

**Employee Engagement, Self-efficacy and Stress:
a Correlation Study Moderated by
Work Locus of Control**

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Submitted in partial fulfilment of the requirements of the BA (Hons) in Psychology at Dublin
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March 2015

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Table of Contents

Acknowledgements	2
Abstract	3
Introduction	4
Method	15
Results	18
Discussion	23
References	32
Appendix 1	37
Appendix 2	54

Acknowledgements

I would like to thank my supervisor, Dr Barbara Caska, for her support in completing this thesis. I am grateful for her guidance and advice throughout the process. I also wish to thank all of the participants who took the time to complete the survey.

I also thank, most sincerely, my wife and family for their support throughout the completion of this thesis and indeed for the last four years. Your patience and understanding is appreciated more than you will know.

Abstract

The purpose of this study is to investigate the relationship between employee engagement, self-efficacy and workplace stress. It is a non-experimental correlation study with work locus of control (WLOC) as a moderating variable. The hypothesis that engagement scores for respondents with <5 years service will differ significantly from other length of service groups was also tested. Participants were recruited via snowball sampling and data was collected using an online questionnaire; N = 82 (M = 40, F = 42). Positive significant correlation was found between engagement and self-efficacy and significant negative correlation between engagement and stress in line with predications. Controlling for WLOC, the correlation between engagement and workplace stress remained significant whereas the relationship between engagement and self-efficacy did not. Significance was found between respondents with <5 years service and those with 15-19 years. A significant finding was also reported for male and female differences in workplace stress.

Introduction

The last decade has seen an increased interest in the concept of employee engagement amongst Human Relations practitioners, with particular emphasis on how engagement can affect the bottom line of a business. Gallup is accredited with introducing the concept of engagement into the discourse of Human Resources in the 1990's and defining it in terms of "involvement, satisfaction and enthusiasm for work" (Schaufeli and Bakker, 2011 cited in Federici and Skaalvik, 2011, p.580). Since then, other researchers have suggested it is more of an overarching construct built around psychological, performance and dispositional constructs (Macey and Schneider, 2008). There are a number of views on the meaning of engagement and Robertson and Cooper (2010, p.326) cite the Robinson et al (2004) definition of engagement as "a positive attitude held by the employee towards the organisation and its values. An engaged employee is aware of business context, and works with colleagues to improve performance within the job for benefits of the organisation". However, the many factors influencing engagement lead Macey and Schneider (2008) to suggest that many practitioners focus on the positive outcomes of engagement while avoiding actually defining it. Chaudhary (2014, p.129) goes one step further and argues that there is "no consensus" on what engagement actually is, due to multiple authors and their definitions.

For many, the concept of engagement revolves around employee satisfaction, organisational citizenship, commitment, attachment and the employees' willingness to go the extra mile for the good of the organisation and by default its customers and clients. Kahn (1990, p.694) "defined personal engagement as the harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances". This suggests behavioural and cognitive functions contribute to engagement and that it is multi-tiered across a spectrum from satisfaction of the employee and their loyalty to the organisation, to the higher construct

of personal investment in the organisations goals and culture. Where the employees' values are aligned with that of the organisation, they are more engaged as there is an increased sense of commitment and effort. Wilson (2011) cites Allen, Weeks and Moffitt (2005) in suggesting that employees with high internal locus of control will have more intrinsic motivation to perform and this will increase the efficiency of the organisation. In return, the organisation must engender a climate of trust and be concerned with the psychological health of the employee.

There are, however, challenges to employee engagement. Cartwright and Holmes (2004, p. 199) suggest that due to globalisation, competition, mergers and acquisitions, organisations are “delaying and downsizing”. This has had a negative effect on engagement and productivity due to the uncertainties that have accompanied it in relation to security of tenure. Griffin, Parker and Neal (2008) suggest that while employees may seem to display any number of the antecedents of engagement, they may in fact just be trying to avoid a situation where their position comes under threat. Bunting (2004) as cited by Cartwright and Holmes (2006) suggests that due to changes in the workplace and indeed, in society itself, employees are being not just disengaged, but also becoming disenchanted and frustrated with the nature of work. This has resulted, according to Cartwright and Holmes (2006, p.200) in individuals “looking for the opportunity for greater self-expression and fulfilment”. Having an engaged employee is good for “bottom-line results” (Macey and Schneider, 2008, p.1) and employees with high levels of engagement and psychological well being are central to delivering important outcomes associated with high performing, successful businesses (Robertson and Cooper, 2010).

Employee Engagement

Welch (2011) suggests that leaders and managers in organisations should concern themselves with the concept of employee engagement as it affects the overall competitiveness, innovation and effectiveness of the entire organisation. Moura, Orgambidez-Ramos and Goncalves (2014) suggest that the lack of economic resource due to the recessionary period has focused organisations on the need to have engaged employees. Their study of engagement and job satisfaction showed strong positive correlations. It is suggested by Shuck, Reio and Rocco (2011, p.427) that engagement is not an in the moment construct, but rather a “long-term emotional involvement” and as such acts as an antecedent to other psychological states such as commitment and sentiment. Macey and Schneider (2008) posit that the psychological constructs that accompany, or are as a result of, engagement will ultimately affect behaviour. One such behaviour is discretionary effort, which the employee exerts for the good of the organisation. However, Saks (2008) contradicts this assertion by Macey and Schneider (2008) by suggesting that the relationship between engagement and discretionary effort is cyclical and therefore the effort is not an engagement in itself. Schuck et al (2011, p.428) citing Chalofsky (2010) suggests that less than 30% of employees report “even partial engagement with their work”. This potentially leaves a significant gap in the utilisation of the skills and expenditure of discretionary effort. An engaged employee displays motivation and performance and Bandura (1995) cited by Fearon, McLaughlin and Morris (2013, p.247) suggests that “high levels of self-efficacy” contribute to these traits.

Based on their research, Macey and Schneider (2008) propose that the actual terminology around engagement is misconstrued. They suggest that employee engagement is not the construct that should be considered, it is the construct of “state engagement” that has more relevance (Macey and Schrieder, 2008, p.24). Limiting engagement to something that happens when the individual is in work mode does not give adequate recognition to all of the

constructs related to engagement. According to Macey and Schrieder (2008, p.24), state engagement involves organisational commitment and involvement however, it also encompasses the “positive affectivity of job satisfaction” and is cognoscente, that for many, work is a part of their self-identity. Griffin et al (2008) propose that the attempt to define engagement by linking specific behaviours with specific motivational states does not capture the true nature of the employee engagement. They suggest the environment can inhibit behaviour and it is not necessarily correct to classify employees who fail to display certain motivational characteristics as unengaged.

