Occupational Stress and Its Impact on Job Performance

Azman Ismail [1], Noorshafine Saudin[2]

[1] Faculty of Economics & Management, National University of Malaysia, 43600 Bangi, Selangor, Malaysia
[2]Graduate Business School, National University of Malaysia, 43600 Bangi, Selangor, Malaysia
azisma08@gmail.com, puteri_aliamaisara@yahoo.com

Abstract - The purpose of this study is to examine the relationship between occupational stress and job performance using self-administered questionnaires gathered from employees at a private investment bank in Peninsular Malaysia. The outcomes of Smart PLS path model analysis confirms that occupational stress (physiological stress and psychological stress) does act as an important antecedent of job performance in the organizational sample. In addition, this study provides discussion, implications and conclusion.

Index Terms - Occupational stress, job performance, Malaysia

1. Introduction

Stress is a multidimensional construct and may be interpreted based on two major perspectives: eustress and distress conditions [1][2][3]. In an organizational context, eustress is often called as positive stress where individuals who have adequate knowledge, skills, abilities and attitudes to cope with their work demands and pressures. [4] [5][6][7]. On the other hand, distress is also known as negative stress where individuals have not adequate knowledge, skills, abilities and attitudes to cope with external forces and challenges placed on their bodies [3][4][8].

Occupational stress refers to individuals who have experienced physiological stress (PHS) and/or psychological stresses (PSS) in carrying out duties and responsibilities to achieve their key performance indicators [3][9][10]. PHS is normally viewed as a physiological reaction of the body (e.g., headache, migraine, abdominal pain, lethargic, backache, chest pain, fatigue, heart palpitation, sleep disturbance and muscle ache) to various stressful triggers at the workplace that directly and negatively affects an individual's productivity, effectiveness, quality of work and personal health [9][10][11]. While, PSS is often seen as an emotional reaction experienced by an individual (such as anxiety and depression burnout, job alienation, hostility, depression, tension, anger, nervousness, irritability and frustration) as a result from the stimulate at the workplace [6] [9][10][12].

Interestingly, extant studies in the workplace stress show that the levels of PHS and PSS may have a significant impact on individual outcomes, especially job performance (JOP) [9][13]. According to many scholars, JOP is usually defined as the ability of individuals to accomplish their respective work goals, meet their expectations, achieve benchmarks or attain their organizational goals [14][15]. In an occupational stress model, several scholars believe that the ability of employees to properly identify, regulate and manage their PHS and PSS in executing job may lead to higher JOP in organizations [12][16].

Within an organizational stress model, many scholars concur that PHS, PSS and JOP are distinct, but strongly interconnected concepts. For example, the capability of employees to properly manage their PHS and PSS in executing job may lead to an enhanced JOP in organizations [9][17][18]. Although the nature of this relationship is interesting, the role of occupational stress as an important antecedent is inadequately explained in the workplace stress models [19][20]. Many scholars argue that the role of occupational stress as an important antecedent is inadequately explained in the previous studies because they have much emphasized on debating occupational stress concept, employed a meta-analysis method to describe the features of occupational stress in various organizational settings, implemented a simple survey method to assess respondent attitudes toward occupational stress features, and neglected to measure the effect size and nature of the correlation between occupational stress and job performance. As a result, this study paradigm has provided inadequate findings to be used as important recommendations by practitioners in understanding the complexity of occupational stress and formulating occupational stress programs for growth and competitive organizations [17][19][21]. Thus, it encourages the researchers to fill in the gap of the literature by executing the relationship between occupational stress (i.e., PHS and PSS) and job performance.

The influence of occupational stress on individual outcomes is consistent with the notion of occupational stress theory. For example, Karasek and Theorell's (1990) job strain model [22] explains that level of job demands is higher than level of job control may reinforce high risk of individuals' physiological and psychological stresses. Besides that, Edward's (1998) P-E fit theory [23] suggests level of job demands is higher than available resources may induce two forms of strains, that is physiology (e.g., raised blood pressure and lowered immunity) and psychology (e.g., sleep disturbances, anxiety, panic attacks, and restlessness). The notion of these theories has gained strong support from the workplace stress research literature.

For example, several recent studies using a direct effect model were conducted to investigate occupational stress based on different samples like 254 nurses over three nursing shifts [17], 333 nurses from four hospitals in Kampala, Uganda [18], 304 call center employees in the UK [19], 100 nurses from a large general teaching hospital in Scotland [21], and 213 employees at six geographic Logistics Centers within a medium-sized Fortune 500 company in the Southeastern

United States [24]. The outcomes of these studies reported that the inability of employees to manage, regulate and control their job had invoked employees' physiological and psychological stresses. As a result, it could lead to lower job performance in the respective organizations [17][18][19][21][24]. Based the literature, it was hypothesized that:

H1: There is a significant relationship between physiological stress and job performance.
H2: There is a significant relationship between psychological stress and job performance.

