic features of job satisfaction and employee attributed importance, and the well-being scales of depression-enthusiasm and anxiety-contentment. Organizations could employ these measures to gain a greater depth of information about their workforce and ultimately tailor the most appropriate and effective interventions to promote job satisfaction and employee well-being. This would decrease the economic burden caused by reduced well-being and satisfaction, ensuring survival in today's challenging and evolving economic climate.

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# **Beyond personality: exploring the role of motivations, self-evaluations and values in leadership emergence within an organizational setting**

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## **Abstract**

The current research explored the relationships between personality and non-personality traits with leadership emergence. Managers in a UK insurance company completed a self-report survey on leadership behaviours and individual differences (i.e., traits). Analyses of over one hundred participants found significant associations between their emergence as a leader and many variables (e.g., extraversion, motivation, and leader-member relationships). Practical implications include the use of trait measures in leadership selection and recommendations for mentoring and training in regards to leadership development. Further research combining situational factors in leadership emergence is advised, as are longitudinal studies employing multiple methodologies across a diverse sample.

## **Background**

Leadership is a multi-faceted domain involving a set of complex behaviours and interactions between people, which can be crucial to the success or failure of an organization (R. Hogan, Curphy & J. Hogan, 1994). One interesting aspect of leadership concerns how people develop into potential leaders, and how individual characteristics influence this process (Riggio & Mumford, 2011).

### Leadership emergence

When an individual moves into a leadership position it is known as leadership emergence (Li, Arvey & Song, 2011). Leadership emergence concerns the traits and experiences that predispose a person to become perceived by others as '*leaderlike*', and how these enable them to emerge into a leadership position (Dinh et al., 2014). Leadership can emerge through informal or formal means.

Firstly, an individual can claim a leadership position in the absence of authority, through being considered a leader within a group by the group members, and

potentially even by individuals external to the group. There is potential for informal leadership emergence in a wide range of contexts where leaderless groups might be present, such as music groups or software development teams, as well as in more traditionally hierarchical settings (i.e., customer service), where teams have a formally appointed supervisor. Given a person has exerted significant influence over others they are considered an emergent leader (Schneier & Goktepe, 1983). In contrast, a more formal emergence process exists whereby leaders are appointed a leadership position via selection or nomination (Kaiser, R. Hogan & Craig, 2008). This can occur when a member within a team (or elsewhere in the organization) is promoted following a competitive promotion process or informal promotion selection. For instance, formal emergence to team leadership is common among teams operating in organizations providing health care. Similarly, a person can formally emerge into a leadership role by being recruited externally, which is often the case in the hospitality sector where team member turnover tends to be high. The mutual link between the formal and informal routes is that the person has been perceived as leaderlike, based partly on their characteristics. Understanding why leaders emerge can be just as important as whether leaders will be effective. For example, a person may possess qualities of an effective leader but lack those enabling them to reach that position to begin with.

Leadership emergence is especially relevant for decision makers within organizations, whereby failing to recognise and develop individuals with potential to become leaders can result in lost talent. Additionally, selecting future leaders based on technical abilities rather than leadership potential may be costly. Therefore, recognising characteristics of emergent leaders and identifying those with future potential is particularly valuable from an organizational perspective.

#### Individual differences in leadership emergence

Despite leadership existing universally, individual differences are important to recognise (Judge, Piccolo & Kosalka, 2009). Those in leadership positions may exhibit specific patterns of behaviour that have enabled them to emerge into leadership roles. Various constructs have been associated with leadership emergence, with particularly strong support for personality seen in meta-analyses (Judge, Bono, Ilies & Gerhardt, 2002). However, attempts to create a consistent trait profile of those more likely to emerge as leaders have not always been successful (Smith & Foti, 1998).

As a result, authors have not yet reached agreement on which traits are significant and under which circumstances. For example, across the various studies and on-going list of related traits, some highlight masculinity as being important (Mann, 1959), others Emotional Intelligence (Goleman, 2003), alertness (Stogdill, 1948), and various measures of personality (e.g., Northouse, 1997). In fact, a review of the literature around leadership competencies (Judge et al., 2002) highlighted that self-confidence was the only trait related to leadership across most studies, and that “if one were to ask five leadership researchers, in general, whether trait theory was valid and, if so, specifically which traits were valid, one would likely get five different answers” (p.766).

One critique of the existing research is the tendency to focus on personality as a predictor of leadership emergence, whilst the role of values, motives and social skills are ignored (Zaccaro, 2007). In order to address some of these concerns, the variables of interest in this study are not confined to personality measures; rather, they encompass a broader range of both positive and negative attributes.

### Setting the research agenda

This research aims to explore which constructs are related to leadership emergence, and whether these relationships are stronger with personality or non-personality attributes. For example, research supporting the role of the Five Factor Model of personality suggests it is more apparent in those who have emerged as leaders than those who have not (e.g., Judge et al., 2002), where other research highlights the role of motivation and values (e.g., Chan & Drasgow, 2001). Is it that both are influential or does personality have much greater influence? A review of the literature was conducted and the variables of interest are outlined below.

#### Personality

The Five Factor Model (FFM) is a common measure of personality, referring to five traits set out by Costa and McCrae (1992); openness, conscientiousness, extraversion, agreeableness and emotional stability. Taggar, Hackett and Saha (1999) found that team members higher on conscientiousness and extraversion are more likely to emerge as leaders in autonomous teams. Such autonomous teams exist when the roles assumed by members are flexible (Seers, 1989) and thus multiple members can exhibit leadership qualities at any one time.

Similarly, peers are more likely to nominate an extraverted, open and conscientious individual for the position of team leader (Emery, Calvard & Pierce, 2013). These findings are reinforced by a meta-analysis which demonstrated that extraversion, conscientiousness and openness are positively related to measures of leadership emergence, while agreeableness had a negative association (Judge et al., 2002).

Although a wealth of supportive evidence confirms the prediction that the five factors are related to leadership emergence, research considering the relative strength and direction of each relationship is inconsistent. For the purposes of this research, each factor will be treated separately and their relationship to leadership emergence investigated.

#### Narcissism

Narcissism is one of the three traits that comprise the 'dark triad' of personality, together with Machiavellianism and sub-clinical psychopathy (Paulhus & Williams, 2002). Defined as a personality trait, narcissism encompasses behaviours such as arrogance, self-absorption, feelings of grandiosity and entitlement. Interestingly, narcissism is an attribute shared by many powerful leaders (Rosenthal & Pittinsky, 2006). On-one-hand, being perceived as exploitative and arrogant could lead to poor ratings by peers, whereas displaying self-esteem and exuding confidence may convince others of their leadership capabilities (Paunonen, Lönnqvist, Verkasalo, Leikas & Nissinen, 2006). Either way, a narcissist's primary need to prove their

superiority leads to their pursuit for power and recognition from others (Morf & Rhodewalt, 2001a, b).

Empirical research suggests that narcissistic individuals tend to emerge in leaderless discussions when both self-report and expert ratings are used across student and executive samples (Brunell et al., 2008). In formal leadership emergence, narcissistic individuals may appear desirable to selection panels due to their charismatic tendencies (R. Hogan, Raskin & Fazzini, 1990), and are capable of manipulating others into thinking they possess leadership potential (Rosenthal & Pittinsky, 2006). These findings are consistent with (and reinforce the role of) personality traits in leader emergence, since narcissistic individuals tend to be low on agreeableness and high on extraversion (Vernon, Villani, Vickers & Harris, 2008); traits that are associated with leader emergence (Judge et al., 2002).

### Core Self-Evaluations (CSE)

Core Self-Evaluations refer to a broad personality trait encompassing four well established characteristics: locus of control, emotional stability, self-efficacy and self-esteem (Judge, Locke & Durham, 1997). Although measured as a single construct, the justification for each component in relation to leadership is outlined below:

- *Locus of Control* (LOC) refers to an individual's beliefs about the causes of life events, where an internal locus indicates a belief they have control over these, and an external locus that events are controlled by the environment or fate (Rotter, 1966). Given that those wanting to control their environment would naturally prefer to lead than follow it is reasonable to expect this to have some bearing on leadership emergence. One study comparing a control group to students deemed as having leadership potential found that the potential group had significantly greater levels of internal LOC (McCullough, Ashbridge & Pegg, 1994). This supports previous findings relating LOC with leadership outcomes (see Anderson & Schneier, 1978), however similar investigations have not been explored more recently.
- *Emotional stability* (the opposing trait to neuroticism) refers to the tendency to have a positive cognitive style and avoiding a focus on the negative aspects of the self (Watson, 2000). Leaders with high levels of emotional stability may be perceived by others as reserved or laid back, and seldom experience fluctuations in emotion (Goldberg, 1999). As included in the Five Factor Model, emotional stability has been positively associated with leadership emergence (Judge et al., 2002).
- *Self-efficacy* refers to “beliefs in one's capabilities to organise and execute the courses of action required to produce given attainments” (Bandura, 1997, p.3). It has been identified by social-cognitive theorists as the self-regulatory mechanism most able to affect behaviour, with those high on the trait generally being motivated, resilient and goal-orientated (Bobbio & Manganelli, 2009). Within the leadership literature it is apparent that those who emerge as leaders tend to be described in a similar manner (Locke et al., 1991), for example as persevering in the face of obstacles and committing strongly to their work.
- *Self-esteem* refers to the judgement made by a person about their level of worth across situations (Coopersmith, 1967), and has found to be associated

with numerous leadership variables. For example, a longitudinal study of male cadets at military college found self-esteem at Year 1 predicted whether cadets assumed leadership positions at Year 4 (Atwater, Dionne, Avolio, Camobreco & Lau, 1999). One potential explanation for this is that a leader's self-esteem appears related to (for example) trust in others, not requiring constant recognition and being courteous to colleagues (Bass & Bass, 2009). These behaviours will likely enable the attainment of leadership positions. In addition, those with greater self-esteem tend to seek more feedback than those low on the trait (Ashford, 1986), which is likely to enhance leadership development (Waldman & Atwater, 1998).