Self-efficacy

Self-efficacy is a person’s belief in their ability to succeed and “cope successfully” in a given situation (Federici and Skaalvik, 2011, p.576). In the work environment this can translate to greater productivity and a greater sense of well being. Van Vuuren, Veldkamp, Menno and Seydel (2008, p.144) cite Judge, Erez and Bono (2002) as empirically confirming “the idea that organisation members with high beliefs of GSE are more productive and satisfied at work”. When employees feel that their effort is contributing to achieving the organisational goals, then they will be willing to engage in more work related goals. Furthermore it is suggested that “high levels of self-efficacy have also been shown to contribute to high levels of personal performance and motivation” (Luthans and Peterson, 2002, as cited by Fearon et al, 2013, p.247). Alternative research by Salanova, Lorente, Chambel and Martinez (2014) however, suggest that the relationship between self-efficacy and extra role effort is weak. Fearon et al (2013, p.247) cite Bandura (2001) in suggesting that all aspects of an individual’s life, including work, are subject to the self-efficacy of that individual. Therefore improving self-efficacy can increase engagement and Earley (1994) cites Meyer and Gellatly (1988) in suggesting that the provision of normative information regarding a task prior to engaging in it can lead to increased levels of self-efficacy and

therefore performance. Wilson (2011) discusses the construct of psychological empowerment as it relates to self-efficacy and ultimately customer satisfaction. Zimmerman (1995) as cited by Wilson (2011) suggests that empowerment is the medium through which self-efficacy is expressed by employees. The result is better customer outcomes as employees are intrinsically motivated to achieve the best outcome. Wilson (2011, p 106) citing, amongst others, Bowen and Schneider (1985) further suggests that “the perception of positive customer satisfaction” will create positive employee engagement.

Beyond the self-efficacy of the individual there is also the consideration of group or collective efficacy. Fearon et al (2013, p.248) cite Bandura (1997) in relation to the collective efficacy and its role in obtaining the organisational goals. An organisation is more than just the sum of its parts and in seeking to achieve its goals it cannot rely on just one individual. The collective effort of the group will ultimately deliver success or failure in obtaining organisational goals. Exploring and understanding the combined capabilities of the group in achieving goals is extremely important and this is linked to, and reliant on, the collective belief of achievement. Keyton (2005) cited by van Vuuren et al (2007) suggest that goals exist which are, by their nature and complexity, too large for a single individual to handle and require the combined effort of a collection of individuals, hence the requirement for organisations. Goals are achieved through individual and collective effort. Bandura (2002) cited by van Vuuren et al (2007) suggests that common purpose and collective efficacy have a major influence on the organisations ability to achieve its goals. The effectiveness of the group has an effect on the performance of the individuals. Individuals become committed to ensuring the group does not fail and this according to van Vuuren et al (2007) has an empowering effect.

Workplace Stress

Riggio (2009, p. 247) defines worker stress “as physiological and/or psychological reactions to an event that is perceived to be threatening or taxing”. Lack of skills to complete a task, time constraints, environmental and situational factors as well as interpersonal conflicts can all act as stressors in the workplace. Stafyla, Kaltsidou and Spyridis (2013) suggest that stress is felt by, and reacted to, differently by males and females depending on situational context. Spector and Jex (1998, p.278), who developed measures to investigate job stressors, suggest they can hinder performance by preventing individuals from “translating effort and ability” into productive outputs. However, research by Fay and Sonnentag (2002) posits that stressors, in some cases, can have a positive effect on performance. They suggest performance is affected by the absence of arousal. Stressors create arousal and hence increase performance. Self-efficacy is also affected by situational factors and stressors within organisations. Research by Sonnentag and Spychala (2012) suggests that time constraint stress can activate self-efficacy actions, positing that stress can have positive effects.

However, Robertson and Cooper (2010) argue that there is not enough focus on the psychological wellbeing of the employee in many studies of engagement as they focus too much on commitment and attachment. According to Srivastava (2009, p.51) “large organisations, like other settings, exert its set of unique forces on the individual”. These forces can result in increased stress levels amongst employees as they are pressurised to meet deadlines and targets. Taking another viewpoint, Butcher, Hooley and Mineka (2015) suggest that stress can be a result of feeling locked into an unrewarding and frustrating organisational role. The economic environment of the last several years has also contributed to the levels of stress felt by employees (Moura et al, 2014). Modrek and Cullen (2013) investigated perceived levels of stress within a number of work environments where downsizing had occurred due to recessionary conditions. Surveys carried out in 2006 and then in the years

2008 to 2012 suggested that reported levels of stress amongst workers where layoffs had occurred during the downturn were greater than the 2006 figure. Reported stress was also higher where layoffs had been greater in number than at equivalent locations.

Hondmont, Kerr and Addley (2013) conducted correlation studies on work related stress across the civil service of Northern Ireland. Results suggest that levels of stress in the sample taken during the recessionary period were 25% higher than in the previous study that was conducted before the recession. Absenteeism resulting from stress also reported a 35% increase. Hondmont et al (2013, p.102) cite Manu and Kinnunen (2002) in suggesting that job security is perceived to be greater in relation to public service workers and this is likely to “moderate the effects of economic stress” however, this did not mitigate against all external stressors. Bakker (2009) as cited by Robertson, Birch and Cooper (2012) suggest that engaged employees experience better psychological and physical well-being and more positive emotions. According to Srivastava (2009, p.52) stress and depression are more likely to be found in individuals with external locus of control as they “are more aware of work situations and life strains”. Research by Kobasa, Maddi and Kahn (1982) suggest that individuals with certain personality traits who take control of their situations are more likely to be in a position to positively handle potential stressors and hence reduce overall stress. Sprung and Jex (2012, p.272-273) suggest stressors and personality traits are two antecedents of counterproductive behaviours, including time wasting and non co-operation. They suggest one of these personality traits is locus of control.

