

# The Role of Leadership Practices on Job Stress among Malay Academic Staff: A Structural Equation Modeling Analysis

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## Abstract

Globalization brings change in all aspect of human life, including in how job and organizations operate. These changes create strain and stress not only among employee at business organization, but also among academic staff. The dean of faculty or department at university has important role in prevent the effects of job stress among the academic staff by giving support, motivation, and redesign how a task should be finished to reduce job stress.

This study aims to examine the role of leadership practices with job stress among Malay academic staff. Design of this study is survey research with quantitative approach. A total of 124 academic staff participate or answered the questionnaires. The data was analyzed with structural equation model method using Amos 18 program.

The result of structural equation modeling suggests that four dimensions of leadership practices show unique relationship pattern with four dimensions of job stress. The significant relationship between exogenous and endogenous was tested using structural equation modeling (SEM). The result of SEM analysis just confirms three exogenous variables that significantly have relationship with endogenous variables. Those are dimension of challenging the process with behavioral, emotional, physiologic and cognitive stress responses. Enabling others to act with emotional stress response, and the last, encouraging the heart with behavioral stress response. While inspiring a shared vision is not have significant relationship with all dimension of job stress. Overall, the proposed model had a fit model with empirical data. The mechanism of relationship among exogenous and endogenous variables will be discussed in a paper below.

**Keywords:** Leadership practices, Job stress, Malay academic staff

## 1. Introduction

Since the early 1990s, the spread of globalization and it changes have begun to impact organizations everywhere. Globalization is something unavoidable and affected every aspects of life. The changes brought by globalization are also creating new demand, new workload and more job complexity for employees. Among organizations in developing countries, the imperatives for adopting globalization process could no longer be ignored. Within the workplace, these changes translate to over duty for many workers (Kendall et al., 2000). Many employees with full-time job are experiencing high pressure and faster pace (Bousfield, 1999). Work overload has been linked to cardiovascular disease, and the risk of heart attack for those working in long hours (e.g. 11 hours) (Sokejima & Kagamori, 1998). Working in long hours is 2.5 times have risk than those working an 8 hour a day (Sokejima & Kagamori, 1998).

Nowadays, employees are expected to learn the different cultures, languages, rules and new regulations about international trade, resulting in increased workloads, increasing the pressure to enhance job skills and long working hours (Cooper, 2006). The changes in nature of how job should be done, the type of working environment and the mechanism of organizational behavior would as certainly escalate the incidence of job stress in workers, which in turn will damage the worker's physical and mental health (Dollard, 2003; Devereux et al., 2004). Either employees or organization was affected by the incidence of job stress. But sometime this cost is rarely considered either in the human capital or financial term by the organization (Wilhelm, et al 2004).

The effects of job stress did not just happen at job like pilot, airtraffic controller, medical profession, and factory employees, but at teaching profession the incident of job stress is happened too. Several studies have identified the causes of job stress at teachers. Same findings have been obtained from other studies in others countries. A study in Sweden, Wahlund and Nerell (2004) found the most important causal factors that always afflicting job stress was big classroom sized, long working hours, distractive student's behavior, overload demand, and rapid school reformation. In UK, Cox et al (2000) identified five factors related with job satisfaction and job stress, which are school organization, job demand, teaching resources, working condition, career and training, and student's behavior. In same study, Kyriacou (2001) reported four stress factors experienced among teachers in UK, which is negative student's behavior, stressful working condition, working time pressure, and lower school ethic.

In education organization, especially at higher education setting, many studies concluded that lecturer, staff or administration personnel have reported experienced job stress from middle to high level (Donders et al., 2003; Boscolo et al., 2008; Leung, Siu, & Spector, 2000; De Nobile, & McCormick, 2007; Blix, & Lee, 1991; Assadi, 2003; Jing, 2008). Ahsan et al (2009) stated that academic staffs at university in Malaysia face more problems in their job, due to the increasing of competition among universities in Malaysia. These may causes the academic staffs face more demands, more duties, more work overload, and this condition will create a plenty of stress and therefore affect their satisfaction and even their physical or mental health. Whereas, study by Huda et al (2004) revealed that prevalence of job strain (referred to as 'high job strain') on University Sains Malaysia lecturer was 23.3%. A significantly proportion of clinicians 34.1% on University Sains Malaysia reported high job strain compared to non-clinicians 6.9%. The prevalence of job dissatisfaction on University Sains Malaysia lecturers was 42.6%.

Aeria (1998) conducted comparative study on the level of burnout among Petaling Jaya teachers with another sample and show increasing level of burnout experienced by Petaling teachers. Mean score for emotional exhaustion of Petaling teachers is 3.8 and show the highest score than the other studies sample (Hartford Connecticut teachers = 3.5; Victoria Australia teachers = 3.2; Massachusetts teachers = 3.4; Alberta Canada teachers= 3, 4). Mean score for depersonalization of Petaling teachers is 2.3 and show the highest score than the other studies sample above. While mean score for the personal accomplishment of Petaling teachers is 2.6 and show the highest score than the other studies sample. Based on several studies in the past it can be predicted that the incident of job stress on academic profession (teachers and lecturers) in Malaysia will be higher and increase in the future.