### Emotional Intelligence (EI)

Emotional Intelligence refers to a person's ability to perceive and understand emotion in themselves and others, with the ability to manage the experience and expression of these emotions (Mayer, Salovey & Caruso, 2000). The concept can be broken down into a number of components, including self-awareness, self-monitoring, social awareness/empathy and relationship management (Goleman, 1998). Despite some scepticism for the construct on the basis of measurement issues and scant evidence regarding the predictive validity of EI above and beyond the Five Factor Model of personality and IQ (e.g. Antonakis, Ashkanasy & Dasborough, 2009), evidence for the strength of EI in the workplace comes from several studies in recent years, with some support for its role in predicting leadership emergence (e.g. Côté, Lopes, Salovey & Miners, 2010). For the purposes of this study, EI is measured as a single construct, although the benefit of measuring separate constructs is discussed.

### Motivation to Lead (MTL)

Motivation to Lead refers to "*a construct that affects a leader's or leader-to-be's decisions to assume leadership training, roles, and responsibilities and that affect(s) his or her intensity of effort at leading and persistence as a leader*" (Chan & Drasgow, 2001, p.482). Categorized into three dimensions, the premise suggests that people with high MTL possess positive feelings towards being a leader, compute little calculation of its cost effectiveness and feel a sense of duty to lead. For example, given that there are usually costs related to being a leader, those who consider these against the benefits of leading may be more likely to avoid leadership positions (Kark & Van Dijk, 2007). In addition, some people (particularly those who are promotion-focussed) who are motivated by personal growth and development are more likely to adopt leadership roles based on their wanting to do so (rather than having to do so).

In one study supporting the relationship between MTL and emergence, findings demonstrated that those high on MTL were more likely to be identified as potential leaders by unknown raters and be selected for leadership positions. Furthermore, highly motivated people were more likely to assume leadership positions compared to their less motivated peers (Luria & Berson, 2013). The evidence would suggest that those higher on MTL will be more likely to emerge as leaders. For the purposes of this study, MTL is measured as a singular construct reflecting overall motivation to lead.

### Achievement values

The need for achievement refers to an individual's "*concern for long-term involvement and competition against some standard of excellence*" (House, Spangler & Woycke, 1991, p.367). Examples of achievement behaviour include demonstrating to themselves or others that they are successful, through showing competence against social standards and gaining social approval (Scannell & Allen, 2000; Schwartz, 2012). A value can be seen as a guiding principle in a person's life, providing motivation for behaviour (Schwartz, 1996). As such, individuals who value achievement are motivated to accomplish and as such may strive to achieve a leadership position.

#### Core Self-Evaluations as a mediating variable

Despite being a driving force of behaviour, possessing achievement values may not necessarily lead to action. For example, it is reasonable to expect that individuals valuing success and influence may require the internal belief that emergence is possible. Even when individuals appear motivated, self-derogatory beliefs about ability can hinder performance (Wine, 1971). Core self-evaluations may act as a facilitator of behavioural action on values and thus is expected to mediate between achievement values and emergence.

#### Leader-Member Relations (LMX)

Leader Member Exchange (LMX) theory refers to the one-on-one relationship between a leader and follower (Graen & Uhl-Bien, 1995). According to LMX, a leader develops relationships of varying quality with their followers during interactions and routines. Followers engaged in high quality relationships will also have access to additional resources and opportunities as given by their leader (Graen & Uhl-Bien, 1995), information that could motivate them to assume greater responsibilities (Liden & Graen, 1980) and participate in leadership activities. As a result, an individual could develop the relevant experiences and gain recognition as a potential leader above their peers. There may also be cases where a supervisor nominates a follower for a leadership position, which is more likely to happen if their relationship is positive.

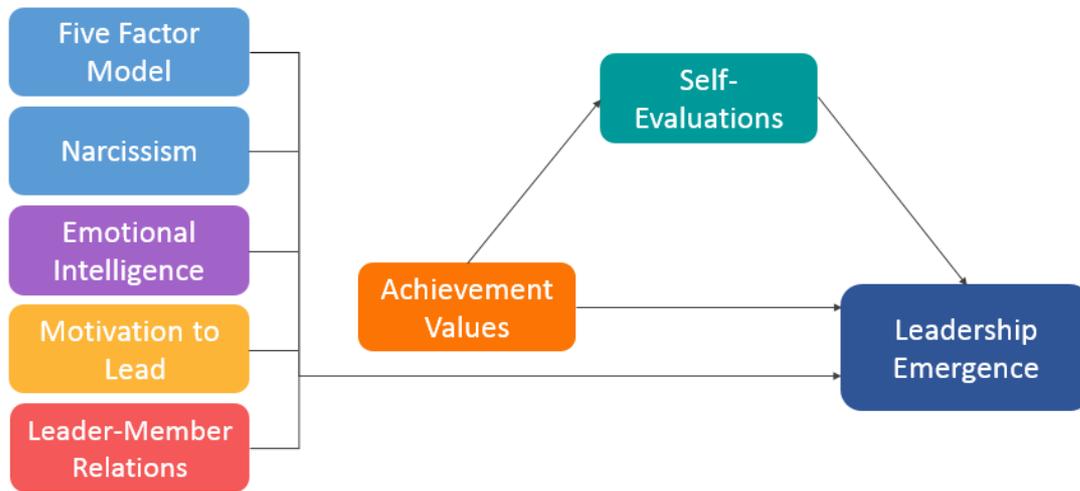
#### Research questions

Given the supportive evidence outlined it is expected that:

- Personality variables will demonstrate strong relationships with leadership emergence. People scoring highly on narcissism, extraversion, conscientiousness, openness and emotional stability, and low on agreeableness will be more likely to emerge as leaders.
- Non-personality variables (EI, MTL, achievement values and CSE) will also be related to leadership emergence (i.e., people high on these will be more likely to emerge as leaders).
- The relationship between a leader and follower (LMX) will be related to leadership emergence (i.e., those in higher quality relationships will be more likely to emerge as leaders).
- CSE will mediate the relationship between achievement values and leadership emergence.

The predicted relationships are represented as a conceptual model below (see Figure 1).

*Figure 1. The predicted conceptual model of relationships between variables*



## Method

### Participants

Pearn Kandola, a business psychology consultancy, provided an opportunity sample of four hundred experienced leaders from a UK insurance company. The participants were invited to participate in the research via an email from a consultancy representative, which contained a link to the on-line survey.

The leaders were senior managers, each managing between six and 16 employees and distributed across individual business units. All managers were recruited through an Assessment Centre consisting of an interview, psychometric tests and group role play activities. Managers have received structured training lasting between one to three years and have reached the most senior level that exists within a business unit.

### Measures

Participants were asked to report their responses on a number of established scales which measured the variables of interest. This was followed by demographic information, the outcome measure (leadership emergence) and three control variables (sex, age, tenure). One hundred and sixteen responded to a survey measuring their characteristics and leadership behaviours. The measures used are summarised in Table 1 below.

*Table 1. Measures used for each construct included in analyses*

<b>Construct</b>	<b>Measure</b>
Personality	Ten-Item Personality Inventory (TIPI; Gosling, Rentfrow & Swann, 2003)
Narcissism	Narcissism Personality Inventory (NPI-16; Ames, Rose & Anderson, 2006)
CSE	Core Self-Evaluations Scale (CSES; Judge, Erez, Bono & Thoreson, 2003)
EI	Assessing Emotions Scale (AES; Schutte et al., 1998)
MTL	Motivation to Lead Scale (MTL; Chan & Drasgow, 2001) as used by Bobbio and Rattazzi (2006)
Achievement values	Achievement component of the Work Value Survey (Schwartz, 1994)
LMX	LMX-7 scale (Graen and Uhl-Bien, 1995)

### Measuring leadership emergence

The study adapted a scale used by Kent and Moss (1990). Participants were asked to imagine themselves in a typical team scenario with colleagues at work, in which there is no assigned leader (informal emergence). Although the original scale asks participants to rate themselves and peers after participation in group projects, constraints of the current research did not allow for such tasks and thus self-reports from a hypothetical situation were deemed sufficient.