Work Locus of Control (WLOC)

The theory of locus of control is accredited to the work of Rotter in the 1950's (Srivastava, 2009). Rotter (1990) suggests that the concept of locus of control is based on the reinforcement the individual perceives as being created intrinsically or extrinsically. The

individual's behaviour is the antecedent to the final outcome and locus of control theory posits that individuals will perceive the outcome as either; a matter of luck, circumstances or the actions of another actor; or as a direct result of their own characteristics and behaviours. The former, Rotter (1990) suggests results from external control of reinforcement and the latter from internal control. Wilson (2011) citing Allen, Weeks and Moffitt (2005) suggests that those with internal loci will perform based on the belief in their own abilities compared to those who believe that external forces in the environment are the driving force in their success or failure. Research by Mulry and Rotter (1965) posits that internals will take longer on tasks based on skill compared to externals and cite Gore and Rotter (1965) when they suggest that internals will take more time to learn information that may influence their future goals. The theory is grounded in social learning theory which is concerned with how people learn. Passer, Smith, Holt, Bremner, Sutherland and Vliek (2009) cite Bandura (1969; 2004) in suggesting that observational learning of model behaviours has a significant influence on how the observer will behave and the outcomes that will be achieved. In organisations, as in any social setting, observed behaviour can encourage or discourage proactive behaviours and hence create a situation where internal or external forces are perceived to be more relevant. Passer et al (2009) also cite Bandura (1969) in suggesting that self-efficacy is intrinsic to an individual's belief that they can effectively perform a particular behaviour and loci of control may have a significant influence on whether such behaviours are engaged in.

Spector (2012, p.225) states that "a moderator variable affects the relationship between two other variables". The moderating variable affects the direction and relationship of criterion and predictor variables. In the correlation analysis planned for this study, WLOC will be used as a moderating variable in relation to employee engagement and self-efficacy and employee engagement and work place stress. Baron and Kenny (1986, p.1174) suggest that in a correlation study "a moderator is a third variable that affects the zero-order

correlation between two variables". Srivastava (2009) cites Judge, Erez, Bono and Thoresen (2003) as suggesting that locus of control interacts with job satisfaction and job performance, both of which have been linked to employee engagement. Srivastava (2009) further suggests that locus of control moderates the relationship between general self-efficacy and workplace stress as it is considered a key personality variable around the study of organisational settings.

Purpose of the research

Chaudhary, Rangnekar and Barua (2012) suggest that to fully understand employee engagement it is necessary to understand how personal variables influence the construct. Employee engagement is of major importance to organisations as they come to realise the benefits of having an engaged work force compared to the potential cost of not. According to Shuck et al (2011) the cost to the US economy of disengaged employees is between \$250 and \$300 billion a year, with estimates for the German economy put at €230 billion. Cartwright and Holmes (2006) suggest that more organisations are coming to realise the value of engagement and the intrinsic values that employees bring to the construct. Spreitzer (1995) cites Conger and Kanungo (1988) in attempting to define empowerment and suggests the individuals' cognition of self-efficacy, meaning and impact all orientate the individual in relation to their work role. The existing research on employee engagement proposes a number of intrinsic and extrinsic factors that contribute to the construct. Amongst these are psychological well-being, the role of self-efficacy and the influence of locus of control.

The study being undertaken is concerned with the correlations of employee engagement and self-efficacy and employee engagement and workplace stress and how these relationships are affected when moderated for WLOC. The study uses a questionnaire containing an employee engagement measure retrieved from <http://4hrm.info/employee-engagement->

questionnaire, which is a free to use measure; the General Self-efficacy Scale (©Schwarzer, R., & Jerusalem, M., 1995); the Workplace Stress Scale (© The Marlin Company, 2007); and the WLOC scale (©Paul E. Spector, 1988). For the purpose of the study employee engagement is the criterion variable and self-efficacy and workplace stress are the predictor variables. WLOC is used as a moderator variable. The current study will test the following:

Hypothesis 1

It is predicted that there will be a significant positive relationship between employee engagement and self-efficacy scores for respondents.

Hypothesis 2

There will be a significant correlation between workplace stress and employee engagement, in that the more engaged the employee is, the less stress they will perceive.

Locus of control is a construct that can influence the level of engagement individuals have (Daily and Morgan, 1978). WLOC may also influence the relationship between engagement and self-efficacy depending on whether the individuals' loci are internal or external. Moderating for internal WLOC would have a negative effect, whereas moderating for external would have a positive effect on the correlation score. Therefore:

Hypothesis 3

It is predicted that controlling for WLOC, there will be a significant changes in the correlations between: 1) engagement and self-efficacy and: 2) engagement and workplace stress.

An analysis of the data will be made to investigate if there is a significant difference in engagement scores between respondents who have <5 years service compared to all other

length of service groups. Unemployment in Ireland rose from less than 4% in 2005 to over 15% in 2012 (CSO, 2015) during the economic crisis. With unemployment now at 10% it can be hypothesised that some of those who lose their jobs during the recession have come back into the labour market. To test if respondents with <5 years service are more engaged the following will be investigated:

Hypothesis 3

It is predicted that there will be a significant difference in the level of engagement between respondents with <5 years service compared to all other groups, in that this group will have higher engagement scores.

Descriptive statistical analysis will be undertaken to analysis the characteristics and psychological measures of the sample. An independent t-test will be used to test male and female respondents in relation to each of the constructs under investigation to establish if there is a significant difference between them on any of the measures.

Method

Respondents

There were $N = 82$ respondents involved in this study. The respondents were recruited using non-probability snowball sampling. The questionnaire was made available online via the link <http://kwiksurveys.com/s.asp?sid=6s2s44x23z6239p478853>. Work colleagues and social contacts were forwarded the link and they in turn forwarded it on to their colleagues and social contacts. The mean age range was between 30 and 39 years with 42 (51.2%) female and 40 (48.8%) male respondents. The mean length of service was between 5 and 9 years and 78 (95.1%) were in fulltime employment, while 23 (28.1%) held managerial positions. All responses were voluntary and no remuneration or incentive was received by any respondent for completing the questionnaire.

Design

This study is of non-experimental cross-sectional design. It is a correlation study measuring the relationship between the predictor variables of self-efficacy and workplace stress with the criterion variable of employee engagement. As WLOC may influence the relationship between the predictor and criterion variables, this will be used as to complete partial correlations with the employee engagement and self-efficacy and workplace stress variables.

Apparatus and material

A 55 item self-report questionnaire was used to complete the study online via www.kwiksurveys.com. The first 6 questions related to demographic information about the respondents sex, age, length of service, role, full or part-time status and whether they hold a managerial role. These were followed by 4 separate and pre-existing questionnaires related to

employee engagement, general self-efficacy, workplace stress and WLOC. All of the measures use Likert type scales offering a range of answers. The questionnaires were not administered under their separate headings; rather they were combined into the remaining 49 items. A copy of the questionnaire can be found in Appendix 1.

