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

Rosanna L Maxwell

MSc Organizational Psychiatry and Psychology: King's College London

rosanna.leah.maxwell@gmail.com

# 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 & Cately, 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 contextspecific 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; laffaldano & 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 depressionenthusiasm (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 guestion (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 guestionnaire 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  $\alpha = .0.91$  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 nondichotomous 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 wellbeing 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 wellbeing. Well-being composite variables of depression-enthusiasm and anxietycontentment 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, Radj = .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 wellbeing scales of anxiety-contentment and depression-enthusiasm. Intrinsic and extrinsic satisfaction explained a significant proportion of the variance in depressionenthusiasm 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) = -.45, p <.001, overall 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 depressionenthusiasm 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 between employee attributed importance and job satisfaction 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 overall satisfaction. In line with expectations the disparity 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 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; laffaldano & 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 depressionenthusiasm (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 whitecollar 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 wellbeing. 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 depressionenthusiasm, 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 wellbeing 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 & Chruch, 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.

#### References

- Abramis, D. J. (1994). Work role ambiguity, job satisfaction, and job performance: Metaanalyses and review. *Psychological Reports*, *75*(3), 1411-1433.
- Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309-328.
- Baruch-Feldman, C., Brondolo, E., Ben-Dayan, D., & Schwartz, J. (2002). Sources of social support and burnout, job satisfaction, and productivity. *Journal of Occupational Health Psychology*, 7(1), 84-93.
- Beck, A. T. (1972). *Depression: Causes and treatment*. Philadelphia: University of Pennsylvania Press.
- Birx, E., LaSala, K. B., & Wagstaff, M. (2011). Evaluation of a team-building retreat to promote nursing faculty cohesion and job satisfaction. *Journal of Professional Nursing*, *27*(3), 174-178.
- Boswell, W. R., Boudreau, J. W., & Tichy, J. (2005). The relationship between employee job change and job satisfaction: the honeymoon-hangover effect. *Journal of Applied Psychology*, *90*(5), 882-892.
- Callan, V. J. (1993). Individual and organizational strategies for coping with organizational change. *Work & Stress, 7*(1), 63-75.
- Campion, M. A. (1988). Interdisciplinary approaches to job design: A constructive replication with extensions. *Journal of Applied Psychology*, 73(3), 467-481.

- Centers, R., & Bugental, D. E. (1966). Intrinsic and extrinsic job motivations among different segments of the working population. *Journal of Applied Psychology*, *50*(3), 193-197.
- Clark, A., Oswald, A., & Warr, P. (1996). Is job satisfaction U-shaped in age? *Journal of Occupational and Organizational Psychology*, 69(1), 57-81.
- Clark, A. E. (1997). Job satisfaction and gender: why are women so happy at work? *Labour Economics, 4*(4), 341-372.
- Cook, J. D., Hepworth, S. J., Wall, T. D., & Warr, P. B. (1981). *The experience of work: A Compendium of 249 Measures and their use.* London: Academic Press.
- Cooper, C. L., & Cartwright, S. (1994). Healthy mind; healthy organization-A proactive approach to occupational stress. *Human Relations*, *47*(4), 455-471.
- Deci, E. L., & Ryan, R. M. (2008). Facilitating optimal motivation and psychological wellbeing across life's domains. *Canadian Psychology*, *49*(1), 14-23.
- Deci, E. L., Koestner, R., & Ryan, R. M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin, 125*(6), 627–668.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demandsresources model of burnout. *Journal of Applied Psychology*, *86*(3), 499–512.
- DeNeve, K. M., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin, 124*(1), 197–229.
- DiMeglio, K., Padula, C., Piatek, C., Korber, S., Barrett, A., Ducharme, M., & Corry, K. (2005). Group Cohesion and Nurse Satisfaction: Examination of a Team-Building Approach. *Journal of Nursing Administration, 35*(3), 110-120.
- Dobson, K. (1985). The relationship between anxiety and depression. *Clinical Psychology Review, 5*(4), 307-324.
- Donaldson, S. I., & Grant-Vallone, E. J. (2002). Understanding self-report bias in organizational behavior research. *Journal of Business and Psychology*, *17*(2), 245-260.
- Ducharme, L. J., & Martin, J. K. (2000). Unrewarding work, coworker support, and job satisfaction a test of the Buffering Hypothesis. *Work and Occupations, 27*(2), 223-243.
- Elkin. A. J. & Rosch, P. J. (1990). Promoting mental health at the workplace: The prevention side of stress management. *Occupational Medicine: State of the Art Review, 5*(4), 739-754.
- Elliot, A. J., & Church, M. A. (1997). A hierarchical model of approach and avoidance achievement motivation. *Journal of Personality and Social Psychology*, 72(1), 218-232.
- European Agency for Safety and Health at Work (2014). *Calculating the costs of workrelated stress and psychosocial risks – A literature review*. Bilbao: European Agency for Safety and Health at Work
- Faragher, E. B., Cass, M., & Cooper, C. L. (2005). The relationship between job satisfaction and health: a meta-analysis. *Occupational and Environmental Medicine*, 62(2), 105-112.
- Fields, D. (2002). *Taking Measure of Work: A Guide to Validated Scales for Organizational Research and Diagnosis.* Thousand Oaks, CA: SAGE Publications.