Using a 7-point Likert scale from “*Never*” to “*Always*”, participants rated the extent to which they would assume a leadership role, lead the conversation, influence group goals and decisions. These behaviours are based on research by Bass (1981), which suggests that emergent leaders talk, participate and attempt to lead to influence the group more than others. Scores from the three items were averaged to form a single score of leadership emergence. The original scale demonstrated an internal consistency of 0.90, with the adapted scale demonstrating a reasonable value of 0.73.

## Results

### Descriptive data

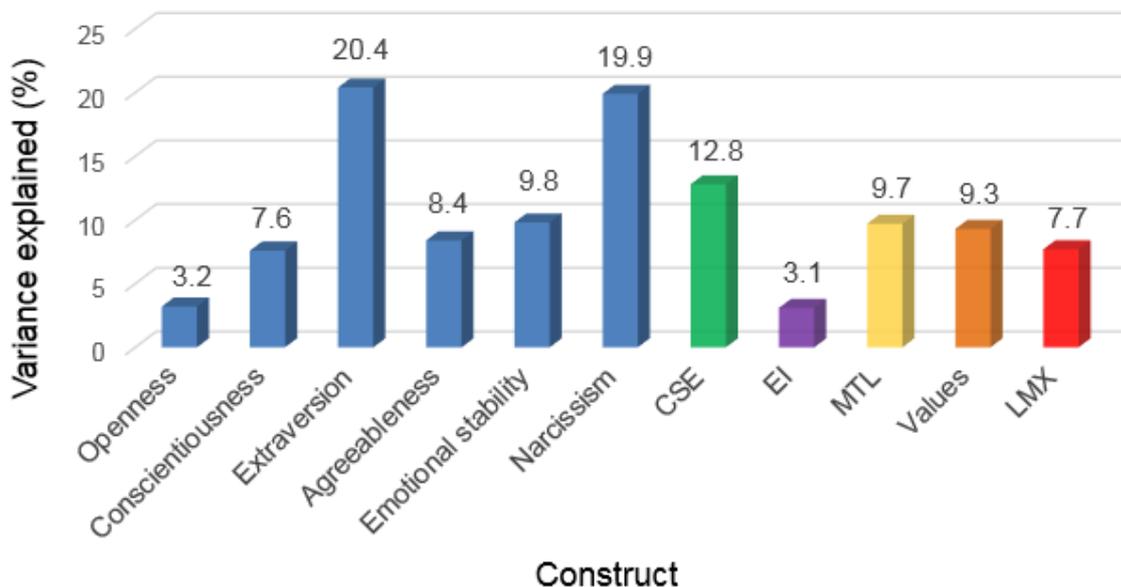
The sample consisted of 76 males and 40 females, of which 113 of the 116 were British. Ages ranged from 25 to 60 ( $M = 44.60$ ,  $SD = 8.44$ ), with organizational tenure ranging from one year to 34 years and 11 months. Participants reported having held

an average of 2.81 leadership positions and managed 16 subordinates, both indicating they possessed substantial leadership experience.

## Analyses

Data screening highlighted cases of univariate outliers and missing values, meaning 13 cases were removed from further regression analyses, leaving 103 participants included in the study. Tenure, age and sex were included in all analyses as control variables, in order to establish that any effects on the dependent variable are caused by the independent variables. A visual representation of the strength of each construct on leadership emergence can be seen below (Figure 2) and the findings are summarised beneath.

*Figure 2. A bar chart showing the percentage of variance in leadership emergence as explained by each construct.*



*Note: personality variables are coloured blue.*

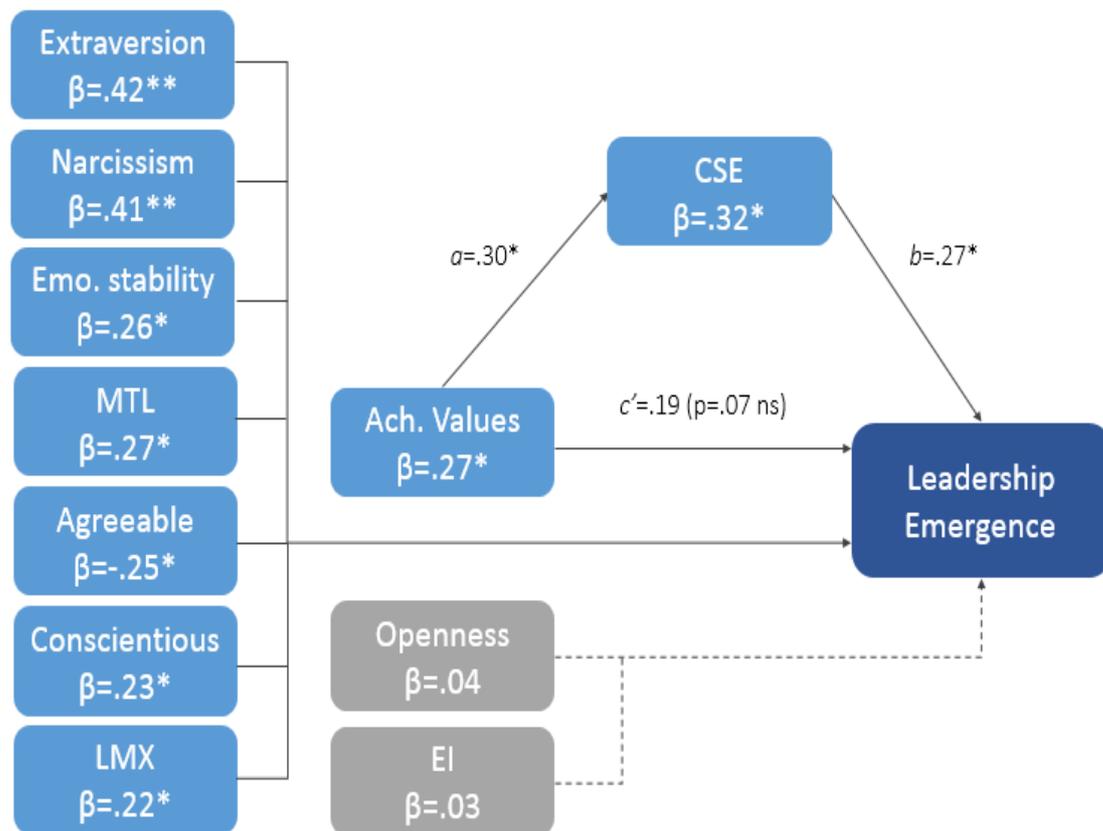
## Summary of findings

The research investigated the influence of non-personality constructs (i.e., self-evaluations, values, motivations) in addition to personality constructs (Five Factor Model, narcissism) and situational influences (LMX) on leadership emergence. Support was gained for the research questions in that most constructs were significantly related to leadership emergence, except in the case of Emotional Intelligence and openness. The strongest relationships were found with extraversion and narcissism, which suggests a strong influence from personality. When core self-evaluations were analysed as a mediator between achievement values and leadership emergence, a strong relationship was found. That is, whether the relationship between a person's values and their likelihood to emerge as a leader can be explained by how the person evaluates their own abilities.

Within organizational settings this finding suggests that valuing achievement may not be sufficient to gain a leadership position if individuals do not possess the belief that they are able to lead.

Relationships between variables and leadership emergence are displayed visually in Figure 3 (below).

*Figure 3. A representation of the direct relationships between the constructs and leadership emergence*



Note: Dashed lines and grey boxes represent non-significant relationships.

Regression coefficients are unstandardized.

$N = 103$ .  $*p < .05$ ,  $**p < .001$ .

### Discussion of findings

This research has helped gain understanding of leadership within an organizational setting. The pattern of associations between personality traits and leader emergence confirms prior research findings and reinforces our appreciation of the role of personality as a facilitator or inhibitor for individuals' emergence into leadership. This is reinforced by the strong relationships found with extraversion and narcissism on leadership emergence.

However, considering traits other than personality has opened up a wide range of constructs proving influential (i.e., values, judgements, motivations). For example, the role of Core Self-Evaluations as a sole contributor and mediator proved highly

significant, which provides further support for the role of non-personality variables in leadership emergence. Of particular interest is the relatively new construct, Motivation to Lead, that is positively associated with leadership emergence and has been deemed trainable (Chan & Drasgow, 2001) and is worthy of further research. This is not to say that investigations of personality and leadership emergence should be abandoned; given its influence in the current study and the mixed findings (e.g., openness) it is still worthy of further research.

#### The role of narcissism

The finding that narcissism was strongly related to leadership emergence commands attention as it can potentially have both positive and negative implications for followers and organizational performance. Narcissistic leaders tend to be perceived negatively by followers and are rated lower by their superiors with regards to performance (Judge, LePine & Rich, 2006). On the other hand, positive associations have been found between narcissism and senior leadership performance (Chatterjee & Hambrick, 2007) and in some situations, higher follower ratings (Paunonen et al., 2006). Therefore, this relationship appears more complex than is perhaps seen in other traits and although at senior levels narcissism is potentially beneficial, caution needs to be exercised especially when managing teams having members high on the trait.