Employee Engagement Scale

The employee engagement measure of this survey is a 15 item scale and was retrieved from <http://4hrm.info/employee-engagement-questionnaire>, last updated 2009. This is a freely available measure however; there were no figures for reliability reported. There is no reverse scoring on this scale. The Cronbach alpha analysis for reliability in this study was reported as $\alpha = .91$, which is above the .70 recommended.

General Self-efficacy Scale

The 10 item General Self-efficacy scale (© Schwarzer, R., & Jerusalem, M., 1995) was used to measure self-efficacy. Reported mean internal consistency of this scale is between .76 and .90, with the majority in the high .80's. In this study, the Cronbach alpha was reported as $\alpha = .85$. There is no reverse scoring on this scale.

Workplace Stress Scale

The Workplace Stress Scale (© The Marlin Company, 2007) was developed in conjunction with the American Institute of Stress as a comparative measure of stress in the Marlin Company against levels in the American workplace in general. The measure contains 8 items, 3 of which are reverse scored. Scores below 25 are considered to be moderate to low on perceived stress. There is no published data on reliability however; in this study the Cronbach alpha analysis was reported as $\alpha = .73$.

Work Locus of Control Scale

The Work Locus of Control Scale (© Paul E. Spector, 1988) measure is a 16 item scale, of which 8 items are reverse scored. According to Spector (1988) low scoring on this scale indicates an internal locus of control. Spector (1988) also reports a mean Cronbach alpha of .83. In this study the Cronbach was reported as $\alpha = .89$.

All measures were re-coded for negative scores prior to calculating total scores for each of the constructs under investigation. The responses were copied into an excel spreadsheet from kwiksurveys.com and stored using a HP ProBook 4530s laptop. The file was password locked to prevent access. IBM SPSS version 22 was used to analysis the data.

Procedure

The link to the questionnaire was distributed via email and text message and respondents were able to access the questionnaire directly. The survey was introduced as a research project on work and attitudes to work. The respondents were advised that consent was taken as granted by their completion of the survey. All questions needed to be completed before proceeding to the next one. Names were not collected, nor were any of the respondents tracked. Once the respondent had completed the survey they were logged out. The data was then retrieved from the kwiksurvey.com site and stored as a excel file.

Results

Descriptive statistical analysis

The sample $N = 82$ respondents was made up of 42 (51.2%) females and 40 (48.8%) males. Respondents were asked to indicate age within pre-defined ranges. Of the $N = 82$, 2 (2.4%) were under 20 years of age, 8 (9.8%) were aged between 20 and 29 years; the 30 to 39 years and 40 to 49 year age groups both contained 30 (36.6%) respondents each and the remaining 12 (14.6%) were aged 50 years and over. With regard to length of service, respondents were again asked to indicate years with their present employer from pre-determined ranges. Of the total sample, 26 respondents (32.9%) have been with their organisation less than five years, 12 (15.2%) have been with their organisation for between 15 and 19 years and those groups with 5 to 9 and 10 to 14 years service both had 16 (20.3%) respondents each. Of the sample 9 (11.4%) respondents have been with their organisation for 20 years or more. Mean for length of service was $M = 2.55$ ($SD = 1.39$). The split between full time and part time respondents was 78 (95.1%) and 4 (4.9%) respectively. Of the respondents, 15 (18.3%) were in sales roles, 3 (3.7%) in service/retail, 35 (42.7%) in administration and support roles, 3 (3.7%) in manufacturing and distribution, 9 (11.0%) in medical or education and 17 (20.7%) in other roles such as social services, childcare and army/gardai.

Tests for normality

Preliminary analysis was performed on the sample ($N = 82$) in relation to assumptions of normality for employee engagement, general self-efficacy, workplace stress and work locus of control. The Employee engagement measure showed negative skewness (-.27) and kurtosis (-.74). The general self efficacy measure also showed negative skewness (-.24) and kurtosis (-.91). However, the 5% trimmed means were not very different from the original

means suggesting that the extreme scores did not have a strong effect on the mean. In the case of employee engagement the 5% trimmed mean of $M = 51.29$ compared to the original mean of $M = 51.23$ and for general self-efficacy the 5% trimmed mean of $M = 32.78$ compared to the original mean of $M = 32.68$.

Psychological measures

The mean and standard deviation for each psychological measure can be seen in Table 1 below. Workplace stress ($M = 20.24$, $SD = 4.36$) suggests that overall stress levels in the sample are moderate to low and WLOC ($M = 44.56$, $SD = 11.99$) suggests the sample displays more internal loci. Employee engagement ($M = 51.23$) and general self-efficacy ($M = 32.68$) suggest moderate and high levels of the constructs respectively.

Table 1: *Descriptive Statistics of Psychological Measures*

Variable	Mean	Standard Deviation
Employee engagement	51.23	9.91
General self-efficacy	32.68	3.53
Workplace stress	20.24	4.36
Work locus of control	44.56	11.99

T-test

An independent samples t-test was conducted to compare the various psychological construct scores for males and females. Table 2 indicates there was no significant difference in scores for employee engagement, general self-efficacy and work locus of control. However, with regard to the scores for work place stress, it was found that males ($M = 21.33$, $SD = 4.89$) reported higher stress levels than and females ($M = 19.10$, $SD = 3.4$). A

significant statistical difference was found between workplace stress levels of males and females ($t(80) = 2.38, p = .02$). The magnitude of the difference in the means (mean difference = 2.23, 95% CI: .37 to 4.10) was moderate ($\eta^2 = .066$).

Table 2: *Independent samples t-test table displaying the differences between Males and Females for various psychological measures.*

Variable		Mean	SD	<i>t</i>	<i>df</i>	<i>p</i>
Employee engagement	Male	50.48	11.01	-.71	80	.48
	Female	52.03	8.67			
General self-efficacy	Male	32.36	3.50	-.86	80	.40
	Female	33.03	3.56			
Work place stress	Male	21.33	4.89	2.38	80	.02
	Female	19.10	3.43			
Work locus of control	Male	46.76	12.76	1.72	80	.09
	Female	42.25	10.80			

Note; p is significant at the .05 level.

Inferential statistical analysis

Hypothesis 1:

The relationship between employee engagement and general self-efficacy was investigated using a Pearson's product-moment correlation coefficient. As can be seen in Table 3, there was a small, positive correlation between the two variables, ($r(82) = .25, p = .03$), 6% variance explained. Employees with higher level of general self-efficacy also display higher scores with regard to employee engagement. Hence the null can be rejected.