2. Materials and Method

This study employed a cross-sectional research design because it allowed the researchers to integrate the occupational stress research literature and the actual survey as a main procedure to collect data for this study. This research design is beneficial to help the researchers in collecting accurate data, less bias data and high quality data [25][26]. This study was done at a private investment bank in Peninsular Malaysia.

At the initial stage of data collection, the survey questionnaire was drafted based on the occupational stress literature and it was checked by one senior manager and three experienced supporting staff in the studied organization. Hence, a back translation technique was employed to translate the content of survey questionnaire into Malay and English versions in order to enhance the validity and reliability of research findings [25][26].

The survey questionnaire has two major sections: first, physiological stress had 3 items and psychological stress had 4 items that were adapted from occupational stress literature [20][21][27]. The dimensions used to measure physiological stress are nervous system and endocrine system. While, the dimensions used to measure psychological stress are psychological strain and cognitive appraisal. Finally, job performance had 8 items that were adapted from job performance literature [13][21][28]. The dimensions used to measure job performance are confidence, offer help, communication, problem solving, adaptability, responsive, and work appearance. All items used in the questionnaires were measured using a 7-item scale ranging from "strongly never/strongly disagree" (1) to "strongly always/strongly agree" (5). Demographic variables were used as controlling variables because this study focused on employee attitudes.

A convenient sampling technique was employed to distribute 200 self-administered questionnaires to executive and non-executive employees in the organization. This sampling technique was employed because the list of registered employees was not given to the researchers for confidential reasons and this condition did not allow the researchers to randomly select participants in the organization. Of the number, 132 useable questionnaires were returned to the researchers, yielding a 66 percent response rate. The survey questionnaires were answered by participants based on their consents and a voluntarily basis. This figure meets a good decision model as suggested by [29], and exceeds the minimum sample of probability sampling, showing that it can be analyzed using inferential statistics [26]. As recommended by [30], the SmartPLS version 2.0 was employed to assess the validity and reliability of the instrument, and thus test the research hypotheses.

3. Results

The majority respondents of this study were females (53.80%), aged between 30 and 31 years old (45.50%), married (77.30%), degree holders (56.80%), executives (86.40%), served more than 10 years (49.20%), and monthly income from RM2000 to RM5000 (77.30%).

Table 1 shows that physiological stress (PHS), psychological stress (PSS), and job performance (JK) had the values of average variance extracted (AVE) larger than 0.5, indicating that they met the acceptable standard of convergent validity [30][31][32]. Besides that, all constructs which had the diagonal values of √ AVE were greater than the squared correlation with other constructs in off diagonal, showing that all constructs met the acceptable standard of discriminant validity [30].

Table 2 shows that the correlation between items and factors for the different constructs, and the construct reliability analysis. The variables loaded more strongly on their own constructs in the model, exceeding the specified minimum, 0.7, showing that the validity of measurement model met the criteria [32][33][34]. Besides that, the composite reliability (CLR) and Cronbach's Alpha (CAP) had values greater than 0.8, indicating that the instrument used in this study maintained high internal consistency [30][35].

Table 3 shows the result of Pearson correlation analysis and descriptive statistics. The means for the variables are from 4.2 to 4.3 signifying that the levels of PHS, PSS and JOP ranging from high (4) to highest level (7). The correlation coefficients for the relationship between the independent variable (i.e., PHS and PSS) and the dependent variable (i.e., JOP) were less than 0.90, indicating the data were not affected by serious collinearity problem [36]. These results showed that the measurement scale met the acceptable standards of validity and reliability analyses.

Table 1: The Results of Convergent and Discriminant Validity Analyses

Construct	AVE	PHS	PSS	JOP
PHS	0.6799	0.8246		
PSS	0.7550	0.4519	0.8689	
JOP	0.6798	0.5185	0.4466	0.8245

Table 2: The Results of Factor Loadings and Cross Loadings for Different Constructs and Construct Reliability Analysis