#### Unexpected findings

Openness and Emotional Intelligence (EI) were not found to be significantly associated with leadership emergence. In relation to openness, previous research has failed to find a relationship between the construct and leadership emergence (e.g., Taggar et al., 1999), which indicates that perhaps the trait is not a significant predictor of emergence. However this is just one possible explanation for the finding in the current study.

Regarding EI, there are two possible reasons for the lack of a significant relationship with leadership emergence. Firstly, it is possible that the scale used to measure the construct does not fully reflect the concept. For example, it has been suggested that one of the singular components of EI (i.e., self-monitoring) could better demonstrate where the relationship between EI and leadership emergence exists (see Zaccaro, Foti & Kenny, 1991).

Alternatively, despite advocates of the construct providing convincing research (Gardner & Stough, 2001; Côté et al., 2010), critique regarding the weak empirical evidence of EI must be acknowledged. In the 25 years since its introduction to research (Salovey & Mayer, 1990), Antonakis and colleagues (Antonakis et al., 2009) argue that support has come from papers lacking methodological rigour and inferences drawn from unsubstantiated claims. To be recognised as a viable construct it appears that EI may need rethinking.

#### Advancing the research

There are many different ways in which future empirical research could build upon these results, ideally across a range of organizational contexts. Firstly, by using

experimental methods such as real-world tasks where autonomous groups measure leaders emerging informally. Secondly, gaining leadership ratings from leaders and followers would create a more consistent picture of leadership traits, especially in relation to LMX. Thirdly, conducting longitudinal investigations where people's leadership development is followed over time allows for tests of cause and effect (whether a variable can predict leadership emergence). Qualitative methods could also be applied to compliment and explore quantitative findings.

### Practical recommendations

Several personality and non-personality factors were identified as being related to leadership emergence. As such, these results could be utilised for purposes of development, selection, and identifying potential leaders. The following practical recommendations are drawn directly from the significant findings and are just three possible examples of next steps.

#### Developing aspiring leaders

Results can be used in the implementation of development initiatives for aspiring leaders. Traits identified as potential 'predictors' of emergence are ones that aspiring leaders would want to possess, or even emulate. Therefore, if extraversion, motivation and self-efficacy (for example) can be developed, the organization wishing to facilitate an individual's emergence could assist in the following three ways:

- Mentoring programmes

Given the significant association between high quality supervisor relationships and emergence, mentoring schemes could be implemented that pair subordinates with experienced colleagues, focussed on establishing trusting and supportive relationships (features of both high LMX and strong mentoring). A meta-analytic review of the mentoring literature demonstrated those individuals who receive workplace mentoring tend to have better work- and career-related attitudes and outcomes, along with a range of positive psychological outcomes, including improved self-perception, emotional adjustment and well-being (Eby, Allen, Evans, Ng & DuBois, 2008).

- Self-efficacy training

Given the strong support for the role of Core Self-Evaluations on emergence, traits such as self-esteem and self-efficacy may be crucial for enabling those lacking belief in their own leadership abilities. Organizations could implement programmes (e.g., workshops) focussed on enhancing employee self-evaluations. One study reviewed a simple intervention and found that those receiving the training showed greater self-efficacy and reduced turnover when compared to controls after nine weeks (McNatt & Judge, 2008).

These findings are similar to previous support for interventions within organizational settings (i.e., Davidson & Eden, 2000), which are beneficial in relation to cost-effectiveness and ease of implementation. They also bring additional benefits to the organization (e.g., job enrichment, quality of communications; Parker, 1998). Of course, individuals can embark upon attempts to enhance these traits themselves.

- Enhancing motivation

Findings suggest that increased motivations to lead were associated with increased leadership emergence. It is worth emphasising that motivations to lead are specific and differ from motivation as a broad term. Within organizations it may be possible to enhance motivations by portraying leadership positively (to decrease the calculation involved), encouraging more leadership experience (increasing positive affect) and framing the role as one that they ought to adopt (encouraging social-norms). Given the construct has sub-components, it is interesting to consider how individual motivations towards leading may depend strongly on the individual. For example, one person's affective motivation could be the driving force in their motivation to become leader, regardless of the strengths of other components.

Alternatively, in a culture where aspiring to lead is a strong norm, individuals may be driven by this aspect more than the extent to which they like the idea of leading. Thus it is important to recognise these differences when considering a person's appropriateness for a particular position.

#### Identifying leadership potential

A growing concern for senior managers and human resource practitioners is the identification of leadership potential (Dries & Pepermans, 2012). In order to direct development initiatives to those deemed 'high potentials', accurate identification of these individuals is needed (i.e., the knowledge of factors seemingly predicting emergence). Procedures currently relied upon are all open to bias, for example performance reviews, 'gut instinct' and competency frameworks of experienced leaders. The problem with using competency frameworks means that those possessing the potential to develop (i.e., junior members) are compared to those who are experienced leaders. They cannot realistically be expected to possess similar trait profiles currently, although they may in the future, and so this could be considered (Briscoe & Hall, 1999).

Therefore scales similar to those applied in this research could be used to identify individuals possessing the characteristics/potential to emerge as future leaders. Emphasis here is on developing existing potential rather than on recruitment, particularly if costs are a limitation. Personality variables, core self-evaluations and motivations to lead in particular could be easily measured by employers using established scales. Combined with traits related to successful leadership, a systematic measure of potential could be designed specifically to suit an organization's future needs.

#### Assessment and selection of leaders

When it comes to leadership decisions in the workplace, the gap between research and practice is evident (R. Hogan et al., 1994). Methods for choosing leaders come in many formats (structured interviews, assessment centres, cognitive ability tests), all adequately able to predict effective leadership (see Bass, 1990). However, such methods are often ignored in favour of promoting employees based on technical ability rather than leadership capability (R. Hogan et al., 1994), and perhaps

assumptions about potential. Again, bias is inevitable and poor decisions can be costly.

Similar to the identification of potential, traits related to emergence could be compiled into bespoke assessment tools, where a person's scores on leadership emergence and effectiveness are combined. However, using trait research in selection comes with a warning, especially in situations where individuals are motivated to present themselves favourably. Counteracting scales should thus be integrated where possible. Especially given that individuals possessing 'dark' traits are usually skilled socially with high self-esteem (Harris & J. Hogan, 1992), implications of narcissism as an influential trait are worth consideration.

Furthermore, combining with traits of effective leaders could yield a more complete picture of leadership outcomes (i.e., who *will* lead and who *can* lead). For example, much of the leadership research aims to establish the qualities of an effective leader (who can lead), with one method being organizations identifying competencies of their outstanding leaders. Albeit a perfectly legitimate focus for organizations, is it not worth trying to gain an overall picture of individuals who can and will lead? It could be the case that someone possesses the traits of an effective leader, but not those that enable them to reach a leadership position. On the other hand, a person may reach a leadership position but prove ineffective.

### Conclusion

It is clear that the link between individual differences and leadership emergence is strong, but that the picture is mixed. The current study confirmed many relationships found in the literature, such as between extraversion, motivation and core self-evaluations. The strength of the relationships suggests that personality is significantly related to leadership emergence in that it may be able to predict a person's potential to become a leader. However the research gained support for the influence of motivational, situational and value-based constructs, which also appear to influence leadership emergence. In conclusion, further research would be needed to establish which variables can consistently predict a person's emergence as a leader, and under which conditions.

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# **Personality, core self-evaluation and communication skills seem to be more important than demographic variables in the development of LMX**

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## **About the authors**

Emerita Professor Soili Keskinen originally began researching LMX for several reasons. First, as leadership has conventionally been overplayed in comparison with employee roles; it provides a counterbalance for the leader-focused outlook. Second, Professor Keskinen has recognised the importance of stimulating, activating and maintaining employee responsibility; so that working together with managers organizational goals can be achieved. Third, it is important to emphasise employee roles as a matter of ascertaining the occupational well-being of managers and preventing stress associated with excessive workloads. These observations are of interest to occupational health psychologists Kariluoma, Rehnbäck, Wikman-Heinonen and Vene and the group wishes to study the theme and contribute to further knowledge of these major issues related to occupational well-being.

## **Abstract**

In this study, we were interested in studying Leader-Member-Exchange (LMX) theory. Specifically, we wanted to investigate the quality of LMX relationships with a group of experts; based on the evaluations of their subordinates. We looked at demographic variables like gender, level of education and age and how these were connected to the LMX relationship. We explored these questions with a questionnaire study with 278 employees and supervisors in an expert-organization of state administration. We found only few connections between demographic variables and LMX. Gender and education had some connections with LMX; with men reporting more perceived opportunities to participate in decision-making. There was also a connection between years of employment and approachability of supervisors. Theoretically our findings suggest that personality, core self-evaluation and communication skills may be more important than demographic variables in the development of LMX. Practically we suggest that LMX (and its parts: functional interaction, opportunities of participation and influence, approachability and value of expertise) should be developed at all levels in organizations.