Hypothesis 2:

The relationship between employee engagement and workplace stress was also investigated using a Pearson's product moment correlation coefficient. Table 3 shows there was found to be a strong negative correlation between the two variables, ($r(82) = -.63$, $p < .001$), 40% variance explained, with higher levels of employee engagement associated with lower levels of perceived stress. The null can also be rejected for Hypothesis 2.

Table 3: *Pearson product-moment correlation between Psychological Measures.*

	Employee engagement	General self-efficacy	Workplace stress	Work locus of control
Employee engagement	1			
General Self-efficacy	.25*	1		
Workplace stress	-.63**	-.21	1	
Work locus of control	-.57**	-.41**	.38**	1

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

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

Hypothesis 3:

A partial correlation was used to explore the relationship between employee engagement and general self efficacy, while controlling for work locus of control. While the Pearson's correlation had produced a small positive correlation for the variables, the introduction of WLOC as a moderating variable resulted in a non significant extremely weak correlation ($r(80) = .01$, $p = .91$). Therefore the null cannot be rejected for Hypothesis 3.1

A partial correlation was also used to explore the relationship between employee engagement and workplace stress, while controlling WLOC. The Pearson's correlation between engagement and stress produced a large negative coefficient. The introduction of

WLOC as a moderating variable resulted in a small reduction in the strength of the correlation however, it remained strongly negative ($r(80) = -.54, p < .001$), with 29% variance explained. This suggests that work locus of control does have a moderating effect on workplace stress. Therefore the null can be rejected for hypothesis 3.2.

Hypothesis 4:

A one-way between-groups ANOVA with post-hoc tests was used to investigate if employees with <5 years service had higher engagement than those with longer service. The significance level of .20 for the Levene's test did not violate the assumption of homogeneity variance. There was a statistically significant difference at the $p < .05$ level in employee engagement between the age groups ($F(4, 77) = 3.14, p < .001$). The actual difference in the mean scores between groups was quite large (see Figure 1). The effect size, calculated using eta squared, was .14. Post-hoc comparisons using Tukey HSD test indicate that the mean score for the <5 year group ($M = 56.23, SD = 7.82$) was significantly different from the 15-19 year group ($M = 47.00, SD = 11.58$). The null hypothesis can be rejected.

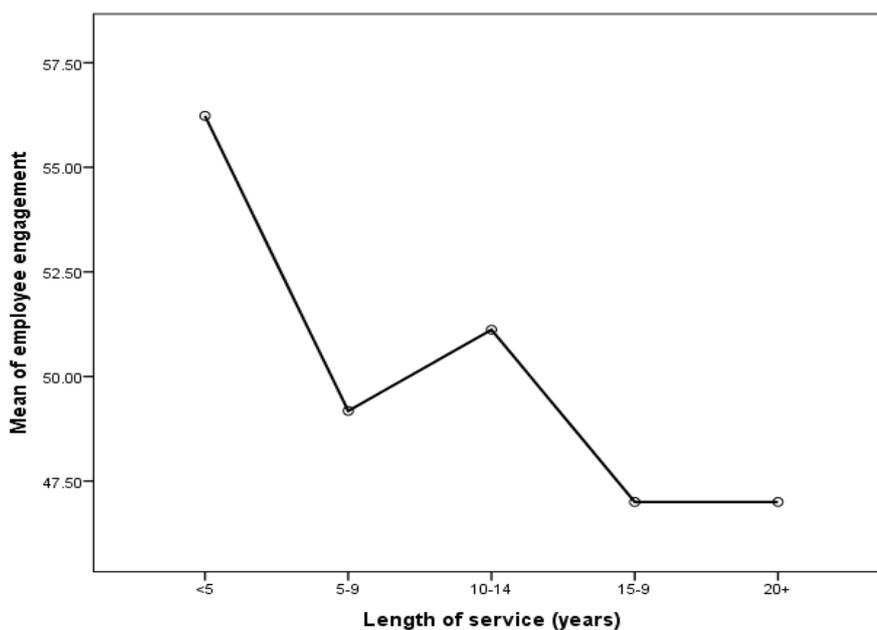


Figure 1: One-way ANOVA detailing employee engagement and length of service.

Discussion

The aim of the current study was to investigate the relationship between the constructs of employee engagement, self-efficacy and workplace stress. WLOC was controlled for using partial correlation to investigate the influence it had on the relationship between the criterion and predictor variables. It was also hypothesised that employee engagement scores for respondents with <5 years service would be significant in relation to all other length of service groupings. The results support the hypothesis that employee engagement and self-efficacy are correlated, albeit in a small positive way and that employee engagement is negatively correlated with workplace stress as predicted. Controlling for WLOC in relation to employee engagement and self-efficacy did not produce the anticipated result as it reduced the small positive correlation to a non-significant, very low correlation. As there were significant correlations between all of the variables apart from self-efficacy and workplace stress, this result suggests there may be some problem with the data. The hypotheses in relation to length of service and employee engagement were partially upheld, in that respondents with <5 years service proved significant with those of between 15 and 19 years. Analysis of the measures comparing males and females for the aforementioned constructs showed that there was a significant difference in relation to workplace stress with males showing higher levels than females.

Engagement, Efficacy, Stress and WLOC

The positive correlation between employee engagement and self-efficacy, while small, is comparable to other studies. Salanova et al (2011) report positive correlation between extra-role performance, an antecedent of employee engagement, and self-efficacy Chaudhary et al (2012) and Frederici and Skaalvik (2011) also report moderate to strong positive correlations between engagement and self-efficacy. The variation in the correlation

co-efficient between studies would suggest employee engagement is hard to define as a distinct construct, as posited by Chaudhary (2014). Macey and Schneider (2008, p.24) suggest that engagement as a construct encompasses “trait, state, and behavioural constructs” and that these are framed inside role and organisational situations. Research has engaged in measuring engagement across a wide range constructs and conditions and this may be why the exact nature of employee engagement is hard to define outside the overarching definitions of behaviours displaying commitment, involvement and extra role activities. Federici and Skaalvik (2011) citing amongst others Prieto (2009) and Halbesleben (2010) suggest much of the research on the relationship between employee engagement and self-efficacy yield moderate to strong correlations, this study found a small correlation coefficient. The nature of the samples used in the various studies being compared may have a bearing on results, especially where specific grouping are being sampled.