Other study by Rosnita (2006) showed that stress of mathematics teacher in Kelantan region is 2.7 percent for the highest value. The dominant sources that causes stress condition is student behavior and teacher's work load. One study by, Haprizta et al (2005) reported that from 62 to 180 academic staff University Technology Malaysia or 34.4% have experienced moderate of job stress. Rusli, Edimansyah, & Naing's (2006) study showed that stress prevalence on dental healthcare worker of higher institution learning in Kelantan was 22.2%. One dental healthcare worker (1.9%) experienced severe stress, whilst eleven (20.4%) dental healthcare worker experienced mild to moderate stress. Several studies above affirm that the incidence of job stress on teacher and academic staff is an empirical reality. One factor that influence academic staffs stress is leader in their department or institution.

Driscoll and Beehr (1994) stated that leader may have significant contribution on subordinate personal and professional performance. Study by Bakker et al (2000) among staff nurses found that a head nurses could buffer and reduce the effect of job strain within working environment by thoughtfully maintaining a positive leadership style that can create a positive climate for nurses to achieve their need and goal. Presumably, this is a main way by which the head nurses or leader can reduce work stress among their staff by giving adequate motivation and support.

Although it is generally admitted that leader behavior plays a substantial role in mitigating or buffering the deleterious effects of work stressors, only a few empirical studies have documented this relationship. Moreover, the empirical investigations of the effects of leadership behaviors toward job stress reactions have some limitations. One of the limitations of previous studies did not consider what leadership practice dimension influenced the dimension of job stress, like whether one aspect of leadership practices impacted on emotional stress responses (Webster and Hackett, 1999; Bakker et al, 2000; Gill, Flaschner, & Bhutani, 2010), especially, focus on Pozner-Kouzes's leadership practice theory.

In order to fill in the gap of knowledge, then the purpose of this study was to investigate whether specific aspects of leadership behavior were systematically related to specific aspects of job stress among Malay academic staff. The Leadership Practices Inventory (LPI; Pozner & Kouzes, 2007) is utilized for the measurement of leadership behavior and the job stress questionnaire will be used to collect job stress responses. The LPI was developed as an empirical measure of a conceptual leadership framework, which was developed from case studies of exemplary leaders at all levels in a variety of settings. The LPI has consistently demonstrated excellent reliability (Posner & Kouzes, 1993), and measure individual leadership actions and behaviors along several dimensions those are challenging the process, inspiring a shared vision, enabling others to act, modeling the way, and encouraging the heart.

## 2. Theoretical framework

### 2.1. Job stress

The definition of stress that widely used in research comes from Lazarus, and Folkman work. They theorize that stress is a transactional process (Folkman & Lazarus 1985). Lazarus and Folkman (1984) define stress as “any event in which environmental demands and/or internal demands exceed the adaptive resources of the individual, his or her tissue system, or the social system of which ones is a part”. In this definition, stress is an interactional process between environmental system and the adaptive resources of the individual system.

Robbins (2003) suggested a model of stress that consisted of three potential stressor those are, environmental factors, organizational factors and individual factors which has the strength of its influence not directly cause the high level of job stress but moderating by individual differences such as perception, personality and social support. While Gibson, Ivancevich, Donnelly and Konopaske (2006) suggested another model which quite different from Robbins’s model. They stated a model of organizational stress consisted of four level those are individual level, group level, organizational level, and non-work level which has the strength of its influences not directly cause the high level of job stress, but moderating by individual differences such personality, heredity, age, sex, and social support. The role of leadership behavior included in organizational factors that may be able to create a negative strain or positive climate.

### 2.2. Leadership Practices

Kouzes and Posner (1987) studied more than 1,000 managers as sample in their research. Based on this research, they developed the Leadership Practices Inventory (LPI) (Kouzes & Posner, 1993). The LPI evaluate a leader's effectiveness on five factors: (a) Challenging the Process; (b) Inspiring a Shared Vision; (c) Enabling Others to Act; (d) Modeling the Way; and (e) Encouraging the Heart. In this research, an adapted LPI-self version was used to collect data. The LPI has been used in leadership development programs by many organizations, including Motorola and Levi Strauss (Kouzes & Posner, 1988).

Challenging the Process, according to Kouzes and Posner (2007), focuses on searching for opportunities by seizing the initiative and by looking outward for innovative ways to improvement. Besides that, leader eager to take risks and experimenting by constantly generating small wins and learning from experience. According to the Kouzes-Posner's (2007) leadership framework, Inspiring a Shared Vision refers to the ability of a leader to envision the future and to clearly articulate the vision to others, thereby gaining the followers' support and belief. Enabling Others to Act, the third category in the Kouzes and Posner (2007) model includes concepts such as teamwork, trust, confidence and empowerment. Leader foster collaboration by building trust and facilitating relationships, and strengthen others by increasing self determination and developing competence. Modeling the Way, as defined by Kouzes and Posner (2007), describes the importance of leaders setting a personal example for the followers, and their willingness to act on their beliefs, in others word, leader should able to clarify values and set the example in their own action. Kouzes and Posner (2007) describe the category of Encouraging the Heart as actions by a leader that encourage, motivate, and support the followers and help the team to celebrate victories. It is an expression of genuine emotion from leader to create and develops positive trust to followers, in order to encourage high motivation and strong spirit to followers.