## Introduction

During the last years, the Leader–Member Exchange (LMX) theory has developed into a central leadership theory (Graen & Uhl-Bien, 1995). LMX-theory depicts leadership as an interactive relationship with one's subordinates. It examines leadership as an upwards communication process, contrasting with transformational leadership theory, where the direction of communication is downwards. Leadership is seen to develop from an interactive relationship with one's subordinates and a sense of community. Traditional leadership theories highlight the skills and personality of the supervisor, while LMX-theory underlines the importance of an interrelationship; with both supervisors and subordinates being responsible in the leadership process. LMX is seen as interactive, with both parties having their own role in the creation and development of the relationship.

Traditional leadership theories often classify and characterise the behaviour, style and personality of supervisors in relation to different types of situations. In these situations, leadership is either seen as efficient and productive or inefficient and unproductive. LMX-theory emphasises relationship forming as the basis for leadership between supervisors and their subordinates (Graen, 2003). The supervisor creates an interrelationship with each subordinate and the successfulness or unsuccessfulness of these relationships as a whole creates the leadership of the entire work community. These multiple leader-member relationships create the quality of leadership in that work group. Supervisors have to interact with their subordinates each day developing working relationships with them individually.

The LMX relationship has four dimensions: affect, loyalty, perceived contribution and professional respect (Graen & Uhl-Bien, 1995). *Affect* means that the subordinate thinks their supervisor is the kind of person one would like to have as a friend. *Loyalty* implies that the supervisor defends employees' working behaviour even without complete knowledge of the issue at stake. *Contribution* means that the supervisor is willing to apply extra efforts, beyond those normally required. *Professional respect* means the supervisor respects the employee's knowledge of their job and they have mutual respect for each other (Liden & Maslyn, 1998; Schyns & Wolfram, 2008). Based on these dimensions both parties experience a relationship based on equality leading to positive working arrangements. According to Schyns and Wolfram (2008) the LMX-relationship develops in a dyadic role-making process and this process emphasises the exchange taking place between leaders and members.

LMX-theory has developed based on social exchange and role theory (Douglas, Ferris, Buckley, & Gundlach, 2003). Studies have examined social relationships between leader and subordinates (Epitropaki & Martin, 2005; Graen & Uhl-Bien, 1995; Henderson, Liden, Glibkowski, & Chaudry, 2009). It was noted that supervisors develop a variety of relationships with their subordinates and those unique relationships are connected to subordinates' well-being at work (Graen & Uhl-Bien, 1995). Effective development of LMX in diverse leader-member dyads may influence both members of the dyad in terms of the development of respect, trust and mutual obligation (Graen & Uhl-Bien, 1995; Scandura & Lankau, 1996; Schyns & Wolfram, 2008). Interaction between supervisor and subordinate is directly related to job satisfaction, organizational commitment, performance ratings and productivity

(Scandura & Lankau, 1996). According to Graen and Uhl-Bien (1995) subordinates describe their supervisors' approachability and loyalty differently, based on their own relationship with the supervisor. According to Scandura and Lankau (1996) when both subordinate and supervisor described the relationship between them as trustworthy, respectful and committed, the subordinate belongs to the '*in-group*'. Later Graen (2003) described the relationship as high-quality exchange instead of using the concept of '*in-group*'. The '*out-group*' consist of subordinates who meet minimum job standards, but whose subordinate-supervisor interaction does not consist of mutual commitment, trust or respect. Later in the LMX literature this type of relationship was described as a low-quality exchange (Epitropaki & Martin, 2005; Hiller & Day, 2003).

LMX therefore refers to both supervisor and subordinate skills. Subordinate skill is a relatively new term in the Finnish work-related literature; but it has been used by Keskinen (2005) and Keskinen and Rehnäck (2005; 2009). These authors define subordinate skills as general responsibility or responsible behaviour of an employee (Keskinen, 2005) and the ability to influence one's supervisor and their mutual relationship (Rehnäck & Keskinen 2008). The definition is based on Organizational Citizenship Behaviour (OCB) (Deluga, 1994) as well as LMX-theory. OCB refers to the employee's conscientiousness, altruism, sportsmanship, courtesy and civic virtue (Deluga, 1994).

OCB suggests that the personal qualities of subordinates help the work community and organization to succeed (Podsakoff, Whiting, Podsakoff, & Blume, 2009), and LMX suggests that subordinate skills are also related to the development of the LMX relationship (Rehnäck, Keskinen, & Keskinen, 2010). The higher the subordinate skills are the greater the probability of high-quality exchange.

LMX is important for individual work-related satisfaction and organizational commitment (Laschinger, Purdy, & Almost, 2007; Schyns & Wolfram, 2008). While there is a great deal of research on LMX relationships (Avolio, Weber, & Walumbwa, 2009) most of this work is based on subordinate evaluations; for example connecting LMX with subordinate work related well-being, commitment to work and their ability to endure stress at work (Schyns & Wolfram, 2008). When examining LMX from the supervisor's point of view, LMX is connected with empowering subordinates, organizational commitment and achieving goals (Cogliser, Schriesheim, Scandura, & Gardner, 2009; Gerstner & Day, 1997; Schyns & Wolfram, 2008). Gerstner and Day's (1997) meta-analysis of high-quality LMX found these relationships were related to work-satisfaction, clear distribution of roles, commitment and reduced intention to quit current employment for both supervisors and subordinates. Both supervisors and subordinates who reported high-quality exchange also reported increased satisfaction at work, efficiency, open and confidential communication and greater opportunities to influence their work.

High quality of LMX is usually associated with employees' efficiency, work satisfaction and commitment to the organization (Graen & Uhl-Bien, 1995), and connected with career advancement (Wakabayashi & Graen, 1984; Schriesheim, Neder, Scandura, & Tepper, 1992). Therefore, it is possible that work related stress

problems may be prevented by high quality of LMX between subordinates and supervisors (Graen & Uhl-Bien, 1995).

LMX is built over time through interactions between supervisors and subordinates. In a study of nurses (Laschinger et al., 2007) as much as 40% of variance in work-related satisfaction could be explained by the quality of the LMX relationship, the amount of responsibility given and the nurses core self-evaluations. Core self-evaluation represents a stable personality trait which encompasses an individual's subconscious, fundamental evaluations of themselves, their own abilities and their own control. People who have high core self-evaluations think positively of themselves and are confident concerning their own abilities. Laschinger and colleagues' (2007) study suggests that both the quality of the relationship and the personalities of those in the relationship can explain the development of LMX relationships.

#### LMX and demographic variables

Based on Graen's (2003) LMX theory the interaction between supervisor and subordinate is developed through three stages. These stages progress step-by-step. Moving to the next stage requires that each previous stage is successful. Graen (2003) names these stages: *Stranger; Acquaintance and Mature Partnership*. At the Stranger-stage the supervisor and subordinate have a low-quality relationship where the direction of communication is downwards This Stranger relationship is transactional; where the supervisor tells the subordinate what goals they expect the subordinate to achieve and which tasks they require to be completed. There is an emphasis on the supervisor to build the relationship with the subordinate. Differences in demographic variables for example age, educational level and gender between the two parties should be important to relationship building.

When the relationship between the supervisor and the subordinate evolves to the Acquaintance-stage; supervisor and subordinate begin to exchange information both on a personal and professional level. These interactions are not only transactional, that is, when there are slight disagreements these are accepted; or negotiations are held to resolve issues. At this stage, confidential terms are built between supervisor and subordinate and their roles become looser. Confidential terms imply that both parties, leader and member, trust each other and have an honest relationship.

In the final stage of the relationship (Mature Partnership) confidence is built. Downward leadership evolves towards transformational, communicative, trusting, and a mutually supportive and respectful partnership.

The size of the work community and the amount of subordinates has been seen to be significant in the development of leader-member relationships. Studies show that the growth of a relationship may depend on: the amount and quality of meetings; and type of contact experienced between supervisor and subordinate (Kacmar, Witt, Zivnuska, & Gully, 2003); the amount of time parties have worked together and how

much the supervisor is able to influence the subordinate's work, salary and general resources (Schyns & Wolfram, 2008).

Demographic variables affect the development of LMX especially at the beginning of these relationships (Hiller & Day, 2003). If values are to some extent shared, the relationship is likely to progress to the level of high-quality exchanges; or at least to the next level from the current one. If the demographic variables differ a great deal at the beginning of the relationship, the development of that relationship may be slow. However, if the supervisor is able to behave in a way that demographic variable differences have a small consequence the relationship will develop to the deeper level. This can happen by spending time with one's subordinates, allowing similarities in personalities and shared values and attitudes, to emerge and be understood.

LMX stems from the ideal that co-operation develops as a result of mature interactions between two persons (Graen, 2003). If the interaction does not develop and progress positively, the resulting interaction may be harmful. Clearly, understanding the impact of demographic variables on relationships between supervisors and subordinates are important for appreciating how they affect the development of LMX relationships.

#### Research Questions

- What is the quality of LMX relationships in an expert organization based on the evaluations of subordinates in different departments of the organization?
- How are demographic variables like gender, level of education and age connected to LMX?

### Methods

#### Participants

The research was conducted as a case study, and the participants were 400 employees of an expert-organization of State administration. Departments varied in size from four to 60 people.