One of the outcomes of employee engagement, according to Shuck et al (2011), is discretionary effort. Understanding the level and the nature of employee engagement in organisations is vital to providing the right environment, management and safety elements to encourage and harness this effort. Extra effort is a physical manifestation of engagement which produces positive outcomes. On the other end of the scale lies personal disengagement, which according to Kahn (1990) causes individuals to withdraw from their roles, colleagues and ultimately in to themselves. They perform, driven by external influences rather than internal and withdraw cognitively and emotionally from the organisation. This has negative impacts on the productivity of the organisation. Understanding the conditions that lead individuals to this course of action can help prevent it.

Employee engagement surveys and studies within organisations can give indicators to management of the psychological conditions that Kahn (1990) suggests form the basis for employee engagement; meaningfulness, safety and availability. Welch (2011) suggests

effective communication is a considerable driver of employee engagement and as such, is a vital skill for management. An employee's perspective of the organisation and its goals also has a considerable bearing on engagement and empowerment. Individuals who feel personal and organisational goals are aligned will give more of themselves to their roles. The language of the organisation is also important in imparting the culture of the organisation. Fearon et al (2014, p.252) suggest the use of the term 'colleague' instead of 'employee', as used by organisations such as Sainsbury's, promotes elements of Bandura's social cognitive theory in that it encourages "identification with peers and imitation of their behaviours". Research by Bibby (2001) cited by Cartwright and Holmes (2006) suggests the approach individuals have to work is changing. From the research it was found that 86% of individuals wish to engage in work that is interesting and meaningful, while only 57% valued job security. Understanding what drives individuals can help organisations to prepare better strategies to promote engagement.

Van Vuuren et al (2008) citing Bandura (2002) suggest that individuals will not engage in behaviours they do not believe will produce positive outcomes. The current study suggests that self-efficacy, while positively correlated with engagement could be improved. In order to encourage self-efficacy, organisations must provide the right framework for individuals to see the 'fruit of their labours'. Fearon et al (2012) cites Bandura (1988) in suggesting that reinforcement through verbal support, as well as learning experiences made real through performance, can increase self-efficacy behaviours. Fearon et al (2012) citing Bandura (1995) suggests that individuals with high levels of self-efficacy tend to be less prone to stress in the workplace and are more likely to exhibit internal loci of control as they manage their environment to ensure maximum performance. This study tends to support these suggestions as self-efficacy is negatively correlated with workplace stress and WLOC; however for workplace stress this correlation was not significant. Promoting self-efficacy

through the aforementioned actions not only has positive outcomes in relation to engagement, which is beneficial to the organisation, but has potentially beneficial outcomes for the individual in relation to psychological well-being.

According to Robertson and Cooper (2010, p.328) the construct of “full employee engagement” is one that organisations should focus on. Full employee engagement is concerned with the commitment and the well-being of the employee. Stress, according to Moura et al (2014, p.292) citing Maslach and Leiter (2008) can be a “significant occupational hazard” and the result of their research supported the hypothesis that stress has a negative impact on employee engagement. The current study found strong negative correlation between employee engagement and workplace stress and a small negative correlation between self-efficacy and workplace stress in line with other studies (Moura et al, 2014; Srivastava, 2009; Federici and Skaalvik, 2011). Stress can interfere with cognitive functioning of individuals (Srivastava, 2009) which negatively impacts on their psychological well-being. Frederic and Skaalvik (2011) posit that as self-efficacy is correlated negatively with stress it therefore has a positive relationship with employee engagement, as found in this study. As stress was not controlled for in the relationship between employee engagement and self-efficacy in this study, no assumptions can be made on its possible influence on the correlation between those variables.

Research by Fay and Sonnentag (1998) showed a positive correlation with stressors and personal initiative, suggesting that stressors can improve performance. Personal initiative behaviours included voluntary extra-role effort, similar to the discretionary effort displayed by engaged employees as described by Macey and Schneider (2008). However, in line with more conventional views of stress as a negative construct, Houdmont et al (2012) posit that the recent economic recession has had a negative impact on peoples stress levels. Finding the balance between ‘good’ stress and ‘bad’ stress would present a challenge to most

organisations and getting that balance wrong could have serious implications for individuals within the organisation. Any future development of this study should include analysis controlling for stress. In the current study the correlation between employee engagement and workplace stress was in accordance with research by Srivastava (2009). Both studies controlled for locus of control and found it had a moderating effect on stress. Understanding how personal traits and constructs leave individuals prone to stress would allow organisations to set preventative measures in place.

The current study found significant differences between male and female perceived workplace stress. Stafyla et al (2013) also found that males and females differ in relation to stress. They suggest that males tend to suffer from stress more than females for a number of reasons including their propensity to argue with colleagues. Males also tend to become more frustrated with equipment or process failures. Srivastava (2009) suggests individuals who cope with stress do so by adapting the way they perceive the situation, possibly relying on their internal locus of control. Internally oriented individuals tend to have lower perceived stress (Sandler and Lakey, 1982; cited by Sprung and Jex, 2012), as was seen in the current study. Daily and Morgan (1978) in their research also concluded the locus of control negatively correlated predicted employee engagement. According to Stafyla et al (2013, p.91) men find it harder to cope with stress that is caused by “organisational constraints”. The research by Sprung and Jex (2012) showed positive correlation between WLOC and counterproductive behaviour, indicating external locus of control is counter to engagement. Internals are also more likely to have higher thresholds in relation to potential stressors (Sprung and Jex, 2012). Targeting stress management interventions towards male employees would help create healthier workplaces.

Also, according to Spector (1988, p.335) “internals tend to be more satisfied with their jobs than externals” so consideration of loci of control and how it interacts with other

constructs should also influence how interventions are framed. Developing an organisational framework that encourages individuals to be more reliant on their own abilities would also help with the development of internal loci of control as individuals feel more autonomy in their role. In line with the findings of Mulry and Rotter (1965) understanding the loci of individuals and indeed of the organisation allows management to profile job roles and tasks to those with appropriate psychological constructs. Matching individuals to job roles also promotes improved psychological well-being with internals being more suited to positions of responsibility (Pestonjee and Singh, 1981; cited by Srivastava, 2009).

Limitations of this study

There were a number of limitations to this study. Respondents were involved in a wide range of roles and the choice of role identification was reasonably broad. Having the sample from a number of roles, industry and service sectors does not control for environmental factors that could influence the respondent, nor is there any information available concerning size or structure of their organisations. However, the fact that respondents were not connected via a common work environment also has advantages, as they are not subject to the same influences or culture of a single organisation. The potential external and internal stressors and workloads of those involved in sales will differ from those who are dealing with internal colleagues rather than external customers, which could also have an influence on the various constructs.

