

Effects of Stressor on Work and Employee Performance in Higher Education

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ABSTRACT

This study discusses the factors that generate stress. Stressor is the source that generates stress in the form of role ambiguity, role conflict, work overload, time availability, career development, and responsibility. Excessive workload and availability and insufficient time rapidly triggers the occurrence of stress. Stress is one cause of reduced performance and productivity of employees. The three variables in a person's frame of mind are stressor, job stress, and employee performance. A questionnaire was developed for the purpose of quantitative with three variables identified. The questionnaire comprises 14 dimensions (2 to 6 dimensions for each variable) and each dimension consists of 3 to 4 queries. The respondents of the survey we conducted were employees from an open university and were selected via stratified random probability sampling. Three hypotheses were developed and analyzed using partial least squares. Results showed that job stressor significantly influences job stress. Stressor work did not significantly affect the performance, whereas job stress did not significantly influence the performance. The interrelated stressor is reflected by role overload and time availability, work stress is reflected by emotions and attitudes/behaviors, and reflected by the performance reliability, cooperation, quality of work, quantity of work, and knowledge.

Keywords: stressor, work stress, performance, PLS

1. INTRODUCTION

An increasing number of studies on work stress and its influence and various manifestations on the health of working individuals have been conducted. Occupational stress can be viewed as a process, in which stressors are associated with the content and circumstances of work and characteristics, resources, and social environment of individuals (Baba et al., 2000). Stressful incidents at work were analyzed using an open-ended technique for three different occupations, namely, clerical workers, university professors, and sales associates. Narayana (2000) revealed that similarities and differences in stressors and coping techniques are reported across all occupations. Sauter et al. (1990) explained that the most common sources of occupational stress are workload and work pace, conflict and ambiguity in the workplace, career concerns, work schedule, interpersonal relationships, and job content and control.

Various problems can cause stress at work. For example, working conditions can cause stress to employees. Stress has an important relationship with the productivity,

finances, and material possessions of people. Stress in the workplace has cost companies an enormous amount of money. Gibson et al. (1993) revealed that companies in the US lose US\$68 billion in annual income due to a decrease in productivity resulting from the effects of stress on employees. These costs include medical benefits (i.e., when employees are sick), hospital care costs, and costs associated with decreased productivity. Workers, who have been trained at a huge cost, may experience stress when under pressure in their respective jobs. Consequently, they may become prone to make illogical decisions, such as habitual absence and alcohol and drug abuse, thereby leading to their replacement by other workers who need retraining. Such decisions can lead to increasing costs on the part of companies (Greenberg, 2003). Milbourn (2006) determined that stressors can be observed due to six factors: role confusion, role conflict, availability of time, work overload, career development, and responsibility. Work stress can occur when work demands exceed the capability of an employee. Therefore, companies should know the stress levels of their employees. After determining the stress levels of employees, companies can act to ease the stress experienced by the former, thereby enabling them to work productively.

The main task of higher education is to provide academic and professional education in the various disciplines of science, technology, and the arts based on a system of distance. Higher education has the following functions in terms of performing its basic tasks: conduct research to develop science, technology, and the arts; perform community service; employ academic guidance and administrative personnel to suit the environment; and provide administrative services. Employees are required to provide the best services to students. In providing these services, technical or non-technical issues can cause stress on every employee. The aforementioned results indicate that stress affects the health and costs incurred by companies. The three variables in this study are stressor, job stress, and employee performance. Stressors were measured as role ambiguity, role conflict, time availability, work overload (quantitative), career development, and responsibility.

Work stress can be measured by emotions and attitude or behavior. Marifah (2004) referred to Livine et al. (1990), Schuler (1996), Mink (1993), and Caspersz (2002) and concluded that performance is measured using (1) reliability, (2) presence, (3) cooperation, (4) quantity of work, (5) knowledge, and (6) ability. In the current study, constructs/variables can be measured by considering the dimensions.

