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The Moderating Effect of Self-Efficacy in The Relationship Between Perceived Job Characteristics and Work Engagement

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ABSTRACT

Although much research attention has been given to study the effect of perceived job characteristics on various work outcomes, few have specifically examined the joint effect of perceived job characteristics and self-efficacy on employee work engagement. This study aimed to examine the role of self-efficacy as a moderator in the perceived job characteristics-work engagement relationship. A total of 646 employees from the healthcare sector in Malaysia participated in this study. A moderated hierarchical regression analysis revealed a positive effect on job characteristics (autonomy, skill variety, feedback, task significance, task identity) with work engagement and a significant interaction between task identity and self-efficacy in predicting employee work engagement. Managerial implications and directions for future research are discussed.

Keywords: *Job Characteristics, Autonomy, Task Identity, Self-Efficacy, Work Engagement*

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INTRODUCTION

Employee work engagement has received increasing research attention over the past ten years (Coffeng *et al.*, 2014; Bakker & Scaufeli, 2008; Ng & Tay, 2010; Schaufeli, Bakker, & Salanova 2006; Schaufeli & Salanova, 2007). Employees who are engaged in their work express themselves physically, cognitively, and emotionally during role performance and also psychologically present when occupying and performing an organizational role (Kahn, 1990). Engagement is also construed as positive antithesis of burnout (Maslach, Schaufeli & Leiter, 2001) and is said to be characterized by energy, involvement, and efficacy. Schaufeli *et al.*, (2002:74) defined engagement as “a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption”. The authors stated that engagement is not a momentary and specific state, but rather, it is a more persistent and pervasive affective-cognitive state that is not focused on any object, event, individual, or behaviour.

Review of the literature shows two streams of research that provide models of employee engagement. In the first model of employee engagement, Kahn (1990) explored three psychological conditions associated with engagement or disengagement at work: meaningfulness, safety, and availability. His study showed that employees were more engaged at work in situations that give them more psychological meaningfulness and psychological safety. In the second model of employee engagement, Maslach *et al.* (2001) identified six areas of work-life that leads to employee engagement namely: workload, control, rewards and recognition, community and social support, perceived fairness, and value. Maslach *et al.* (2001) argued that job engagement is associated with a sustainable workload, feeling of choice and control, appropriate recognition and reward, a supportive work community, fairness and justice, and meaningful and valued work.

Although past researchers have focused on studies that examine the antecedents of work engagement, recent research are found to examine role of personality and dispositional variables as potential moderators in the relationship between various work situation and employee work attitude variables (Colbert *et al.*, 2004; Dzepina, 2011). This research focused on examining the moderating role of self-efficacy in the perceived job characteristics-work engagement link.

Job Characteristics and Work Engagement

Decreased employee satisfaction, increased turnover and absenteeism, and difficulties in managing employees in simplified jobs prompted researchers to develop theories focusing on the motivating features of work. Hackman and Oldham (1975, 1980) identified the core job characteristics that would increase the experience three types of psychological states and subsequently propounded the job characteristics theory which argued that the most effective means of motivating employees is through the optimal design of jobs. The job characteristics theory focuses on facilitating high internal work motivation in the workplace in order to achieve positive work behaviors. The authors proposed that the means for increasing internal work motivation is to design jobs, so they will provide (1) skill variety; (2) task identity; (3) task significance; (4) autonomy, and (5) feedback.

Research shows motivating job characteristics in the workplace leads to various positive work behaviors and employee attitudes such as job involvement, job satisfaction, job commitment, employee performance and work engagement. This study focused on examining the effects of perceived job characteristics on work engagement. The theoretical explanation on the relationship between perceived job characteristics and work engagement can be found in the Social Exchange Theory (Blau, 1964). When employees receive positive inputs from their organization, they feel obliged to repay the organization with greater levels of engagement. When the organization fails to provide these inputs (e.g. motivating job characteristics, social support, conducive work environment), individuals are more likely to withdraw and disengage themselves from their roles.

Based on the above discussion on the theoretical and empirical researches related to this study, the researchers proposed the following:

H1: Job Characteristics (autonomy, skill variety, feedback, task significance, task identity) are positively relate to work engagement.