Common method variance is also a potential limitation with self reporting questionnaires and surveys (Salanova et al, 2011) and this study is no different. Using measures such as self-efficacy also leads respondents to answer in “socially desirable ways” as they do not wish to “admit a lack of skills” (van Vuuren et al, 2008, p.151). This leads to negative skewness as has been found with many other studies measuring self-efficacy

(Forsyth and Carey, 1998: cited by van Vuuren et al, 2008). The skewness found in this study is therefore consistent with others of its type. The nature of the study does not establish if efficacy precedes engagement or vice versa however, Schaufeli and Bakker (2004) as cited by Federici and Skaalvik (2011, p.595) suggest it may be an “upward spiral” where “self-efficacy breeds engagement”. Correlation studies can only make inference as to the relationship between variables.

Future research

The current research builds on existing data in relation to employee engagement and self-efficacy. It also adds to the understanding of stress in relation to employee engagement and how the construct of WLOC influences the relationship between variables. The potential for future research would be to target a large multi site organisation with quantitative measures relating to the constructs investigated in this study and qualitative measures in relation to corporate culture. Understanding the effect organisational and local culture has on employees would allow for more in-depth analysis of the factors influencing the variables. This would enable the development of cognitive based training interventions to increase the positive aspects of employee engagement and self-efficacy based on situational factors.

Potential for further research also exists in relation to individuals re-entering the work force post recession. The significant result found in this survey in relation to respondents with <5 years services may suggest that those who have been out of work are more motivated and prepared to engage on a higher level. Individuals who have remained in employment through the recessionary years may have done so with adjustments to salary or could have residual stress from experiencing downsizing. In line with the research of Modrek and Cullen (2013), qualitative questions relating to downsizing and restructuring during the previous number of years would potentially also add more data and allow further analysis for the significance

found in this study. The descriptive statistics from the Moderk and Cullen (2013) research showed that the ratio of employees under five years had dropped by 6% between 2006 and 2012, while the ratio of employees with 11 to 20 years service had risen by 5%. The latter grouping formed part of the respondent group that had experienced colleagues being laid off and had also reported increased levels of stress.

Implications

This study shows the correlation between various constructs that influence and affect performance of job roles and productivity of organisations. Encouraging and developing self-efficacy would appear to be a positive aspiration for organisations looking to increase employee engagement and hence improvement performance, financial or otherwise. Bandura (1995) as cited by Fearon (2013) suggests that individuals with high levels of self-efficacy achieve better outcomes through their ability to manage their circumstances and situations and hence are less prone to anxiety and stress. Accordingly, Chaudary (2014) citing Cater et al (2010) suggests that reality based training would aid with self-efficacy as it gives individuals the skills needed to learn new tasks in a constructive manner. Social interaction and vicarious learning amongst colleagues is also a way of exposing those with negative views to others with more positive views in an attempt to model behaviours that benefit the organisation. All of the constructs are inter-related, therefore interventions on one or a combination of constructs has the potential to pay dividend. Fearon et al (2014, p.248) citing van Vuuren (2006) suggests team building programmes to foster communication and engagement across organisational structures can increase organisational efficacy as well as individual self-efficacy. Fearon et al (2014) offer a model for conceptualising employee engagement and self-efficacy spanning the individual, work groups and the organisation as a whole and formulating research and interventions around this model would greatly improve engagement at all levels. A copy of this model can be found in Appendix 2.

Understanding individual and collective measures on the constructs under investigation also allows for feedback to be generated in an appropriate context. Robertson and Cooper (2010) suggest feedback is received differently by those with varying engagement and stress levels. The more engaged individual benefits from positive feedback whereas those with lower engagement and higher stress levels will perceive feedback, and indeed other interactions, as potentially threatening causing them to withdraw further, and thereby reduce engagement.

Conclusion

Robertson and Cooper (2010, p. 328) suggest that “full engagement” encompasses organisational commitment and citizenship as well as consideration for the physical and psychological well-being of the individual. The body of research on engagement, its antecedents and its consequences, suggest it is a positive and productive construct for organisational enhancement and improvement. Core to the ideal of engagement are the constructs of individual (and ultimately organisational) self-efficacy and the various stressors that impinge on it. This study investigated the relationship between the construct of employee engagement and the constructs of self-efficacy, workplace stress and WLOC. The analysis of the data indicates significant correlations amongst the constructs of employee engagement, self-efficacy and workplace stress. It also explored the influence of WLOC on these constructs. It is important for organisations and the managers who direct them, to understand the nature of these constructs and the positive and negative consequences they can have on the achievement of goals.

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Appendix 1

Work and attitudes survey

This survey is about work and attitudes to it.

It is a purely academic survey, conducted as part of a final year project submission for a BA in Psychology.

All answers are collected anonymously and data is not shared with any third party.

By completing this survey your consent is implied.

The survey should take no more than 8-10 minutes to complete. There are no wrong answers. The best way to approach is to answer fairly quickly. That is, do not try to count up the number of times you felt a particular way, but rather indicate the option that seems like a reasonable estimate.

While most questions ask you to consider your present employment, questions 40 to 55 are about your attitude to work in general.

Thank you for taking the time to complete this survey.

Emmet Hegarty

If you have any questions or queries regarding this survey, please email me at xxxxxx@mydbs.ie.

1. Are you

- Female
- Male

2. Are you aged (years)

- under 20
- 20-29
- 30-39
- 40-49
- 50+

3. Are you currently in

- Full time employment
- Part time employment

4. Length of service (in years) with your present employer:

- less than 5
- between 5 and 9
- between 10 and 14
- between 15 and 19
- 20 plus

5. Are you a in a managerial role

- Yes
- No

6. Please indicate the area that best describes your role:

- Sales
- Service industry / retail
- Admin / accounts / IT / HR function
- Manufacturing / distribution / warehousing
- Medical / educational
- Other (Please Specify)

7. I have the materials and equipment I need to do my job efficiently

- Strongly Disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

8. I receive the information and communication I need to do my job.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

9. I regularly receive recognition/praise for doing good work

- Strongly disagree
- Disagree
- Neither agreed nor disagree

Agree

Strongly agree

10. The benefits offered here are fair and reasonable

Strongly disagree

Disagree

Neither agreed nor disagree

Agree

Strongly agree

11. The people here are pleasant and co-operative to work with

Strongly disagree

Disagree

Neither agreed nor disagree

Agree

Strongly agree

12. There is someone at work that encourages my development

Strongly disagree

Disagree

Neither agreed nor disagree

Agree

Strongly agree

13. My opinions and ideas seem to matter

Strongly disagree

- Disagree
- Neither agreed nor disagree
- Agree
- Strongly agree

14. My supervisor provides me with feedback and guidance

- Strongly disagree
- Disagree
- Neither agreed nor disagree
- Agree
- Strongly agree