The term of leadership has been disputing for along times and several theorists have made many definitions of leadership. Several theorists see leadership from trait perspective. Some theorists look leadership from situational perspective. Some theorist made argument, that leader cannot exist without followers, so leader-members relations become a primary aspect of the leadership dynamic. Much more, several theorists try to describe leadership in more practical manner. Finally, there is no universal definition of leadership that can be accepted because leadership is a complex phenomenon. If we used different perspective, it will create different definition of leadership too.

Thompson (2000) define leadership is “a process of non-coercive social influence whereby a leader guiding the activities and members of a group toward shared objectives and goals in an organization”. Thompson’s definition

suggest that influences of leader is not in form of coercive action, but merely in form of non coercive social influence by personal approach, authentic style and two-way communication. Leader gives a follower direction and guidance in participative manner in order to the follower can achieve shared objective and goals of organization. According to Bass (Gibson, Ivancevich, Donnelly & Konopaske, 2006) a leader are an agent of change, person whose acts affect other people more than other people's acts affect them. Leadership occurs when one group member modifies the motivation or competencies of others in the group. While, Kouzes & Posner (2007) stated that "leadership could bring forth the best from others by action and practice in organization in daily living". All of statements above confirmed that the role of leader has a significant impact on subordinate's work performance. When a leader can creates a positive climate and authentic support to follower, then follower will be able to perform their job better to achieve best work result.

### **3. Method**

#### *3.1. Sample and procedure.*

The study was conducted from December 2009 to May 2010 in one of the Universities in Pahang Malaysia. A covering letter explaining the purpose of the study and providing assurance that the confidentiality of responses would be respected accompanied each questionnaire. Two weeks later, we send the questionnaire and a follow-up letter to non respondents stressing the value of the survey and the importance of their participation. Questionnaires were collected by researcher in every faculty office. A total of 124 participants involved in present study. Frequencies for the respondent's demographic are presented in Table 1 below.

#### *3.2. Research Instrument.*

3.2.1 Leadership Practices. The leadership practices variable will be measured using Leadership Practices Inventory (LPI) by Kouzes and Posner (2007; 1993). Empirically LPI has a good internal reliability, as measured by Cronbach's alpha, and continues to be strong with all scales above the .75 level. However, in this study, we just used five items in every dimension of LPI in order to get fewer items in order not to burden respondent with many items. Therefore, we tested again the LPI adaptation with internal consistency method. The result of LPI Cronbach's alpha is 0.890, with corrected item-total correlation range 0.351 to 0.684. In the present study, researcher just took five dimension of LPI without modeling the way dimension. This decision was taken after conducted a principal component factor analysis that tested the construct validity of the adapted LPI questionnaire. This scale is composed of fifteen items that each answered on a four-point Likert scale ranging from "never" to "frequently".

3.2.2. Job stress. Job Stress Scale (JSS) that was adapted from Stress Indicators Scale (2007) and revised by researcher will be used to measure job stress variable. The reliability and validity of JSS will be analyzed with internal consistency technique by Cronbach alpha. The result of JSS Cronbach's alpha is 0.920, with item-total correlation range 0.369 to 0.708. All questionnaires were tested again using structural equation modeling to examine the measurement model of fit. This scale was composed of twenty-four items each answered on a four-point Likert scale ranging from "never" to "frequently".

#### *3.3. Data analysis*

Data was analyzed by Structural Equation Modeling using Amos 18 (SEM). Several tests of the normality of data were performed. We checked the symmetry, looking at the mode, median and mean, and then used the Shapiro-Wilks test and various graphical tests (box plot, stem and leaf, and normal probability plot). Based on these several tests, a normal distribution data was achieved in our variables.

### **4. Result**

#### *4.1. Descriptive Analysis*

The univariate descriptive statistics for each variable was first presented as a way of both characterizing our sample and exploring whether, for any measure, the variability appears sufficiently restricted to underestimate the magnitude of its relationship with other variables. Mean and SDs for the study variables are presented in table 1 below.

Structural equation modeling has advantages compared with the regression method because of the measurement error of latent variable included in the model and examined. The statistic theory explains that the actual regression coefficient consists of two elements, which is a structural coefficient between dependent variable and independent variable and second is the reliability of the predictor variables. Reliability is the level where the independent variable is considered free from errors. Regression method does not assume the existence of errors in their measurement of variables, whereas the possibility of measurement errors may exist in practice and theory. Structural equation modeling tries to eliminate the weaknesses of regression analysis in order to be more accurate in examining

a theoretical model (Byrne, 2001).