Moderating Role Of Self-Efficacy

Self-efficacy refers to beliefs about one's capabilities to learn or perform behaviours at designated levels. Besides that, it is also defined as

the capacity to organize and execute the courses of action required to manage prospective situation. Self-efficacy is entrenched in a larger theoretical framework of the social cognitive theory, which explains that human achievement depends on interactions between one's behaviours, personal factors (e.g., beliefs, thoughts), and environmental conditions (Bandura, 1977,1986,1997; Bandura & Schunk, 1981). According to Chaudhary, Rangnekar and Barua (2012), self-efficacy is also said to be related to high effort and persistence, as they are also part of the individual's motivational behaviours.

Although past researchers focused on the direct effects of self-efficacy in influencing various work outcomes (Mache, et.al, 2014), recently, more studies have been conducted to examine the moderating role of self-efficacy in various job situation-work outcome relationship. For example, Ballout (2009) examined the moderating role of self-efficacy in the relationship between career commitment and career success and found that career commitment predicted both objective (i.e. salary level) and subjective (i.e. career satisfaction) career success only for employees with average to high self-efficacy but not for those with low self-efficacy. In another study to understand the relationship between the job demands and work-related psychological responses, Panatik, O'Driscoll, and Anderson (2011) found that self-efficacy moderated the impact of job demands on psychological strain among Malaysian technical workers. When the individual had low self-efficacy, high job demands had a higher negative effect on feeling anxiety and depression.

Based on the above discussion on the theoretical and empirical researches related to this study, the researchers propose the following:

H2: Self-efficacy moderates the relationship between job characteristics (autonomy, skill variety, feedback, task significance, task identity) and work engagement

METHOD

Sample and Data Collection

This study employed a convenience sampling method in selecting respondents consisting of healthcare employees in two public hospitals in Malaysia. A survey was conducted using established questionnaires to measure the main variables in this study. A pilot study was also conducted to assess the appropriateness of the questionnaire design. It was agreed that most of the items were clear and understandable by both the target groups.

Measures

All constructs of the study were measured with scales adopted from existing scales.

Job Characteristics. The five dimensions of job characteristics (autonomy, skill variety, feedback, task significance and task identity) were measured with the corresponding subscales of the Job Diagnostic Survey by Hackman and Oldham (1975). Each subscale consists of four items that was evaluated by the respondents based on a 5-point Likert-type scale from 1 indicating strongly disagree to 5 indicating strongly agree. An example of the autonomy measure is “my job allows me to make a lot of decisions on my own”. An example of the skill variety measure is “my job is quite simple and repetitive”. An example of the feedback measure is “I often receive feedback from my supervisor and peers”. An example of the task significance measure is “I am holding a very important job in this organization”. An example of the task identity measure is “My job provides me the chance to completely finish the piece of work I begin”. The respective coefficient alphas for autonomy, skill variety, feedback, task significance and task identity in this study were .63, .72, .79, .68 and .56.

Self-Efficacy. The Generalized Self-Efficacy Scale (GSES) developed by Jerusalem and Schwarzer (1992), consists of 10-items designed to assess optimistic self-beliefs. This is the belief that one can perform a novel or difficult task, or cope with adversity in various domains of human functioning. Perceived self-efficacy facilitates goal-setting, effort investment, persistence in the face of barriers and recovery from setbacks,

for example “I can always manage to solve difficult problems if I try hard enough.” This study has reported a coefficient alpha reliability of .77 for self-efficacy.

Work Engagement. This study adopted the 9-item questionnaire scales designed by Schaufeli *et al.*, (2006) to measure work engagement. These items assess three main dimensions of work engagement namely vigour, dedication and absorption in their jobs. A sample item is “at my work, I feel bursting with energy”. Participants indicated their response on a five-point Likert-type scale from 1 indicating strongly disagree to 5 indicating strongly agree. This study has reported a coefficient alpha reliability of .89 for work engagement.

Data Analysis

The data was analysed using the Statistical Package for Social Sciences (SPSS) for Windows Version 20.0. Prior to conducting the multiple regression (Aiken & West, 1991) data was screened for violations of the assumptions of normality, linearity, homoscedasticity and multicollinearity (Tabachnick & Fidell, 2007). The bivariate relationship between all the variables was investigated using the Pearson product-moment correlation coefficient. A moderated hierarchical regression was conducted to test the moderation effects of self-efficacy on the relationship between job characteristics variables and work engagement (Hypothesis 2). The 3 main steps (Cohen & Cohen, 1983) involved in the moderated regression analysis are as described below. In Step 1 of the moderated regression analysis, the hypothesized independent variables were entered. In Step 2, the moderator variable (self-efficacy) was entered. In Step 3, the interaction term was entered. Any significant increase in the variable explained, as shown by R^2 in Step 2 and the corresponding significance value for beta would indicate the direct relationship between the moderating variable (self-efficacy) and the dependent variable. Any significant increase in the variable explained, as shown by R^2 in Step 3 and the corresponding significance value for beta would indicate the moderating effect of self-efficacy on the relationship between the independent variables and the dependent variable. According to Sharma *et al.*, (1981) if the interaction term is statistically significant and the coefficient of determination value (R square) increases, a pure moderating effect is then present. On the other hand, if there is no significant difference