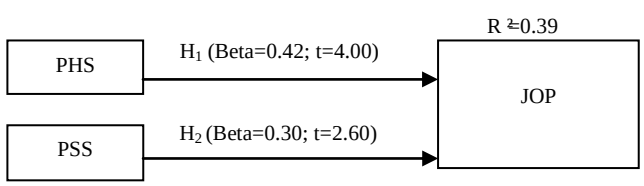
Construct	PHS	PSS	JOP	CLR	CAP
PHS				0.86	0.77
Phy1	**0.8710**	0.3109	0.5291		
Phy2	**0.8578**	0.2870	0.3943		
Phy3	**0.7385**	0.5973	0.3164		
PSS				0.92	0.89
Psy1	0.3977	**0.8515**	0.3337		
Psy2	0.4118	**0.9481**	0.5160		
Psy3	0.32636	**0.9241**	0.3915		
Psy4	0.5143	**0.7363**	0.2201		
JOB				0.94	0.93
JP1	0.5337	0.3885	**0.8359**		
JP2	0.5631	0.4406	**0.8351**		
JP3	0.3372	0.4189	**0.8039**		
JP4	0.3011	0.4351	**0.7890**		
JP5	0.4573	0.3888	**0.8119**		
JP6	0.3610	0.1606	**0.8114**		
JP7	0.4345	0.3228	**0.8756**		
JP8	0.3054	0.2995	**0.8303**		

Table 3: Pearson Correlation Analysis and Descriptive Statistics

Variable	Mean	Standard Deviation	Pearson Correlation Analysis		
			1	2	3
1. PHS	4.3	1.3	1		
2. PSS	4.2	1.5	.52**	1	
3. JOP	4.3	1.3	.47**	.40**	1

Note: Significant at **p< 0.01

Fig. 1 shows the outcomes of testing PLS path model. The inclusion of PHS and PSS had explained 39 percent of the variance in JOP. The results of SmartPLS path model analysis revealed two important findings: first, PHS significantly correlated with JOP (β=0.42; t=4.00), therefore H1 was supported. Second, PSS significantly correlated with JOP (β=0.30; t=2.60), therefore H2 was supported. In sum, this result demonstrates that occupational stress is an important antecedent of job performance in the studied organization.



Note: Significant at *t ≥ 1.96

Fig. 1: Outcomes of Testing PLS Path Model

In order to determine a global fit PLS path modeling, we carried out a global fit measure (GoF) based on [38] guideline as follows: GoF=SQRT{MEAN (Communality of Endogenous) x MEAN (R^2)}=0.52, indicating that it exceeds the cut-off value of 0.36 for large effect sizes of R^2. This result confirms that the PLS path model has better explaining power in comparison with the baseline values (GoF small=0.1, GoF medium=0.25, GoF large=0.36). It also provides adequate support to validate the PLS model globally [37].

4. Discussion

The findings of this study confirm that the ability of employees to appropriately manage, regulate and control physiological and psychological stresses in executing job may lead to an enhanced job performance in the organization. This study provides three important implications. In terms of theoretical contribution, the results of this study confirm that occupational stress has been an important antecedent of job performance in the studied organization. This result also has supported and extended studies published in most Western countries [17][19][21][24]. In regard with the robustness of research methodology, the survey questionnaires used in this study have satisfactorily met the standards of validity and reliability analyses. This may lead to the production of accurate and reliable research findings.

With respect to a practical contribution, the findings of this study may be used as guidelines by practitioners to enhance the ability of employees in handling negative occupational stress in organizations. The potential suggestions are: first, coaching and mentoring programs should be encouraged in order to motivate senior employees and supervisors to guide junior and inexperienced employees in executing job. Second, teamwork should be encouraged in order to enhance employees' skills in working with different people to accomplish organizational strategic mission. Third, recruitment and selection policy should be adjusted in order to select the right employees in performing the right jobs. Fourth, merit pay should be improved in order to provide the type, level and/or amount of reward that adequate with high performers' contributions. Fifth, workplace stress training content and methods should be updated in order to enhance employees' theoretical and practical skills in handing negative occupational stress. If these suggestions are given more attention it may enhance the capability of employees to reduce stress in achieving their stakeholder's needs and expectations.

5. Conclusions

This study proposed a conceptual framework based on the occupational stress research literature. The results of confirmatory factor analysis confirmed that the instrument used in this study met the acceptable standards of validity and reliability analyses. The outcomes of SmartPLS path model analysis revealed that occupational stress was an important antecedent of job performance in the studied organization. This finding also has supported and broadened the occupational stress studies mostly published in Western countries. Therefore, current research and practice within workplace stress model needs to consider physiological and psychological stresses as crucial components of the occupational stress domain. This study further suggests that

the ability of employees to appropriately manage, regulate and control physiological and psychological stresses in executing job will strongly increase their positive attitudes and behaviour (e.g., satisfaction, commitment, health, and quality). Thus, these positive outcomes may lead to maintained and increased organizational competitiveness in an era of globalization.

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