This research aims to investigate the concept of power stress (i.e., stressor) and analyze the effect of work stress on employee performance. The results of this study are expected to benefit company leaders to anticipate the potential causes of stress in view of its negative effects that can be detrimental to the company. Leaders' knowledge on stress can also be used to solve this problem and turn stress into eustress, which is beneficial for persons to develop themselves, improve their performance, and attain job satisfaction.

2. REVIEW OF THE RELATED LITERATURE

Greenberg (2003) explained that stress is associated with the life of an organization, where stress is a pattern of emotional and physical reactions that occurs in response to demands from within and outside such organization. Luthan (1998) used the definition of stress as basis to conclude that stress is an adaptive response to external

situations that result in irregularities or deviation in the physical, psychological, and behavioral aspects of an offender or organization. Work stress is a condition of dependency that affects emotions, thought processes, and condition of a person (Hasibuan, 2001). Siagian (2008) explained that the sources of job stress are classified into *work stress*, which is the workload of authority that is characterized as imbalanced, obscure, involves duty work, and related to unpleasant environment and co-workers which involves financial worries, disharmonious family life, and children's negative behavior. Wood (2001) concluded that the two sides of stress are stress that is building (i.e., constructive stress) and stress that is damaging (i.e., destructive stress). If stress is completely lacking, then employees will not be challenged, thereby resulting in the tendency of their performance to decline. If the stress intensity increased up to the optimal level (moderate), then such increase will assist employees to maximize all available resources.

Rahmawati (2009) elaborated that the factors that cause job stress (stressor) among bank employees are task and role demands, demands of interpersonal relationships, organizational structure, organizational leadership, and organizational life stages. Laughlin (2001) studied occupational stress and its relationship with social support and life turbulence of teachers in New South Wales. Laughlin research revealed that nearly one-third of the teachers studied considered their job to be extremely stressful. Self-reported teacher stress was determined to be negatively related to job satisfaction and intention to continue teaching. Shaikh et al. (2011) studied a plant manager in Pakistan and determined that work conflict and time availability are significantly positively associated with job stress and job stress managers are significantly negatively associated with job satisfaction. Makhbul (2009) suggested that health, work, work shift, and working hours are factors that are significantly associated with work stress.

Wheatley (1990) suggested that individual responses to the sources of stress can be observed from one or a few aspects of life, including social habits, social relations, sexual preferences, and individual sleeping habits. The reactions include the responses of individuals to life events experienced and the heart condition and psychiatric symptoms of each individual. In addition, special aspects include specific aspects for women (e.g., menstrual cycle) and the elderly. Stress in one aspect of life can affect the other aspects. For example, work stress, which includes the social life aspects, can also affect sleep habits, sex life, or health of the heart.

Kahn et al. (1990) investigated the variable stressors (stressors), role of ambiguity (role ambiguity), excessive workload (role overload), and conflict in work (role conflict). By the time individuals interact with other actors (e.g., customers, supervisors, or co-workers) to obtain information (direction and assistance), expectations and demand for such actors can be categorized as a source of stress. The negative effects of stress (distress), which is a variety of prolonged stress that can cause a variety of diseases, such as allergies, high blood pressure, migraine, and stomach pain. In addition, stress is often followed by feelings of anger, anxiety, depression, nervousness, irritability, tension, and saturation (Luthans, 1998). Beehr and Newman (2000) explained that stress can affect a person who has difficulty in concentrating, making decisions, and experiencing job dissatisfaction. The two sides of stress are stress that is building (constructive stress) and stress that is damaging (destructive stress).

If stress is completely lacking, then employees will not be challenged, thereby resulting in the tendency of their performance to decline. If the stress intensity increased up to the optimal level (moderate), then such increase will assist employees to maximize all available resources (Wood et al., 2001). Performance is essentially work that can be achieved by a person or group of people within an organization in accordance with the authority and responsibilities of each individual, to achieve organizational goals legally, and in accordance with moral and ethical standards (Prawirosentono, 1999). A direct correlation exists between work stress and performance. The stress experienced by employees can facilitate the improvement of job performance, although such experience can also inhibit or impair work performance. The effect depends on the level of stress experienced by employees (Handoko, 2001).