15. My supervisor helps me know what is expected of me

- Strongly disagree
- Disagree
- Neither agreed nor disagree
- Agree
- Strongly agree

16. My supervisor cares about me as a person

- Disagree strongly
- Disagree
- Neither agree nor disagree
- Agree
- Agree strongly

17. Even if I had the opportunity to get a similar job with another organisation, I would stay with my present company

- Disagree strongly
- Disagree
- Neither agree nor disagree
- Agree
- Agree strongly

18. In the last year I have had opportunity to learn and grow

- Disagree strongly
- Disagree
- Neither agree nor disagree
- Agree
- Agree strongly

19. I would recommend the organisation as a good place to work

- Disagree strongly
- Disagree
- Neither agree nor disagree
- Agree
- Agree strongly

20. Overall, I have confidence in the senior managers of the company

- Disagree strongly
- Disagree
- Neither agree nor disagree

Agree

Agree strongly

21. Overall, I am extremely satisfied with my job

Disagree strongly

Disagree

Neither agree nor disagree

Agree

Agree strongly

22. I can always manage to solve difficult problems if I try hard enough

Not at all true

Hardly true

Moderately true

Exactly true

23. If someone opposes me, I can find the means and ways to get what I want

Not at all true

Hardly true

Moderately true

Exactly true

24. It is easy for me to stick to my aims and accomplish my goals

Not at all true

Hardly true

Moderately true

Exactly true

25. I am confident that I could deal efficiently with unexpected events

Not at all true

Hardly true

Moderately true

Exactly true

26. Thanks to my resourcefulness, I know how to handle unforeseen situations

Not at all true

Hardly true

Moderately true

Exactly true

27. I can solve most problems if I invest the necessary effort

Not at all true

Hardly true

Moderately true

Exactly true

28. I can remain calm when facing difficulties because I rely on my coping abilities

Not at all true

Hardly true

Moderately true

Exactly true

29. When I am confronted with a problem, I can usually find several solutions

- Not at all true
- Hardly true
- Moderately true
- Exactly true

30. If I am in trouble, I can usually think of a solution.

- Not at all true
- Hardly true
- Moderately true
- Exactly true

31. I can usually handle whatever comes my way

- Not at all true
- Hardly true
- Moderately true
- Exactly true

32. Conditions at work are unpleasant or sometimes unsafe

- Never
- Rarely
- Sometimes
- Often
- Very often

33. I feel that my job is negatively affecting my physical or emotional wellbeing

- Never

- Rarely
- Sometimes
- Often
- Very often

34. I have too much work to do and/or too many unreasonable deadlines

- Never
- Rarely
- Sometimes
- Often
- Very often

35. I find it difficult to express my opinions or feelings about my job conditions to my superiors

- Never
- Rarely
- Sometimes
- Often
- Very often

36. I feel that job pressures interfere with my family or personal life

- Never
- Rarely
- Sometimes
- Often

Very often

37. I have adequate control or input over my duties

Never

Rarely

Sometimes

Often

Very often

38. I receive appropriate recognition or rewards for good performance

Never

Rarely

Sometimes

Often

Very often

39. I am able to utilise my skills and talents to the fullest extent at work

Never

Rarely

Sometimes

Often

Very often

40. A job is what you make of it

Disagree very much

Disagree moderately

- Disagree slightly
- Agree slightly
- Agree moderately
- Agree very much

41. On most jobs, people can pretty much accomplish whatever they set out to accomplish

- Disagree very much
- Disagree moderately
- Disagree slightly
- Agree slightly
- Agree moderately
- Agree very much

42. If you know what you want out of a job, you can find a job that gives it to you

- Disagree very much
- Disagree moderately
- Disagree slightly
- Agree slightly
- Agree moderately
- Agree very much

43. If employees are unhappy with a decision made by their boss, they should do something about it

- Disagree very much
- Disagree moderately

- Disagree slightly
- Agree slightly
- Agree moderately
- Agree very much

44. Getting the job you want is mostly a matter of luck

- Disagree very much
- Disagree moderately
- Disagree slightly
- Agree slightly
- Agree moderately
- Agree very much

45. Making money is primarily a matter of good fortune

- Disagree very much
- Disagree moderately
- Disagree slightly
- Agree slightly
- Agree moderately
- Agree very much

46. Most people are capable of doing their jobs well if they make the effort

- Disagree very much
- Disagree moderately
- Disagree slightly

- Agree slightly
- Agree moderately
- Agree very much

47. In order to get a really good job, you need to have family members or friends in high places

- Disagree very much
- Disagree moderately
- Disagree slightly
- Agree slightly
- Agree moderately
- Agree very much

48. Promotions are usually a matter of good fortune

- Disagree very much
- Disagree moderately
- Disagree slightly
- Agree slightly
- Agree moderately
- Agree very much

49. When it comes to landing a really good job, who you know is more important than what you know

- Disagree very much
- Disagree moderately
- Disagree slightly

- Agree slightly
- Agree moderately
- Agree very much

50. Promotions are given to employees who perform well on the job

- Disagree very much
- Disagree moderately
- Disagree slightly
- Agree slightly
- Agree moderately
- Agree very much

51. To make a lot of money, you have to know the right people

- Disagree very much
- Disagree moderately
- Disagree slightly
- Agree slightly
- Agree moderately
- Agree very much

52. It takes a lot of luck to be an outstanding employee on most jobs

- Disagree very much
- Disagree moderately
- Disagree slightly
- Agree slightly

Agree moderately

Agree very much

53. People who perform their jobs well generally get rewarded

Disagree very much

Disagree moderately

Disagree slightly

Agree slightly

Agree moderately

Agree very much

54. Most employees have more influence on their supervisors that they think they do

Disagree very much

Disagree moderately

Disagree slightly

Agree slightly

Agree moderately

Agree very much

55. The main difference between people who make a lot of money and people who make a little money is luck

Disagree very much

Disagree moderately

Disagree slightly

Agree slightly

- Agree moderately
- Agree very much

Thank you for completing the survey.

Emmet Hegarty

Appendix 2

Fearon et al (2014) model for conceptualising employee engagement and self-efficacy spanning the individual, work groups and the organisation.