Two hundred and ninety-three responses were received from a total sample of 400 people (overall response of 73.3%). The majority of respondents were women (70.7%,  $N=205$ ). Many employees had worked in the organization for over ten years (37%); with only one third (31%) working for less than four years. The expert organization had a high level of education with the majority of respondents having a university degree (61%, Masters/Licentiate/Doctorate) and 68% of these were women. A further 21% had university applied science degrees.

#### The Survey

The study measured the relationship between supervisor and subordinate as experienced by subordinates. The subordinates were asked about their opinions toward their immediate supervisor using 16 items with answers recorded on a five-step Likert response scale (Rehnbäck & Keskinen 2008). The items were derived from the LMX-7 questionnaire (Graen & Uhl-Bien, 1995) translated into Finnish and

two leadership questionnaires commonly used in Finland (Lindström et. al. 2000; Simola, Heikkonen, & Mäkelä, 2000) (see Table 1).

Four of the LMX-7 items were used to form two separate questions, for example: “*I trust my supervisor so much that I would defend their decision even if he was not present*” was divided into two questions “*I trust my supervisor*” and “*If needed I would defend my supervisor’s decisions and views*”. Other questions of LMX-7 were: “*My leader and I are on good terms*”; “*My leader is easy to approach*”; “*I trust my supervisor*”; “*I am aware of how my leader rates my performance*”; “*My leader is aware of problems related to my work*”; “*My leader values my expertise*”; “*My leader helps me overcome problems related to my work*”; and “*My leader provides prerequisites of success for my work*”.

Information about demographic variables of gender, level of education (comprehensive, secondary, BA and MA degree), and years of employment were requested as part of the survey.

### Data Collection

Surveys were administered in a lecture room where almost all the employees and supervisors were present to attend an educational lecture concerning work community functioning and leadership. The questionnaires were completed before the start of the lecture. Employees not present at this event were given the opportunity to answer the survey by email. Participants completing the survey were asked to answer questions in the role of a subordinate using their closest supervisor as the subject of their answers. No names were added to the survey to maintain anonymity. In the survey, we used identity numbers to maintain anonymity.

### Statistical Analysis

Means, standard deviations and cross tabulation were used to describe the data. The questionnaire was analysed using the SPSS 15.0 program.

Scale averages were examined with tests of difference. The average variables were examined closer using the Kruskal-Wallis test and additionally the multiple comparisons were done separately with the Mann-Whitney U-test.

In the Kruskal-Wallis test all of the average variables were used as dependent variables and demographic variables such as gender, years of employment, education and department were used as independent variables.

To examine the connections between the quality of the exchange ratio and the demographic variables we examined the four categories of exchange (Functioning Interaction, Opportunities of Participation and Influence, Approachability; and Value of Expertise) with Kruskal-Wallis nonparametric tests. The exchange ratio itself was

a dependent variable and demographic variables gender, education years of employment and department were independent variables.

## **Results**

### Quality of interaction

Items describing the interaction and relationships between supervisor and subordinate were examined with exploratory factor analysis. This enabled the definition of four average variables describing: Functioning Interaction, Opportunities of Participation and Influence, Approachability; and Value of Expertise. Scale averages were examined with nonparametric tests as average variables were not normally distributed (Kolmogorov-Smirnov  $p < .05$ ).

*Table 1: Study variables: items, origin, reliability, mean, standard deviation and range*

Variable	Item	Reference	Alpha	Mean	SD	range <sup>1</sup>
<b>Dimension of Leader-Member Exchange</b>			<b>0.935</b>	<b>3.56</b>	<b>.80</b>	<b>1-5</b>
<b>Functional Interaction</b>	My leader helps me overcome problems related to my work.	LMX-7				
	My leader provides prerequisites of success for my work.	LMX-7				
	I trust my leader.	LMX-7				
	My leader defends me if needed.	LMX-7				
	My leader is aware of problems related to my work.	LMX-7				
	If needed I defend my leader's decisions and views.	LMX-7				
	I have enough opportunities of discussion with my leader.	QPS-Nordic				
	My leader treats all employees as equals.	STM				
	My leader encourages us to voice our opinions when we disagree with something.	STM, QPS-Nordic				
			<b>0.827</b>	<b>3.79</b>	<b>.80</b>	<b>1-5</b>
<b>Opportunities of Participation and Influence</b>	I have the opportunity to participate in decision making involving myself. (Does your direct leader encourage you to participate in important decisions?)	QPS-Nordic				
	My leader gives me the opportunity to influence work-methods and -approaches. (My leader takes our views and ideas into account in carrying out tasks)	STM				
	My leader takes my views and ideas into account.	STM				
			<b>0.881</b>	<b>4.0</b>	<b>0.98</b>	<b>1-5</b>
<b>Easy Approachability</b>	My leader and I are on good terms.	LMX-7				
	My leader is easy to approach.	LMX-7				
			<b>0.824</b>	<b>3.65</b>	<b>0.90</b>	<b>1-5</b>
<b>Value of Expertise</b>	My leader values my expertise.	LMX-7, QPS-Nordic				
	I am aware of how my leader rates my performance.	LMX-7				

<sup>1</sup> All variables are scored; a high score indicating that the respondent felt the phenomenon in question occurred "often" or "a lot".

The quality of interaction between superiors and subordinates was examined using four separate average variables (Functioning Interaction, Opportunities of Participation and Influence, Approachability; and Value of Expertise) with the maximum response being 5 and the minimum being 1. High and low quality exchange ratios were formed using the mean values and standard deviations of the average variables. The respondents who had evaluated their relationship with their supervisor as lower than .5 standard deviations from the each of the four scale means were described as *low quality exchanges*. The respondents who had evaluated their relationship with their supervisor as higher than .5 standards deviations from the mean were described as *high quality exchanges*. Those evaluations that were within one standard deviation from the specific scale mean were classified as *intermediate exchanges*.

High, intermediate and low quality exchanges were examined by frequencies and mean values across the four separate average variables indicating the quality of the exchange ratio. *High quality exchanges* ranged from 4.4 to 4.9 on the average variables; *intermediate quality exchanges* ranged from 3.5 to 4.0 and *low quality exchanges* ranged from 2.5 to 2.9.

*Table 2. High and low exchange ratio of LMX- relationships by gender, level of education and years of employment*

	<b>Gender:</b>		<b>Level of education:</b>				<b>Years of employment:</b>		
	Female	Male	ud	uasd	se	ce	0-4 yrs.	5-10 yrs.	over 10 yrs.
<b>Functional interaction</b>									
Low exchange ratio	22%	8%	18%	8%	2%	2%	7%	9%	15%
High exchange ratio	26%	13%	25%	6%	3%	6%	14%	10%	16%
Intermediate exchange ratio	22%	9%	18%	8%	2%	2%	11%	9%	9%
	n=268		n=263				n=265		
<b>Opportunities of participation and influence</b>									
Low exchange ratio	26%	6%	15%	11%	2%	3%	12%	10%	11%
High exchange ratio	21%	12%	23%	4%	2%	4%	9%	10%	13%
Intermediate exchange ratio	22%	13%	22%	7%	4%	3%	11%	8%	16%
	n=276		n=272				n=272		
<b>Easy approachability</b>									
Low exchange ratio	24%	8%	18%	8%	2%	3%	8%	8%	15%
High exchange ratio	29%	14%	27%	7%	4%	2%	15%	13%	15%
Intermediate exchange ratio	16%	9%	15%	7%	2%	1%	8%	7%	9%
	n=278		n=273				n=274		
<b>Value of expertise</b>									
Low exchange ratio	23%	7%	16%	9%	3%	2%	10%	8%	12%
High exchange ratio	14%	7%	14%	3%	1%	3%	8%	5%	8%
Intermediate exchange ratio	33%	16%	31%	9%	4%	4%	14%	15%	19%
	n=278		n=273				n=274		

ud= university degree (MA), uasd= university of applied sciences degree (BA), se= secondary education (general/vocational), ce= comprehensive education

Over one third of the respondents (39%) described the interaction with their supervisor as “good” and evaluated the quality of the relationship as high ( $M = 4.4$ ,  $SD = 0.32$ ) (Table 2). Just under half of the respondents (43%) felt their supervisor was Approachable ( $M = 4.9$ ,  $SD = 0.22$ ) and 32% of the respondents felt that their supervisor was not Approachable ( $M = 2.8$ ,  $SD = 0.69$ ). A third (35.4%) of the respondents evaluated their own Opportunities of Participation and Influence as intermediate ( $M = 3.9$ ,  $SD = 0.39$ ), a third (32%) evaluated them as not good ( $M = 2.9$ ,  $SD = 0.53$ ) and a third (32.5%) evaluated them as good ( $M = 4.6$ ,  $SD = 0.30$ ). A fifth (20.8%) of respondents estimated their supervisor’s Value of their Expertise was high ( $M = 4.8$ ,  $SD = 0.25$ ) and almost half (48.7) felt Value of their Expertise was intermediate ( $M = 3.8$ ,  $SD = 0.23$ ). A final 30.5% felt their supervisor’s Value of their Expertise was only slight ( $M = 2.5$ ,  $SD = 0.56$ ).