in Step 2 and Step 3 of the moderated regression analysis, a quasi-moderating effect is present. The significance of the interaction was determined by examining the significance of the increment in criterion variance that is explained by the interaction term.

RESULTS

Sample Profile

A total of 800 questionnaires were distributed and 681 were returned. Out of the 681 survey forms that were returned, 35 cases with several missing values were removed, leaving a final research sample of 646 cases that were used in the final analysis. Of the 646 respondents, 97.4% were female and 2.6 % were male. There was no fair balance in respondent's gender because female are the dominant workforce holding clinical jobs in hospitals. In terms of ethnic composition of the respondents, 93.3% comprised of Malays, 3.9 % comprised of Chinese, 2.3 % comprised of Indians and the rest were from other ethnic groups. About 74% of the respondents were married, 19 % were not married and 91% held higher school certificates and diploma qualification. The age range of the sample of participants was 23 to 58 years, with an average age of 36 years old (s.d= 8.4). The mean organizational tenure was 8 years (sd= 7.1).

Table 1 shows the value of means, standard deviations, internal reliabilities and correlations among the variables. The mean value of the study variables were above 3.5. The Pearson product-moment correlation analysis shows that most of the variables are moderately and strongly correlated with one another. As can be seen, job characteristics variables correlated with work engagement, and with self efficacy. All of the job characteristics variables were also positively related to work engagement and self-efficacy. In general, correlations were small to moderate, suggesting that common-source variance was not a major problem in these data.

Table 1: Means, Standard Deviations, Correlations and Reliabilities

Variables	M	SD	1	2	3	4	5	6	7
1.Autonomy	3.49	0.75	(.63)						
2.Skill variety	3.67	0.59	.38**	(.72)					
3.Feedback	3.99	0.58	.37**	.38**	(.79)				
4.Task Significance	4.11	0.59	.18**	.35**	.44**	(.68)			
5.Task Identity	3.58	0.60	.26**	.36**	.32**	.29**	(.56)		
6.Self Efficacy	4.10	0.50	.30**	.26**	.37**	.44**	.35**	(.77)	
7.Work Engagement	4.01	0.58	.39**	.40**	.43**	.39**	.34**	.53**	
									(.89)

Notes: Values in parentheses along the diagonal represent coefficient alphas. * $p < 0.05$; ** $p < 0.01$

Interaction between Job Design Characteristics and Self-Efficacy on Work Engagement

Table 2 shows the result of the moderated hierarchical multiple regressions that tested the interactive effect of the five dimensions of job characteristics perceptions and self-efficacy on employee work engagement. Hypothesis 1 stated that job design characteristics (autonomy, skill variety, feedback, task significance, task identity) are positively related to work engagement. When these five job design characteristics were entered in Step 1, the total variance explained by the model as a whole was 27.5%, $F(7, 638) = 13.392, p < 0.001$. Among these independent variables, autonomy, feedback and task significance were found to be significantly related to work engagement. All of these four job characteristics variables were also positively related to work engagement. Thus hypothesis 1 gained partial support in this study.

In step 2 of the analysis, when the moderating variable (self-efficacy) was entered, the total variance explained by the model was 38.1%, $F(8, 637) = 17.476, p < 0.001$. Self-efficacy was positively and significantly ($b = 0.438, p < 0.001$) related to work engagement and explained an additional 10.5% of the variance in work engagement, after controlling for the five independent variables. In the final step (Step 3), all the five main interaction terms were entered. The addition of these interaction terms accounted for an additional 1.8% of the variance ($\Delta R^2 = 0.018, p < 0.01$). In this final step of the moderated multiple regression, only the independent variable of task

identity ($b= 0.995, p<0.001$) was found to be significantly related to work engagement. The moderating variable (self-efficacy) was also found to be significantly related to work engagement ($b=1.271, p<0.001$). Among these interaction terms, only task identity ($b= 0.215, p< 0.01$) shows a significant interaction with self-efficacy in predicting work engagement. As indicated by Sharma et al., (1981), the moderating effect is considered present when the interaction terms are statistically significant. Hypothesis 2 stated that self-efficacy moderates the job design characteristics-work engagement relationship. Because there is no significant interaction between job autonomy and self-efficacy, skill variety and self-efficacy, feedback and self-efficacy, and task significance and self-efficacy on work engagement, Hypothesis 2 also gained partial support in this study.