- Glenn, N. D., Taylor, P. A., & Weaver, C. N. (1977). Age and job satisfaction among males and females: A multivariate, multisurvey study. *Journal of Applied Psychology*, *62*(2), 189-193.
- Greenberger, D. B., Strasser, S., Cummings, L. L., & Dunham, R. B. (1989). The impact of personal control on performance and satisfaction. *Organizational Behavior and Human Decision Processes*, *43*(1), 29-51.
- Heritage, B., Pollock, C., & Roberts, L. D. (2015). Confirmatory Factor Analysis of Warr, Cook, and Wall's (1979) Job Satisfaction Scale. *Australian Psychologist*, *50*(2), 122-129.
- Herzberg, F. I. (1966). Work and the nature of man. Chicago: World Publishing.
- Herzberg, F., Mausner, B., & Snyderman, B. B. (1959). *The Motivation to Work*. New York: John Wiley.
- Hirschfeld, R. R. (2000). Validity studies. Does revising the intrinsic and extrinsic subscales of the Minnesota Satisfaction Questionnaire Short Form make a difference? *Educational Psychological Measurement*, *60*(2), 255-270.
- Holman, D. (2002). Employee wellbeing in call centres. *Human Resource Management Journal*, *12*(4), 35-50.
- Houkes, I., Janssen, P. P., de Jonge, J., & Bakker, A. B. (2003). Personality, work characteristics and employee well-being: A longitudinal analysis of additive and moderating effects. *Journal of Occupational Health Psychology, 8*(1), 20-38.
- laffaldano, M. T., & Muchinsky, P. M. (1985). Job satisfaction and job performance: A metaanalysis. *Psychological Bulletin,* 97(2), 251-273.
- Ivancevich, J. M., & Donnelly Jr, J. H. (1975). Relation of organizational structure to job satisfaction, anxiety-stress, and performance. *Administrative Science Quarterly*, 20(2), 272-280.
- Jackson, C., J., &, Corr, P., J. (2002). Global Job Satisfaction and Facet Description: The Moderating Role of Facet Importance. *European Journal of Psychological Assessment, 18*(1), 1-8.
- Janssen, O., & Van Yperen, N. W. (2004). Employees' goal orientations, the quality of leader-member exchange, and the outcomes of job performance and job satisfaction. *Academy of Management Journal, 47*(3), 368-384.
- Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: a meta-analysis. *Journal of Applied Psychology*, *87*(3), 530-541.
- Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction-job performance relationship: A qualitative and quantitative review. *Psychological Bulletin, 127*(3), 376.
- Lazarus, R. S., Folkman, S. (1984). *Stress, appraisal and coping.* New York: Springer-Verlag.
- Lee, K., & Allen, N. J. (2002). Organizational citizenship behavior and workplace deviance: the role of affect and cognitions. *Journal of Applied Psychology*, 87(1), 131-142.
- Lee, R., & Wilbur, E. R. (1985). Age, education, job tenure, salary, job characteristics, and job satisfaction: A multivariate analysis. *Human Relations, 38*(8), 781-791.
- Locke, E. A. (1969). What is job satisfaction? *Organizational Behavior and Human Performance, 4*(4), 309-336.