#### Connection of Demographic Variables to LMX

We examined the connections between quality of the exchange and the demographic variables for four categories of exchange (Functioning Interaction, Opportunities of Participation and Influence, Approachability; and Value of Expertise) (see Table 3 below).

*Table 3: Connection between leader-member exchange and gender, education and years of employment; Kruskal-Wallis tests*

	Functional Interaction			Opportunities of Participation and Influence			Easy Approachability			Value of Expertise		
	m (SD)	$\chi^2$ (2)	p	m (SD)	$\chi^2$ (2)	p	m (SD)	$\chi^2$ (2)	p	m (SD)	$\chi^2$ (2)	p
Gender												
a. female	3.5 (0.85)	.901	0.342	3.8 (0.08)	4.75	0.029*	4.0 (0.97)	0.609	.435	3.6 (0.90)	1.272	.259
b. male	3.6 (0.84)			4.0 (0.13)			4.0 (1.01)			3.7 (0.90)		
Education												
a. University degree	3.6 (0.84)	4.789	.188	3.9 (0.78)	18.030	0.000***	4.0 (0.95)	4.257	.235	3.7 (0.90)	4.059	.255
b. University App. Science.	3.5 (0.86)			3.4 (0.79)			3.8 (1.03)			3.5 (0.88)		
c. secondary education	3.6 (0.81)			3.8 (0.73)			4.2 (0.86)			3.4 (0.84)		
d. comprehensive education	3.9 (0.87)			3.9 (0.79)			4.1 (1.11)			3.9 (0.97)		
Years of employment												
a. 0-4 yrs.	3.7 (.77)	3.988	.136	3.8 (0.77)	.057	0.752	4.2 (0.92)	5.901	.052*	3.7 (0.91)	.919	.632
b. 5-10 yrs.	3.5 (.91)			3.8 (0.78)			4.0 (0.93)			3.7 (0.85)		
c. over 10 yrs.	3.5 (.85)			3.8 (0.84)			3.8 (1.03)			3.6 (0.94)		

Note: \* refers to  $p < 0.05$ ; \*\* refers to  $p < 0.01$ ; and \*\*\* refers to  $p < 0.001$

There were only few connections between demographic values and leader-member exchange variables. Gender was connected to Opportunities of Participation and Influence ( $\chi^2 (2) = 4.75, p = 0.029$ ). Men estimated themselves to have more Opportunities of Participation and Influence than women. Further, Education level was connected to having Opportunities of Participation and Influence ( $\chi^2 (2) = 18.030, p = .000$ ). Those who had a BA degree felt that they had less Opportunities of Participation and Influence than those of a higher level of education ( $U = 3016.5, p = .000$ ) or than those who had comprehensive education ( $U = 460.5, p = .05$ ).

### Summary of findings

- Most respondents evaluated relationships with their supervisor as good.
- Approachability was evaluated the highest among the four dimensions of LMX.
- Only few connections were seen between demographic variables and leader-member variables.
- The quality of the exchange differed by gender in Opportunities of Participation and Influence with men reporting more perceived opportunities to participate in decision-making than women. Those with a university-level (MA) degree and comprehensive education level felt that their opportunities of influence were greater than those with BA degree or secondary education.
- There was a connection between years of employment and Approachability of supervisors. Those with the least job experience felt that their supervisors were more approachable than those with longer work experience.

## Discussion

Relationships between supervisor and subordinates (LMX) are seen as evolving on a continuum. Decisive attributes of the interrelationships are surface level attributes, such as gender, age, level of education, and years of employment (Hiller & Day, 2003; Scandura & Lankau, 1996). If the LMX relationship between supervisor and subordinate is to develop well, it is important for the supervisor to be aware of the factors that may influence that relationship. Further, efficient development and deepening of LMX relationships may lessen the negative effect of demographic variables on career development (Scandura & Lankau, 1996).

### Demographic variables and LMX

Gender, level of education and years of employment were found to influence the quality of supervisor – subordinate relationships in this study in an expert organization but only slightly. However, in earlier studies, age (Waldman & Avolio, 1986) race (e.g., Moch, 1980), education (Tsui & O'Reilly, 1989), and gender similarity of dyad members (Duffy & Ferrier, 2003; Goertzen & Fritz, 2004) were connected to LMX. We did not evaluate the leader's race and gender.

In this study, it was found that demographic variables on their own did not explain the quality of leader-member relationships. Nishii & Mayer (2009) noted that demographic diversity in a group affects the variation of LMX relationships only when the average LMX in the group is high. Their study examined relationships with

supermarket workers making a difference in context to this study exploring workers in an expert organization. Consequently, it does matter how high the overall LMX exchange ratio is perceived to be in the work community. If the overall LMX is at a low level, the demographic variables between subordinates and supervisors do not become significant.

In our study the LMX relationship level in different LMX variables were not especially high. Our result was that there were few connections between demographic variables and LMX and we follow the conclusion of Nishii & Mayer (2009). However, in an expert organization there may be other more important variables that help to build the LMX relationship than demographic variables. Being an expert represents status in itself. Being an expert may influence how people communicate, the way they work together and is likely to influence individuals' core self-value. In the development of interrelationships between supervisors and subordinates deep level factors such as personality, values and beliefs become decisive in the relationship as it develops over time. Thus, committing to the work community; having steady and long employment relationships are a key part in the internal cohesion of the workplace and the formation of strong relationships.

Men and those with a higher level degree felt their opportunities of participation and influence to be greater than women and participants who had upper secondary education (BA). Opportunity to participate may be a more important aspect for men in this study. In a study (Herranen-Somero, 2014), stress and minor opportunities for participation were highly connected with men but not with women.

Because the LMX-theory's roots lie in the theory of social exchange (Erdogan & Enders, 2007), it must also be noted that the support a supervisor receives from the organization will affect the interaction between supervisor and subordinates. In this study, there was no opportunity to examine the connection between the support a supervisor receives from the organization and the quality of leader-member relationships. The better a supervisor feels about their own supervisory relationship and the more support they receive from the organization; the more they are able to give to subordinates (Laschinger et al., 2007). A nursing study noted that the higher the supervisor evaluated their own supervisor relationship, the more open their communication was perceived by the work group; and the more ideas were shared and empowerment experienced from the supervisor (Laschinger et al., 2007). This means that in the whole organization, on all levels, the LMX should be high. Trying to develop LMX only on the lowest levels of organizational hierarchy will not be successful if the higher levels will stay untouched.

Further research and evaluation of this study

For further research, it would be important to examine the factors affecting the LMX relationship from both the subordinate and supervisor's points of view. Too often, as also in this study, LMX is evaluated only from the subordinates' point of view even though the whole concept is interactive in its nature. An interesting subject for further research would also be to examine the effect of LMX to well-being at work and what kind of variables mediate the well-being and LMX connection.

Concerning the validity and reliability of the measurement method in this study we found that all four dimensions of the LMX (Functioning Interaction, Opportunities of Participation and Influence, Approachability; and Value of Expertise) received support. These dimensions were examined as average variables in the study with high Cronbach alfa coefficients and coincide with the dimensions of the original theory (Liden & Maslyn, 1998; Schyns & Wolfram, 2008). However, this study was a cross sectional one limiting the possibilities to draw conclusions concerning the nature of the connections. It is clear that gender, education and years of employment affect LMX variables and not vice versa. However, interconnections between the four LMX variables are just correlational ones.

### Application of results

In this study, it was found that there were only few connections between demographic variables and LMX. The parts of LMX, functional interaction, opportunities of participation and influence, approachability and value of expertise, are mainly depending from other factors than demographic variables. One strong candidate for such a variable is the organizational culture. As supervisors interact with their own higher level supervisors this interaction creates their LMX with their own supervisors. This LMX of supervisors affects lower level supervisors' behaviour towards their own subordinates. This means that when trying to develop subordinates' and their supervisors LMX the development should be directed to the whole organization, on all levels, and not only lower level subordinates' and their supervisors. Further research into such interventions is required to explore this proposition.

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## **Latest News: the Specialist Certificate in Work and Organizational Psychology**

In 2015, EAWOP and EFPA developed the materials required to launch the EuroPsy Specialist Certificate in Work and Organizational Psychology (hereafter the Specialist Certificate). During 2016, three countries (Finland, Norway and Spain) established their Specialist National Awarding Committees (or S-NAC) and began the process of receiving applications and awarding the Specialist Certificate. To update you on this initiative José Ramos interviewed Salvatore Zappalà the current Chair of the Specialist European Awarding Committee to talk about the process.

### **About the Interviewee**

Salvatore Zappalà is an Associate Professor of Organizational Psychology at the University of Bologna, in Italy. He currently teaches “Organization Change & Development” and conducts research on readiness to change, service climate, and inter-organizational collaboration.

He served on the Executive Committee of EAWOP from 2009 to 2015. In that period he acted as liaison between EAWOP and the European Federation of Psychologists’ Associations (EFPA), in relation to the Specialist Certificate project.



In 2015 he established and chairs the Specialist Certificate Awarding Committee, a body that promotes and supports the European national associations of Work and Organizational Psychologists in the adoption and implementation of the Specialist Certificate.