3. METHODOLOGY, DESIGN, AND HYPOTHESES

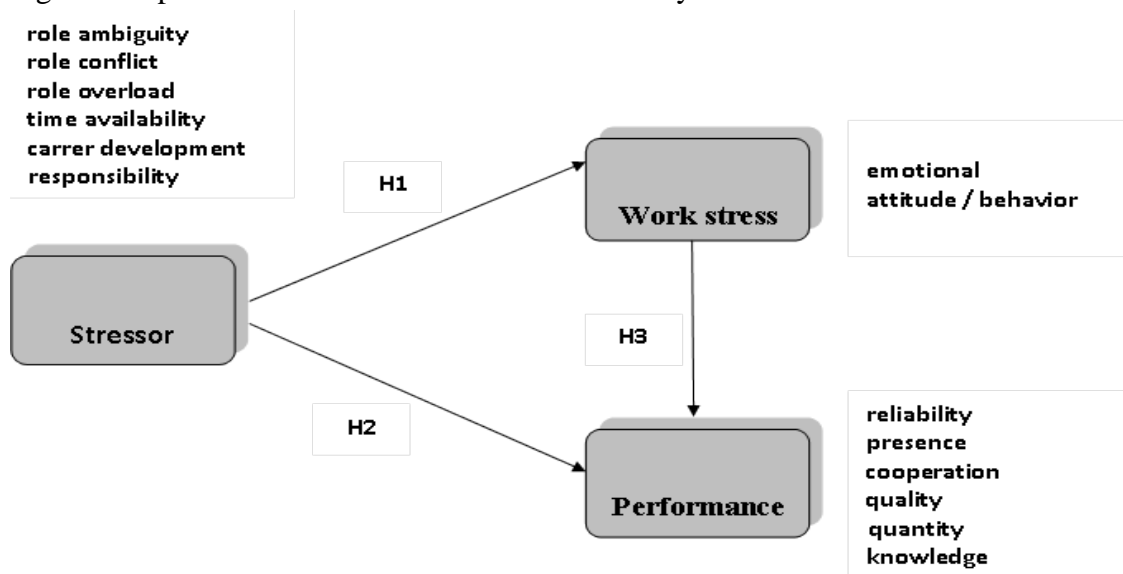
This study measures variables by considering the dimensions. The dimensions are stressor, work stress, and employee performance. Table 1 shows that this research comprises multidimensional constructs.

Table 1: Variables and dimensions of the study

<i>No</i>	<i>Variables</i>	<i>Dimensions</i>
1	Stressor (X)	X ₁ : role ambiguity X ₂ : role conflict X ₃ : role overload X ₄ : time availability X ₅ : career development X ₆ : responsibility
2	Work stress (Y₁)	Y ₁₁ : emotional Y ₁₂ : attitude / behavior
3	Performance (Y₂)	Y ₂₁ : reliability Y ₂₂ : presence Y ₂₃ : cooperation Y ₂₄ : quality Y ₂₅ : quantity Y ₂₆ : knowledge

Table 1 shows the appropriate stage to establish a model that will be investigated using quantitative procedures.

Figure 1: Operational framework of the current study



The respondents were employees of a higher education institution with high level of stress. Data were collected through a questionnaire that focuses on job stress and adapted from Kahn et al. (1964) and Milbourn (2006) and the procedure developed by Marifah (2004). The current study uses partial least squares (PLS) to determine the effects of stressors on the work stress of employees and their performance.

Variables are explored through the questionnaire (Tjiptono & Chandra, 2011) and a survey was conducted to collect data from the respondents (Fowler, 2014). The respondents for this survey were selected via stratified random probability sampling. Three hypotheses were developed and analyzed using PLS.