#### 4.2 Structural Equation Modeling

The next step in our investigation of job stress and leadership practices is to perform Structural Equation Modeling (SEM). Before SEM analysis performs, the continuous distributions for each of the variables should expect. For the purposes of SEM, a sample size of 63 for males and 61 for females may be considered fair. The latent constructs in the present study included job stress dimension and leadership practices dimension as stated above.

A two-step modeling approach was adopted (Kline, 1998; Byrne, 2001). In the first step, a measurement model was tested to make sure that all latent constructs correlate with manifest variable. In step two, a structural analysis designed to test relationships among latent variables was examined. These relationships among variable will be tested only after ensuring that latent variables have measured adequately. This procedure will reduce the risk of misinterpretation and bias (Anderson & Gerbing, 1988; Ghozali, 2008). Maximum likelihood (ML) method of covariance structure analysis was used in this study. To examine overall model fit, the squared error of approximation (RMSEA), chi-square/degree of freedom (CMIN/DF), Tucker-Lewis index (TLI), and normed fit index (NFI) will be used. Satisfactory model fit is indicated by RMSEA values less than or equal to .08 and by TLI and NFI values greater than or equal to .90. Moreover, CMIN/DF values less than or equal to 5 is adequately reasonable for a model (Ghozali, 2008; Byrne, 2001).

The result of measurement model of job stress and leadership practices dimension has a satisfactory fit model. Through SEM analysis job stress dimension obtained satisfactory result with  $p = .152$ ,  $NFI = .900$ ,  $TLI = .982$  and  $RMSEA = .033$ . The same result is obtained for leadership practices dimension with  $p = .357$ ,  $NFI = .928$ ,  $TLI = .994$ , and  $RMSEA = .021$ . All the fit indices for measurement models presented in table 4 below.

After we tested the measurement model and confirmed the satisfactory result, then the structural models of the relationship between leadership practices dimension with job stress dimension was tested.

### 5. Discussion

This study shows that several dimensions of leadership practices have a significant negative relationship with several dimension of job stress. Nevertheless, two dimensions of leadership practices have not a significant negative relationship with several dimension of job stress. Challenging the process is a predictor of behavioral stress response ( $r = -.363$   $p < .01$ ), emotional stress response ( $r = -.361$   $p < .01$ ), cognitive stress response ( $r = -.238$   $p < .05$ ), and physiological stress response ( $r = -.375$   $p < .01$ ). While enabling others to act just has a significant relationship with emotional stress response ( $r = -.166$   $p < .05$ ). While encouraging the heart has a significant relationship with behavioral stress response ( $r = -.226$ ,  $p < .05$ ).

If we look on adjusted R square value, challenging the process, enable others to act, encourage the heart and inspire a shared vision is simultaneously accounted 13% for behavioral stress response, while 87% influenced by others variables. On emotional stress response is 23% influenced simultaneously by all leadership dimensions, while 77% the change of emotional stress response is influenced by others factors. On cognitive stress response 9.9% influenced simultaneously by challenging the process, enable others to act, encourage the heart, and inspire a shared vision, while 90.1% influenced by others variables. The last the predictors of physiological stress response explain 15.1% of its variance, while 84.9% the change of physiological response influenced by others variables.

The present study's result confirms other studies that examined the relationship between leadership with job stress, study by Webster and Hackett (1999) concluded that leadership practice has influence on burnout of mental health professional. The results of their study indicate a significant contribution, although has modest relationship between the leadership practice and emotional exhaustion, and between the majority of the leadership practice with depersonalization. In spite of the fact that the correlations are small, the effect is did exist and are significant and has important implications for applied models of burnout.

Other study by Littrell, Billingsley, and Cross (1994) found that school leader support influences the positive emotion of teachers, and this support forms how teachers think and feel about themselves and their work. The impact of supportive leaders, teachers feel that their work and school environment more enjoyable, rewarding, motivating, more productive, and experienced less job-related stress.

Study by Stordeur, D'hoore and Vandenberghe (2001) stated that work stressors as a whole were found explaining 22% of the variance on emotional exhaustion whereas leadership dimensions explained 9% of the variance in that outcome measurement. Leadership dimension increase and influences the level of emotional exhaustion on a head nurse whose continuously monitors subordinate's performance in order to anticipate mistakes (MBEA) and intervenes to detect mistakes after the fact (MBEP).

Leaders could influence performance by conduct a positive specific behaviors in interactions with subordinates, peers, and outsiders. Extensive research using survey questionnaires, critical incidents, observation, and experiments shown that task oriented behaviors can enhance the performance of individual subordinates and small groups (Yukl, 2006).

The implementation of positive leadership practices in the organization will improve subordinate's job motivation and job satisfaction. Otherwise the capable leader who can inspire a shared vision, encourage the spirit of work, create positive collaboration will enhances power synergy as teamwork (Kouzes & Posner, 2007). Beside that positive practices will create a positive climate and a comfortable working atmosphere that conducive for subordinates to work optimally and achieve a satisfactory work performance. Five leadership practices above will decrease the effect of negative strains in organization directly or indirectly, and this condition will prevent incidence of job stress among subordinate in the future.