### **The Interview**

#### ***What is the Specialist Certificate, and what has been the process for its development?***

The EuroPsy Specialist Certificate in Work and Organizational Psychology (WOP) is a European standard of education and professional training in WOP. It is part of the EuroPsy system, which is a project developed and run by EFPA. EAWOP contributed to this project by developing and testing the standards of education and training for psychologists in the WOP field. Thus, any WO Psychologist who meets the standard can obtain the Specialist Certificate and be included in the public Register of European Psychologists managed by EFPA.

Anyway, before going further, let me anticipate that in May 2017, at the EAWOP Congress in Dublin, there will be a roundtable focused on discussing and presenting the Specialist Certificate. That roundtable will be a good opportunity to present more details than allowed by this interview and participants will be able to raise questions

as well as meet and discuss with country representatives who are implementing the Specialist Certificate.

### ***Who awards this certificate?***

It is the Specialist National Awarding Committee (S-NAC) that awards the Specialist Certificate. The S-NAC is a team that can be established in each European country by the national association of psychologists in connection with the EAWOP Constituent. WO Psychologists apply to the S-NAC of their own country, and the S-NAC will evaluate and determine the outcomes of the applications. If the WO Psychologist positively fulfils the standard their name is sent to the public European register held at EFPA's Head Office, in Brussels. You can now have a look and consult the register at: <http://www.europsy-efpa.eu/find-a-psychologist>

### ***What are the main aims of the Specialist Certificate?***

WO psychologists increasingly work for multinational companies or in international settings. The growing mobility of psychologists, as well as of their clients, makes it necessary to develop tools and standards to safeguard clients' interests at a European rather than a national level.

The Specialist Certificate does neither substitute nor replace national laws and rules for professional practice; but is an addition to these. The Specialist Certificate aims to support the recognition of qualifications of psychologists working outside their own country in the EU (as laid down in the European Directive 2005/36/EC, the Qualifications Directive). Further, this process is a way to show that the community of WO psychologists, pro-actively, has established its own standards of quality and has tools to check and increase the quality of these services provided to clients.

### ***What are the requirements that need to be fulfilled to obtain the Specialist Certificate?***

The Specialist Certificate is an add-on to the EuroPsy Certificate in Psychology (called the EuroPsy "Basic"). The Basic certificate is awarded to psychologists' having five years training in Psychology, one year of supervised practice and can show a certain level of competence. Thus it is a certificate at the "entry level" of the profession. The Specialist Certificate is awarded to psychologists that already possess the Basic Certificate and that can show additional post-graduate education, as well as a higher level of competence. In particular, applicants must demonstrate: a) between 60 to 90 ECTS (European Credit Transfer and Accumulation System, see [http://ec.europa.eu/education/resources/european-credit-transfer-accumulation-system\\_en](http://ec.europa.eu/education/resources/european-credit-transfer-accumulation-system_en)) of postgraduate educational activities; b) at least three years of experience and practice in the WOP field; and c) during these three years there should be at least 400 hours per annum of supervised (or coached) practice (thus, at least 1200 hours in three years) and, during the same three years, at least 50 hours of supervision per year (thus, at least 150 hours in three years). Evidence of practice and of the specialist competences can be included in a log book ("portfolio").

***The Specialist Certificate is based in the acquisition of specialist professional competences. Could you give some detail about the competency model?***

The overall purpose of practicing as a professional psychologist is to apply psychological principles, knowledge and methods in an ethical and scientific way in order to promote the well-being and effectiveness of individuals, groups and organizations. In order to do so, the professional psychologist has to develop, practice and implement two main groups of competences: a) those relating to the psychological content of the professional practice (Primary competences); and b) those enabling practitioners to render their services effectively (Enabling competences).

The Primary competences are unique for the psychological profession, in terms of content, knowledge and skills required for performance. There are 20 Primary competences grouped into six functional categories: i) Goal specification; ii) Assessment of individuals, groups or organizational units; iii) Development of interventions; iv) Implementation of interventions; v) Evaluation; and vi) Communication.

The Enabling competences are competences that psychologists share with other professions and providers of services. There are nine competences, which include, among others: attention to Continuous Professional Development, capacity to develop and maintain professional relations, having a professional strategy, practice management, quality assurance, or self-reflection.

Competences are self-assessed by the psychologist, and/or by their supervisor, on a scale from 1 to 4, where 1 means that the basic knowledge and skill is present but it is insufficiently developed, and 4 means that the competence allows them to perform complex tasks without guidance or supervision.

***Supervised practice is the main basis of assessment of the Specialist Certificate; can you explain the importance of supervision and the implications for our discipline?***

The acquisition of competences, and of higher level of competences, requires practice and also feedback on that practice. Thus, an important goal of supervision is helping to connect knowledge and skills with the components of a specific project, or activity, that unfolds as the project develops, taking into account the rules of professional ethics. Supervision may also help in connecting the relevant contextual factors (as social, legal or economic conditions) that may influence the effectiveness of the intervention with a specific client. Supervision helps the new WO Psychologist to deal with the complex context of the intervention and the multi-faceted learning process; facilitating reflection and self-awareness.

However, although the importance of supervision is widely recognised and endorsed, it is also true that in the WOP field only few European countries have a tradition of systematic supervised practice and procedures for training supervisors, delivering supervision and taking note of the advancements promoted by the process. Supervision, or as it is more often called in our field, coaching or mentoring, can thus promote the learning process and a higher level of awareness of the competences

and expert services that WO Psychologists possess and can provide to their clients. In the end, it may consolidate the sense of a more professionalised discipline, which tries to guarantee even more professionalised services, training a new generation of competent and expert practitioners.

***At moment, what is the process of implementation of the Specialist Certificate among EAWOP Constituents?***

EAWOP is an important stakeholder of the EuroPsy Specialist Certificate, because it is formed by national associations that group together WO psychologists in each European country. EAWOP Constituents associations have regular contact with WO psychologists; they know their competences, successes and also their needs and challenges; and thus they have the interest to promote and support the professionalisation and competent practice of their associates.

In fact, from Spring, 2012 to Spring, 2013 five EAWOP Constituents participated in a pilot of the Specialist Certificate, which showed that the standards can be met by WO Psychologists. As a result, the Specialist Certificate has been officially started by EFPA in 2015. Now, three EAWOP constituents, Finland, Norway and Spain, have applied to set up their Specialist National Awarding Committees in their respective countries. The application was submitted to the Specialist European Awarding committee (S-EAC), the body that coordinates the Specialist Certificate. After some clarification, the S-EAC approved the three applications and those S-NACs started to work, translating the information materials into the local language, organising seminars and events to spread information across the country and solicit applications from WO Psychologists. Thus, we expect that Specialist Certificates will be issued in those countries in the near future.

***What are your opinions regarding the impact of the Specialist Certificate around Europe?***

The Specialist Certificate can have a great impact in Europe, and beyond. It can have a positive impact for both single practitioners and for the whole profession; that is formed by a multitude of single practitioners! WO Psychologists work in a field in which there is a lot of competition with practitioners from other disciplines. The Specialist Certificate can increase the positive reputation of a single practitioner showing that they fulfil a European standard of quality; It is like a company showing it's ISO certificate.

Next, in order to get the Specialist Certificate applicants have to provide evidence of an advanced level of competence. This is a novelty for our profession (as well as for many others) and is an important addition to simply writing the list of previous contracts or famous clients, because it describes specific psychological competences. In order to be successful in a competitive market WO Psychologists need to become more aware and more able to self-assess and to provide concrete evidence of their competences; and this an additional advantage of the project.

Thirdly, WO Psychologists often work abroad, in a different country from their own, and the Specialist Certificate can be an additional element to their CV; facilitating

obtaining a license to practice in that other country, even if it does not automatically provide such a license.

Fourthly, the Specialist Certificate is an opportunity of improvement not only for the single practitioner but also for the whole profession. An impact that the Specialist Certificate can have on the profession concerns two challenges: in order to become specialist, many professions have clear educational paths and supervised practice procedures after the graduation. In our field, specialised knowledge and supervised practice are often present and available to practitioners, but they are often sparse and unsystematic. It is probably time to recognise that we do a complex job, and that we need to develop more structured and assisted processes of professionalisation. These processes are already available in some countries, and the Specialist Certificate can be the opportunity for all the EAWOP Constituents to share experiences and develop a more unified shared model of education, training and supervision. This process will facilitate the younger generation of practitioners to navigate the job market in a more confident way, and, ultimately, more successfully.

***Finally, would you like to comment on anything more?***

Yes. The Specialist Certificate is a good opportunity for all EAWOP Constituents that has to be pursued and managed in this time. It is also a challenge because it requires us to develop more structured specialist programmes after graduation as well as supervision, or coaching, procedures. But, this is necessary if we want to develop our position in the Human Resource or consultancy market. It is important that EAWOP Constituents take on this opportunity, apply to set up a S-NAC, and increase their efforts towards the professionalisation of younger WO psychologists.

Finally, if this interview raises any issues or comments please come and talk about them at the roundtable on EuroPsy and the Specialist Certificate at the EAWOP conference in May, 2017 in Dublin.