Khan et al. (1990) explained that these stressors can be role ambiguity, excessive workload (role overload), or work conflict (role conflict). Control deficiencies and excessive job stress eventually trigger work stress (Narayana, 2000). Milbourn (2006) stated that the sources of stress are confusion of roles, role conflicts, time constraints, and excess labor. The preceding studies concluded that stressors would lead to considerable stress. This conclusion is based on a variety of stressors that will have an impact on stress. Employee performance is crucial to the success of a company and directly or indirectly contributes to the company (Mangkuprawira, 2009). If the stress intensity increased up to the optimal level (moderate), then such increase will assist employees to maximize all available resources (Handoko, 2001). Stress affects employee performance. An extremely low level of stress causes employees to work below their true potential, whereas people who work at a high level of stress make them unable to concentrate on their jobs (Crampton et al., 1995). Two forms of stress are constructive stress (eustress) and destructive stress (distress). Eustress increases a worker's performance and provides the additional motivation, energy, and courage required for administrative duties (Cloud, 1991). Balci (2000) argued that medium levels of stress pave the way for individual creativity. Many administrators exhibit their best performance when they experience medium level of stress. A few studies indicate that stress at the lowest point makes the performance of an employee better than when they

experience high levels of stress. Accordingly, the present researcher provides the second and third hypotheses related to employee performance.

4. RESULTS AND DISCUSSIONS

Table 2: Characteristics of the respondents

The characteristic							
gender	Men	46%	women	54%			
age	40-55 years	54%	30-39 years	22%	over 55 years	24%	
education level	postgraduate	39%	undergraduate	30%	high school	13%	diploma 18%
years of service	<21-30 years	38%	11-20 years	24%	1-10 years	20%	>30 years 18%

The analysis was conducted to determine the shape and influence of the independent latent variables (exogenous), which is a stressor, to the dependent latent variables (endogenous), which are work stress and employee performance. We used PLS dooped with SmartPLS 2.0 in this analysis.

The form of relationship with the latent variable is a reflective indicator. Variable stressors are reflected by role ambiguity, role conflict, time availability, work overload, career development, and responsibility. Variable job stress is reflected by attitude/behavior and emotions. Employee performance variables are reflected by reliability, presence, collaboration, quality, quantity, and knowledge. Once the model is formed using SmartPLS, we can now test the feasibility of this model.

Ghozaly (2008) explained that the evaluation of the outer reflection model is based on four criteria, namely, convergent validity, discriminant validity, average variance extracted (AVE), and composite reliability. First, convergent validity or reliability of indicators is reflected in the value of the loading factor, thereby reflecting the strength of the interrelation between the latent variables stressor, job stress, and employee performance against each indicator variable. The interrelation stressor is reflected by the role overload (X_3) and the value of the loading factor is 0.7979 and time availability (X_4) by loading values at 0.552. The results of this study are similar to those of Rahmawati (2009), which explained that one cause of stress is excessive task demands. Makhbul (2009) determined a significant effect on the working hours of work stress. Siagian (2008) also determined that work stress is caused by workload obscurity.

Stress can also occur among employees in the field of education. Laughlin (2001) suggested that teachers' stress negatively affects job satisfaction and intensity to continue teaching. Zang (2010) reported that female Chinese academics were exposed to more considerable stress at work than their male colleagues do because the former experience difficulties in adapting to the male-dominated relations and face gender discrimination in promotions. Perlberg and Keinan (1986) indicated that women were supposed to assume the majority of the responsibilities at home apart from their responsibilities at work. Gerdes (2003) argued that female academics emerged as an employee group that faces high levels of work-related stress due to their heavy career and household responsibilities. These conclusions are associated with the results of the current study, in which role overload and time availability become a source of stress.