As Gmelch (Administrator, 2004) said "I found that I needed more interpersonal influence than command and control. You move away from reward and punish. It is more about personal than institutional power. Your source of leadership is who you are, rather than "I'm in charge. Leader works more toward building bridges, and building teams. Leader needs to understand and build credibility. You need to build a dean's team—you need to be able to influence, not to command. It is more about credibility and collaboration than anything else" (p.1).

In the same perspective, Kouzes and Posner (2007) stated that leadership is about the future; their unique legacy is the creation of valued institutions that survive over time. The most significant contribution of leaders is to create a long-term development of people and organization so they can adapt, change, prosper, and grow.

## 6. Conclusion

Leaders have a very prominent role in creating a healthy organization, where subordinates can work with the maximal and optimal manner. Leadership style practices and behavior that tend to suppress and authoritarian will have a tendency to create a strain on subordinates. This study showed that several leadership practices such as challenging the process, inspire a shared vision, enable others to act and encourage the heart of subordinates have significant negative relationship with behavioral, emotional, cognitive and physiological stress responses on subordinates.

## References

- Aeria, L. A. (1998). Burnout among high school teachers in Petaling. *Journal of Education*. Jilid 2: Bil. 2.
- Ahsan, N., Abdullah, Z., Gun Fie, D.Y. & Shah Alam, S. (2009). A Study of Job Stress on Job Satisfaction among University Staff in Malaysia: Empirical Study. *European Journal of Social Sciences Volume 8, Number 1*.
- Anderson, J.C. & Gerbing, D.W. (1988). Structural equations modeling in practice: a review and recommended two-step approach. *Psychological Bulletin*. 103: 411–42.
- Assadi, H. (2003). Evaluation of job stress factors (organizational and managerial) among heads of physical education organization. *Acta Univ. Palacki. Olomuc, Gymn 2003, vol. 33, no.*
- Bakker A.B., Killmer C.H., Siegriest J. & Schaufeli W.B. (2000). Effort-reward imbalance and burnout among nurses. *Journal of Advanced Nursing*. 31, 884-891.
- Blix, A.G. & Lee, J.W. (1991). Occupational stress among university administrator. *Research in Higher Education, Vol. 32*.
- Boscolo, P., Di Donato, A., Di Giampaolo, L., Forcella, L., Reale, M., Dadorante, V., Francesca Alparone, F., Pagliaro, S., Kouri, M., Magrini, A. & Fattorini. (2008). Blood natural killer activity is reduced in men with occupational stress and job insecurity working in university *International Archives Occupational Environmental Health*, DOI 10.1007/s00420-008-0374-5.
- Bousfiled, G. (1999). Dutch study to explore workplace stress. *Safety and Health-The international safety, health and Environment Magazine*, December.
- Byrne, B.M. (2001). *Structural Equation Modeling with Amos basic concept, application, and programming*. New Jersey: Lawrence Erlbaum Associates.
- Cooper, C.L. (2006). The changing nature of work: the new psychological contract and associated stressors. Rossi, A.M., Perrewe, P.L., & Sauter S.L.(Eds.). *Stress and quality of working life: current perspectives in occupational health*. (1-8). Greenwich: Information age publishing.
- Deckard G., Meterko M. & Field D. (1994). Physician burnout: an examination of personal, professional, and organizational relationships. *Medical Care* 32, 745±754.