- Locke, E. A. (1973). Satisfiers and dissatisfiers among white-collar and blue-collar employees. *Journal of Applied Psychology*, *58*(1), 67-76.
- Malka, A., & Chatman, J. A. (2003). Intrinsic and extrinsic work orientations as moderators of the effect of annual income on subjective well-being: A longitudinal study. *Personality and Social Psychology Bulletin, 29*(6), 737-746.
- McFarlin, D. B., & Rice, R. W. (1992). The role of facet importance as a moderator in job satisfaction processes. *Journal of Organizational Behavior, 13*(1), 41-54.
- McFarlin, D. B., Coster, E. A., Rice, R. W., & Cooper, A. T. (1995). Facet importance and job satisfaction: Another look at the range-of-affect hypothesis. *Basic and Applied Social Psychology*, 16(4), 489-502.
- Mobley, W. H., & Locke, E. A. (1970). The relationship of value importance to satisfaction. Organizational Behavior and Human Performance, 5(5), 463-483.
- Morrison, D., Cordery, J., Girardi, A., & Payne, R. (2005). Job design, opportunities for skill utilization, and intrinsic job satisfaction. *European Journal of Work and Organizational Psychology*, *14*(1), 59-79.
- Newbury-Birch, D., & Kamali, F. (2001). Psychological stress, anxiety, depression, job satisfaction, and personality characteristics in preregistration house officers. *Postgraduate Medical Journal,* 77(904), 109-111.
- Oshagbemi, T. (1999). Overall job satisfaction: how good are single versus multiple-item measures? *Journal of Managerial Psychology*, *14*(5), 388-403.
- Ross, C. E., & Reskin, B. F. (1992). Education, control at work, and job satisfaction. *Social Science Research*, *21*(2), 134-148.
- Rothmann, S. (2008). Job satisfaction, occupational stress, burnout and work engagement as components of work-related wellbeing: empirical research. *SA Journal of Industrial Psychology, 34*(3), 11-16.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68-78.
- Sainsbury Institute for Mental Health (2007). *Mental Health at Work: Developing the Business Case*. London: Sainsbury Institute for Mental Health.
- Sandvik, E., Diener, E., & Seidlitz, L. (1993). Subjective well-being: The convergence and stability of self-report and non-self-report measures. *Journal of Personality*, *61*(3), 317-342.
- Schaufeli, W. B., Salanova, M., González-Romá, V. & Bakker, A.B. (2002). The measurement of engagement and burnout: A confirmative analytic approach. *Journal of Happiness Studies, 3*(1), 71-92.
- Sonnentag, S., &, Schmidt-Braße, U. (1998). Expertise at work: Research perspectives and practical interventions for ensuring excellent performance at the workplace. *European Journal of Work and Organizational Psychology*, 7(4), 449-454.
- Sparks, K., Faragher, B., & Cooper, C. L. (2001). Well-being and occupational health in the 21st century workplace. *Journal of Occupational and Organizational Psychology*, 74(4), 489-509.
- Stride, C., Wall, T. D., & Catley, N. (2007). *Measures of job satisfaction, organizational commitment, mental health and job-related well-being: A benchmarking manual* (2nd ed.). New York: John Wiley & Sons Ltd.

- Taris, R., Feij, J. A., & van Vianen, A. E. (2005). Met expectations and supplies-values fit of Dutch young adults as determinants of work outcomes. *The International Journal of Human Resource Management, 16*(3), 366-382.
- Terry, D. J., Nielsen, M., & Perchard, L. (1993). Effects of work stress on psychological wellbeing and job satisfaction: The stress-buffering role of social support. *Australian Journal of Psychology*, 45(3), 168-175.
- Todnem, R. (2005). Organizational change management: A critical review. *Journal of Change Management*, *5*(4), 369-380.
- Van de Mortel, T. F. (2008). Faking it: social desirability response bias in self-report research. *Australian Journal of Advanced Nursing*, 25(4), 40-48.
- Van Katwyk, P. T., Fox, S., Spector, P. E., & Kelloway, E. K. (2000). Using the Job-Related Affective Well-Being Scale (JAWS) to investigate affective responses to work stressors. *Journal of Occupational Health Psychology*, *5*(2), 219-230.
- Van Yperen, N. W., & Janssen, O. (2002). Fatigued and dissatisfied or fatigued but satisfied? Goal orientations and responses to high job demands. Academy of Management Journal, 45(6), 1161-1171.
- Warr, P. (1990). Decision latitude, job demands, and employee well-being. *Work & Stress, 4*(4), 285-294.
- Warr, P. (1992). Age and occupational well-being. Psychology and Aging, 7(1), 37-45.
- Warr, P. (2002). Psychology at work. Penguin UK.
- Warr, P. (2007). *Work, Happiness and Unhappiness*. London: Lawrence Erlbaum Associates.
- Warr, P. (2009). Environmental "Vitamins", Personal Judgments, Work Values, and Happiness. . In S. Cartwright, & Cooper, C. L. (Ed.), *The Oxford Handbook of Organizational Well-Being*. Oxford: Oxford Handbooks Online.
- Warr, P., & Clapperton, G. (2010). The joy of work? Jobs, happiness, and you: Routledge.
- Warr, P., Cook, J., & Wall, T. (1979). Scales for the measurement of some work attitudes and aspects of psychological well-being. *Journal of Occupational Psychology*, *52*(2), 129-148.
- Watson. D. & Tellegen, A. (1985). Toward a consensual structure of mood. *Psychological Bulletin*, *98*(2), 219-235.
- Watson, D., Clark, L. A. & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scale. *Journal of Personality* and Social Psychology, 54(6), 1063-1070.
- Worrall, L., & Cooper, C. L. (1998). *Quality of working life 1998 survey of managers' changing experiences.* London: Institute of Management.
- Wright, T. A., & Cropanzano, R. (2000). Psychological well-being and job satisfaction as predictors of job performance. *Journal of Occupational Health Psychology*, 5(1), 84-94.
- Wright, T. A., Cropanzano, R., & Bonett, D. G. (2007). The moderating role of employee positive well-being on the relation between job satisfaction and job performance. *Journal of Occupational Health Psychology, 12*(2), 93-104.
- Xie, J. L., & Johns, G. (1995). Job scope and stress: Can job scope be too high? *Academy* of *Management Journal*, *38*(5), 1288-1309.