The work stress variables are reflected by emotion (Y_{11}) with the largest value of the loading factor at 0.7038. Greenberg (2003) explained that stress can be divided into emotional and physical reactions. The results of this study indicate that the work stress variables are reflected by emotion. The performance variables are reflected by reliability (Y_{21}) with a loading factor value of 0.6951. One measure of worker performance is reliability factor. Reliability measures the ability to perform a task well and discipline (Marifah, 2004). Sliskovic and Maslic (2011) showed that teachers in higher education are exposed to the highest level of work stress, thereby causing an emotional high as well. The two researchers determined that (1) most university teachers have to cope with excessive workloads and (2) women report high exposure to stressors at work, particularly workload. Pressure that is sufficiently high can make someone become emotional.

Discriminant validity indicates a correlation value between variable stressors, work stress, and performance with each indicator. If the indicator stressor is reflected from the stress of work and performance, then the correlation values of these indicators on work stress and performance should be larger than the correlation of these indicators against the other latent variables, including job stress variables and performance. If the indicators for each of the variables describe reflection, then the correlation value must be higher than the correlation of these indicators against other latent variables. This study proves that the model is a reflective stressor to stress and the work and performance in this study is valid.

Table 3: AVE values for the stressors, work stress, and employee performance

Variable	AVE
Performance	0.3826
Stressor	0.5056
Work Stress	0.3757

Table 3 presents the AVE stressors, work stress, and employee performance. The values above the standard (> 0.5) indicate that the indicators for performance and work stress are a less consistent measure than each latent variable stressor. Meanwhile, the indicators are a consistent measure of the latent variables.

Composite reliability (ρ_c) shows a test of the stability and internal consistency of a good indicator. This study showed that the stressor, employee stress and employee performance are 0.8346, 0.7484, and 0.8713, respectively. The composite reliability value is above 0.5. Thus, the indicators used for any latent have stability and are consistently good.

The results of the evaluation's outer reflection model suggest that a few indicators should be dropped. After completing the procedure, the effects of the latent variables and hypothesis testing were evaluated. The structural models were evaluated using R-square for endogenous variables and by comparing the t arithmetic with t table (t table at the 95% confidence level is 1.96). The PLS processing results showed that the R-square stressors against employee stress are equal to 0.4095. This result means that the performances of 40.95% of the employees were affected by the stressors and the rest was influenced by other factors. The performances of 6.28% of the employees were affected by the stressors and the rest was influenced by other factors. Hypothesis testing

was performed by considering the path, coefficients bootstrapping analysis, and by comparing the value of the t arithmetic with t table. This approach analyzes the three hypotheses.

The stressor's positive effect on job stress has a coefficient parameters value of 11.335. The first hypothesis (H1) indicates that positive stressors affect job stress due to many factors that cause job stress. In this study, the causes of stress are the most dominant, namely, overwork and time constraints. This result means that the more stressors, the higher the stress of the employees. The stressor that does not affect the performance of employees is 0.7559. In this study the causes of stress are the most dominant: overworking and time constraints. Work stress is not positively influenced by performance, in which the coefficient parameter is 1.6905. Hypothesis s (H3) showed that work stress does not affect the performance. This result indicates that even if a high level of employee stress is present, such stress will not affect employee performance.

5. CONCLUSION

In conclusion, one of our hypotheses was proven, while the other two were not. First, the first hypothesis states that the more stressors, the higher the stress of employees. Stressors from this research are the workload and availability of time. Second, no influence exists between stressors and employee performance. This result indicates that despite the causes of stress (stressor), the more it will not affect the performance of the employee. Third, job stress has no effect on performance. This result indicates that high level of employee stress will not affect the performance of employees. This study recommends that the workload of each employee be reviewed and that the workload burden of employees analyzed. Evidently, the workload should be compared with the time available to do the work assigned to employees. For future research on stress, we recommend the analysis of employees based on position and the inclusion of additional independent variables apart from work stress and employee performance. Moreover, among the independent variables that can be included in the model are work motivation, organizational culture, job satisfaction, and training.

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