- De Nobile, J.J. & McCormick, J. (2007). Occupational Stress of Catholic Primary School Staff: Investigating Biographical Differences. *A paper presented at the Annual Conference of the Australian Association for Research in Education, Fremantle, November 25-29, 2007.*
- Devereux, J., Rydstedt, L., Kelly, V., Weston, P. & Buckle, P. (2004). *The role of work stress and psychological factors in the development of musculoskeletal disorders.* Robens Centre for Health Ergonomics University of Surrey Guildford : Surrey
- Dollard, M.F. (2003). Introduction: context, theories and intervention. In Dollard, M.F., Winefield, A.H. & Winefield, H.R. (Eds.). *Occupational stress in the service professions.* (pp.1-42). New York: Taylor & Francis Inc.
- Donders, N.C.G.M., van der Gulden, J.W.J., Furer, J.W., Tax, B., & Roscam Abbing, E.W. (2003). Work stress and health effects among university personnel. *International Archives Environmental Health: 76*, 605–613.
- Driscoll M.P. & Beehr T.A. (1994). Supervisor behaviors, role stressors and uncertainty as predictors of personal outcomes for subordinates. *Journal of Organizational Behavior: 15*, 141±155..
- Gibson, J.L., Ivancevich, J.M., Donnelly, J.H. & Konopaske, R. (2006). *Organizations: Behavior, Structure, Processes.* 12<sup>th</sup> edition. Boston: McGraw-Hill Irwin.
- Gill, A., Flaschner, A.B. & Bhutani, S. (2010). The Impact of Transformational Leadership and Empowerment on Employee Job Stress. *Business and Economics Journal.*
- Ghozali, I. (2008). *Structural Equation Modelling: Concept and Application Program AMOS 16.0.* Semarang: Universitas Diponegoro.
- Gorter R.C., Albrecht G., Hoogstraten J. & Eijkman M.A.J. (1998). Work place characteristics, work stress and burnout among Dutch dentists. *European Journal of Oral Sciences.* 106, 999-1005.
- Hapriza, B. A., Ungku, N. U. A., & Aisyah, S. A. R. (2005). Organizational commitment among academic staff: the relationship with stage of stress. *Final Research Report.* Unpublished. Centre of Research Management University of Technology Malaysia.
- Huda, B.Z., Rusli, B.N., Naing, L., Tengku, M.A., Winn, T., & Rampal, K.G. (2004). A Study of Job strain and Dissatisfaction among Lecturers in The school of Medical Sciences University Sains Malaysia. *Southeast Asian Journal Tropic Medical Public Health.* Vol 35 No. 1 March.
- Jing, L. (2008). Faculty's job stress and performance in the undergraduate education assessment in China: A mixed-methods study. *Educational Research and Review* Vol. 3 (9), pp. 294-300.
- Kendall, E., Murphy, P., O'neill, V. & Bursnall, S. (2000). *Occupational stress: Factors that contribute to its occurrence and effective management.* Centre for Human Services, Griffith University.
- Kline, R.B. (1998). *Principles and practice of structural equation modeling.* The Guilford Press, New York.
- Kouzes, J.M. & Posner, B.Z. (1993). *Leadership Practices Inventory (LPI): A Self-Assessment and Analysis.* San Diego, CA: Pfeiffer & Company.
- Kouzes, J.M. & Posner, B.Z. (2007). *The Leadership Challenge (4nd ed.).* San Francisco, CA: Jossey-Bass.
- Kouzes, J.M. & Posner, B.Z. (1987). *The Leadership challenge: How to get extraordinary things done in organizations.* San Francisco: Jossey-Bass.
- Kyriacou, C. (2001) Coping actions and occupational stress among school teachers. *Research in Education, 24*, 57-61. 2001.
- Lazarus, R. & Folkman, S. (1984). *Stress, appraisal, and coping.* New York: Springer Publishing.
- Leung, T., Siu, O. & Spector, P.E. (2000). Faculty Stressors, Job Satisfaction, Psychological Distress Among University Teachers in Hong Kong: The Role of Locus of Control. *International Journal of Stress Management, Vol. 7, No. 2.*
- Littrell, P. C., Billingsley, B. S., & Cross, L. H. (1994). The effects of principal support on special and general educators' stress, job satisfaction, school commitment, health, and intent to stay in teaching. *Remedial and Special Education, 15*, 297–310.
- Robbins, S. P. (2003). *Organizational Behavior.* 10th Ed. New Jersey: Prentice-Hall, Inc.
- Rusli bin Nordin, Edimansyah bin Abdin, & Naing, Lin. (2008). Working conditions, self-perceived stress, anxiety, depression and quality of life: A structural equation modeling approach. *BMC Public Health* 2008, 8:48.
- Sokejima, S. & Kagamori, S. (1998). Working hours as a risk factor for acute myocardial infraction in Japan:

Case-control study. *British Medical Journal*, 317, 780.

Stordeur, S., D'hoore, W. & Vandenberghe, C. (2001). *Journal of Advanced Nursing*. 35(4), 533±542.

Thompson, M. D. (2000) Gender, Leadership Orientation, and Effectiveness: Testing the Theoretical Models of Bolman & Deal and Quinn. *Sex Roles*, Vol. 42, Nos. 11/12.

Wahlund, I., & Nerell, G. (2004). *Work environment of white collar workers: Work, health, well-being*. Stockholm: Central Organization of Salaried Employees in Sweden (TCO)..

Webster, L., & Hackett, R.L. (1999). Burnout and leadership in community mental health systems. *Administration and Policy in Mental Health*. Vol. 26, No. 6, July.

Wilhelm, K., Kovess, V., Rios-Seidel, C. & Finch, A. (2004). Work and mental health. *Social Psychiatry Psychiatrist Epidemiology* 39 : 866–873

Table 1. Frequency and percents of respondent's demographic data.

Variables	Content	Frequency	Percent
<b>Gender</b>	Male	63	50.8
	Female	61	49.2
<b>Age</b>	20-25	30	24.2
	26-30	47	37.9
	31-35	37	29.8
	36-40	5	4.0
	41-45	3	2.4
	50	2	1.6
	Tutor	9	7.3
<b>Academic Position</b>	Lecturer	86	69.4
	Senior lecturer	27	21.8
	Assoc professor	2	1.6
	Part-time	1	.8
<b>Job Status</b>	Full time contract	11	8.9
	Fulltime permanent	112	90.3

Table 2. Reliabilities, Means, and Standard Deviations for leadership practices dimension and job stress dimension.342)