Table 2: Moderated regression results for the interaction effects of perception of job characteristics and self-efficacy on work engagement

Variable	Work Engagement		
	Step 1	Step 2	Step 3
	B	B	B
Autonomy (MJA)	0.100***	0.047	0.175
Skill variety (MJV)	0.046	0.037	0.469
Feedback (MJF)	0.254***	0.189***	-0.144
Task significance (MJS)	0.213***	0.092*	-0.066
Task identity (MJI)	0.066	0.076*	0.995***
Self-efficacy (MSE)		0.438***	1.271***
MJA x MSE			-0.034
MJV x MSE			-0.103
MJF x MSE			0.077
MJS x MSE			0.035
MJI x MSE			-0.215**
R ²	0.275	0.381	0.399
Adjusted R ²	0.267	0.373	0.387
F	13.392***	17.476***	10.985***
ΔR ²	0.260	0.105	0.018

Notes: N=646; unstandardized coefficients are reported; * $p<0.05$; two tailed; ** $p<0.01$; two tailed; *** $p<0.001$; two tailed * $p<.05$, one tailed.

DISCUSSION & IMPLICATIONS

The main purpose of this study was to examine the moderating role of self-efficacy in the relationship between perceived job characteristics and work engagement. As hypothesized, the results showed support for the direct effect of perceived job characteristics on work engagement (Hypothesis 1). The findings of the significant positive effect job characteristics variables on work engagement are consistent with several research results (Maslach *et al.* 2001, Saks 2001, Salanova & Shaufeli, 2008). This study also has provided further support for an interactionist perspective in the development of employee work behavior (work engagement). It was found that employee engagement in work was jointly predicted by dispositional (self-efficacy) and work situational (motivational job characteristics) variables. Importantly, the findings of this study show that self-efficacy partially moderates the relationship between job characteristics and work engagement (Hypothesis 2). The present findings are consistent with a study by Panatik, O'Driscoll, & Anderson (2011) who found that self-efficacy moderated the impact of job demands on psychological strain among Malaysian technical workers and also with the study by Ballout (2009) which showed a moderating role of self-efficacy in the relationship between career commitment and career success.

One important implication of this study is that employees' perception about job characteristics and their self-efficacy matters in the workplace, particularly with regard to promoting their engagement level in their job. This study has demonstrated that employees who found motivating work will actively engage in their job if they possess high self-efficacy. Specifically, this study found a significant interaction between perceived task identity and self-efficacy in the prediction of work engagement among employees. Therefore, employers who wish to increase work engagement among employees may need to plan programmes that will increase employee self-efficacy and at the same time ensure employees complete the entire piece of work.

Limitations and Suggestion For Future Research

Although this study has provided some important insights into the relationship between perceived job characteristics and work engagement,

we acknowledge that there are also some limitations. First, the sample used in this study consists of rather a homogenous group of mostly female respondents (over 94%). Further, the respondents in this study are mainly registered staff nurses employed in the public hospitals in Malaysia. This has implications on generalizability of our research findings to employees in other sectors of the economy. Thus, future studies should replicate our study using samples drawn from different occupations and type of work with even gender distribution. Second, the current study has employed a cross-sectional design in which data were collected from respondents at a single point in time. One of the weaknesses in this method is that it does not allow us to draw firm conclusion regarding the causal direction of the relationships among the predictors and outcome variables. Given this limitation, future research should examine the relationships among the variables using longitudinal designs that examine the continuity of the response. Finally, this study has focused on only one type of employee personality as a moderator in the perceived job characteristics-work engagement relationship. Future research can be extended by examining other potential personality variables such as job conscientiousness or grit.

CONCLUSION

This study has provided an empirical evidence for linking employees' perceived job characteristics and their work engagement in the workplace. This study found a strong support for the direct effect of job characteristics (autonomy, skill variety, feedback, task significance, task identity) on work engagement. This study also found that self-efficacy only moderates the relationship between perceived job identity and work engagement.

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