Variable	$\alpha$	M	SD
Leadership Practices	.890	48.31	6.19
Encouraging the Heart	.792	15.76	2.41
Enabling Others to Act	.821	12.66	2.08
Inspiring a Shared Vision	.816	9.38	1.74
Challenging the Process	.875	10.53	1.85
Job stress responses	.920	43.78	10.38
Behavioral response	.624	8.34	2.24
Emotional response	.818	7.84	2.63
Cognitive response	.818	8.56	2.74
Physiological response	.824	16.39	4.37

Table 4. Fit indices for measurement models

Test	$\chi^2$	Prob	CMIN/DF	NFI	TLI	RMSEA
Job stress responses	129.515	.152	1.136	.900	.982	.033
Leadership practices	73.753	.357	1.054	.928	.994	.021

Table 5. Fit indices for structural models

Test	$\chi$	Prob	CMIN/DF	NFI	TLI	RMSEA
Job stress dimension with Leadership dimension	3.404	.493	.851	.991	1.012	.000

Table 6. Correlations among latent constructs by standardized regression weights.

Leadership dimension	Job stress dimension			
	Behavioral	Emotional	Cognitive	Physiologic
Challenging the process	-.363**	-.361**	-.238*	-.375**
Encouraging the Heart	-.226*		.010	
Enabling Others to Act		-.166*		
Inspiring a Shared Vision	0.033	-.027	-.108	-.046

Significantly greater ( $p < .05$ ). \* $p < .05$ . \*\* $p < .01$ .

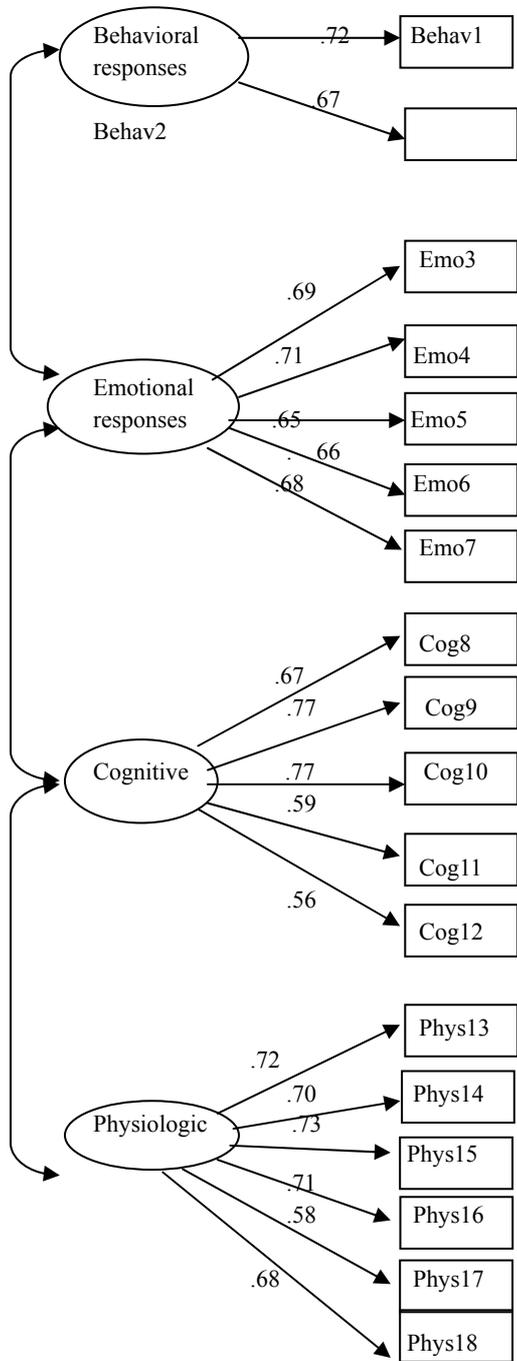


Figure 1. Job stress dimension measurement model.  
 Note: Measurement errors and factor correlations have been omitted for clarity.

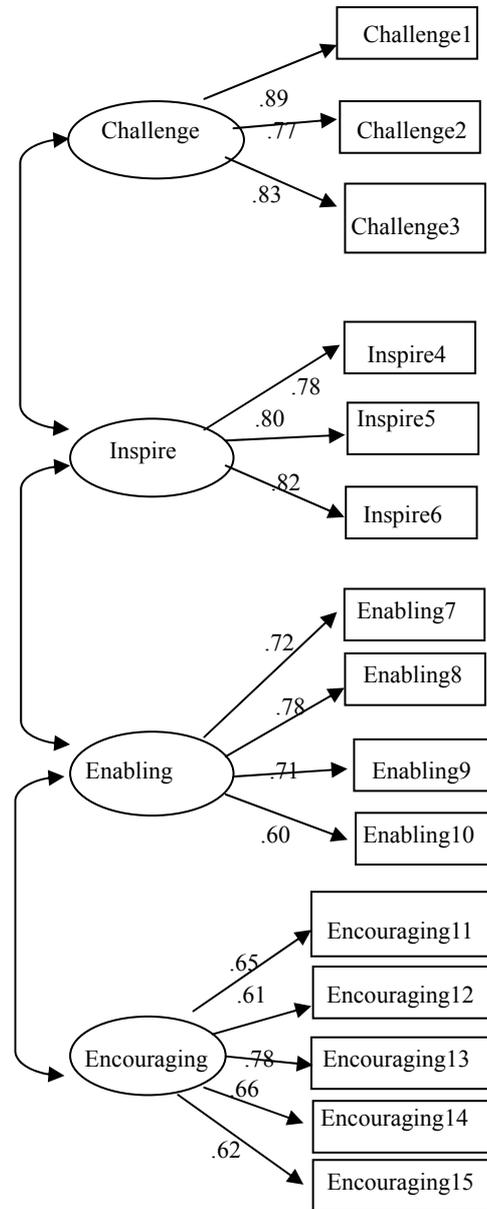


Figure 2. Leadership practices dimension measurement model.  
 Note: Measurement errors and factor correlations have been omitted for clarity.

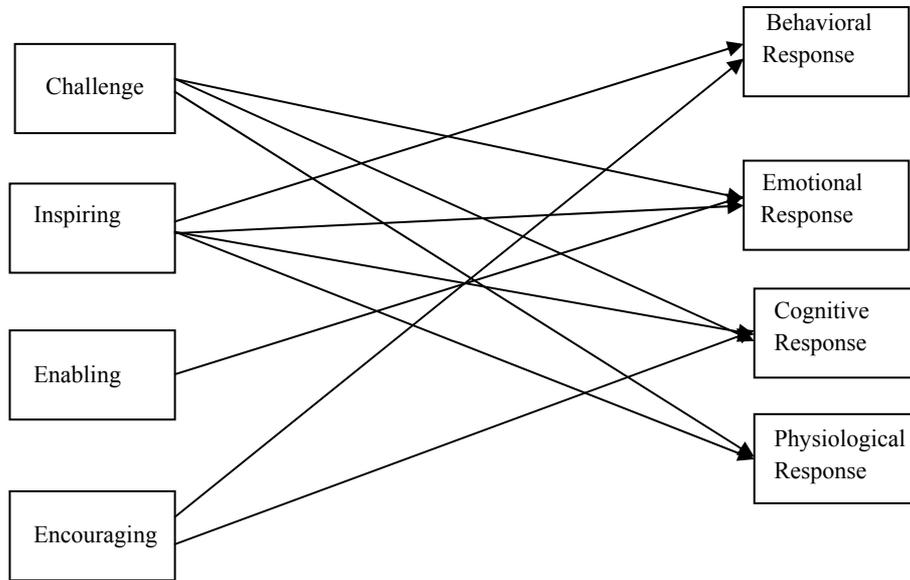


Figure 3. A model of hypothesized relationships among variables

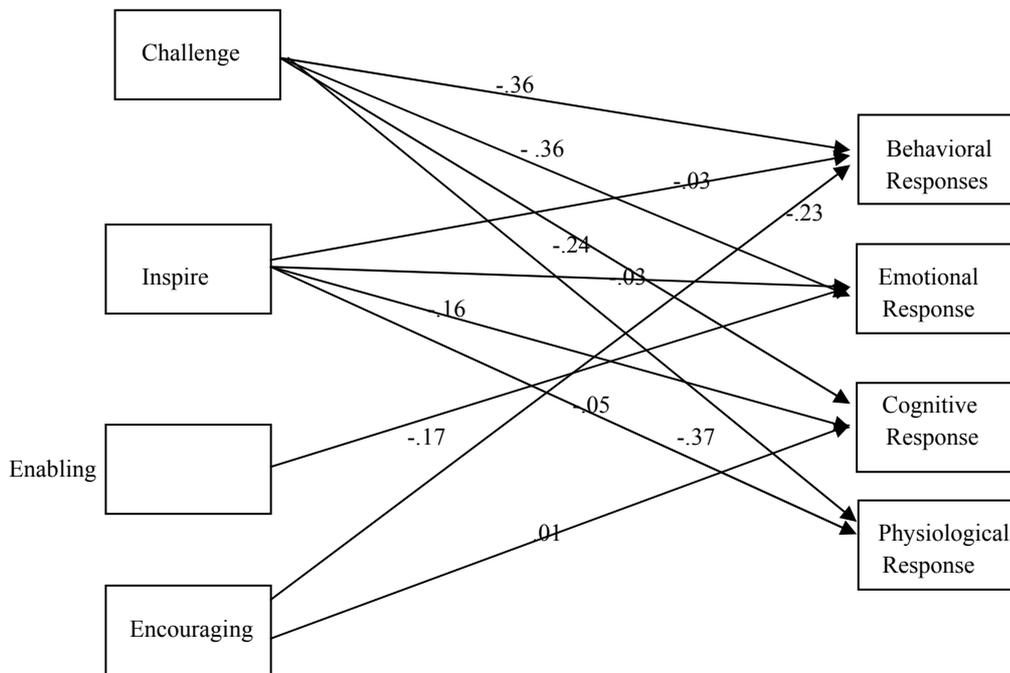


Figure 4. Covariate structure relationships between leadership practices dimension with job stress dimension