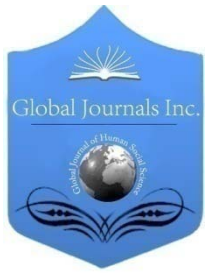
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Emotional Intelligence under Stress: Valuable or Overrated?

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Abstract- Stress has created a vigorous discourse among researchers of various fields and considered as one of the most vital issue that has not yet been solved. A growing interest has been developed on the influence of emotional intelligence in reducing stress level among students. This study examined emotional intelligence as four interrelated processes which were postulated from the four-branch emotional intelligence theory of Salovey and Mayer. A self-reported measure of the Assessing Emotions Scale (AES) and the Perceived Stress Scale was used respectively to measure emotional intelligence and stress level of the participants involved. PLS-SEM was employed to assess the measurement construct and structural model of this study. The findings indicated a significant negative relationship between the ability to perceive emotion, the ability to manage one's own emotion, and the ability to manage others emotion with stress. However, no significant association were identified between the ability to utilize emotion and stress among the participants involved. Results also confirmed that the ability to perceive and assess emotion accurately as the most prominent emotional intelligence dimension in predicting stress. The applied utilities of emotional intelligence are discussed and the potential value of integrating emotional intelligence in formal tertiary education systems is also highlighted.

Keywords: emotional intelligence, perceived stress, partial least squares, path modeling.

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Emotional Intelligence under Stress: Valuable or Overrated?

Nurhamiza Mumina [α], Syed Azizi Wafa Syed Khalid Wafa [σ] & Khan-Vun Teong [ρ]

Abstract- Stress has created a vigorous discourse among researchers of various fields and considered as one of the most vital issue that has not yet been solved. A growing interest has been developed on the influence of emotional intelligence in reducing stress level among students. This study examined emotional intelligence as four interrelated processes which were postulated from the four-branch emotional intelligence theory of Salovey and Mayer. A self-reported measure of the Assessing Emotions Scale (AES) and the Perceived Stress Scale was used respectively to measure emotional intelligence and stress level of the participants involved. PLS-SEM was employed to assess the measurement construct and structural model of this study. The findings indicated a significant negative relationship between the ability to perceive emotion, the ability to manage one's own emotion, and the ability to manage others emotion with stress. However, no significant association were identified between the ability to utilize emotion and stress among the participants involved. Results also confirmed that the ability to perceive and assess emotion accurately as the most prominent emotional intelligence dimension in predicting stress. The applied utilities of emotional intelligence are discussed and the potential value of integrating emotional intelligence in formal tertiary education systems is also highlighted.

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I. Introduction

According to the national health and morbidity survey, young Malaysian at the age group of 16 to 24 had the highest prevalence of acute and chronic suicidal ideation, 10 percent and 26 percent respectively, compared to other age group. The pressure of excellent academic achievement was one of the most reported stressors that have created a very stressful atmosphere which can take a toll on the physiological and mental well-being (Cohen et al., 1983; Lazarus, 1990). Experiencing stress is common among students throughout their formal education life which may come in various forms of stressors such as poor time management, expectation of academic achievement, personal relationship issue and pressure from parents and peers (Ibrahim & Bohari, 2012). Crandall et al (1992) listed 88 stressors that significantly have a negative impact on undergraduate students, which consist of social, family and academic-related factors.

According to a study conducted by Muhamad Saiful and colleagues (2013), examination, large amount of learning content, and limited reviewing time of what have been learnt were the prominent stressors among undergraduate students. Numerous studies have uncovered that academic performance can be debilitated by stress, anxiety and depression (Muhamad Saiful et al., 2013; Parker et al., 2004). However, those who are facing similar stressor are not necessarily experiencing the same level of stress. A highly resilient individual is less likely to be affected by strain. Personality variances, coping strategy and demographic factors contribute to the different magnitude of stress experienced by an individual. Females were reported to have higher levels of stress and depression compared to males, while the older age group of students was identified to experience more stress compared to the younger group of students (Shamsuddin et al., 2013). The finding is plausible since academic workload increase is parallel with years of study and age. However, the gendered result of stress is questionable due to the inconsistent results from the previous researches.

The term of emotional intelligence was first introduced by Salovey and Mayer in 1990 and recognized as the subject of social intelligence by Gardner (1983). They defined it as the ability to recognize, manage and utilize own and other's emotions. It combines the cognitive and affective sphere which can increase the effectiveness of individual's socializing ability. Socializing is one of the most common issues that caused strain among undergraduate students. The transformation from a well-structured secondary education to independent learning environment in tertiary education often overwhelm students. Working in groups is inevitable and need ample interpersonal skills which not only require the ability to assess verbal and non-verbal cues, but the emotion of others too. The ability to understand and manage others' emotion would give an advantage to create a more harmonious relationship and avoid strain caused by poor interaction with another individual.

This study is conducted to investigate the association between emotional intelligence and stress among students. It is also intended to determine the

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most prominent EI dimension in influencing stress among students. Another reason that motivated this study is to add to the body of literature by providing empirical evidence on the influence of emotional intelligence on stress. Previous researches were more focused on nursing and medical students, while little attention had been given to those who are studying in different disciplines. To aid in the interpretability of research findings, the present study focused on full-time students from business, finance and science disciplines. This study examined a relatively broad range of emotional intelligence, using a model of emotional intelligence developed by Salovey and Mayer (1990) that consists of four dimensions: perception of emotion, managing own emotion, managing others' emotion, and the ability to utilize emotion.

II. Literature Review

According to Lazarus (1966), stress occurs when individual believed they are not able to satisfactorily fulfil demands or when dealing with anything that may impair their well-being. Stress is unavoidable, especially throughout a formal academic life where most students are struggling to juggle assignments, test and their personal lives. High stress level can lead to sleeplessness (Shamsuddinet al., 2013), development of negative behaviors such as substance abuse, smoking and relapses (Reeve et al., 2013). Stress elevates heart beat rates and blood pressure, which consequently leads to insomnia, hypertension, cardiovascular disease, as well as depression (Greenberg, 2011). However, the effect of stress will only arise when the situation is demanding or threatening and when the resources needed to cope with the situation is scarce or unavailable (Cohen et al., 1983).

Stress is part of another broad and richer aspect of life which is emotion (Lazarus, 1990). Salovey and Mayer (1990) defined emotion as "an organized response, crossing boundaries of psychological, cognitive, motivational, and experimental system, which arise to an event, either internal or external". Emotional reactions reflect how individuals cope with threats, challenges, benefits, and how they view their life and the world in general (Lazarus, 1990). The concept of emotion reveals the way individuals relate to the environment, physically and socially, and intense enough to disrupt the rational thinking process. Therefore, it is crucial to keep emotion in check to ensure physical, mental and social process is not interrupted which concomitantly can disrupt one's well-being. Emotional intelligence is part of social intelligence which consists of the ability to appraise one's own and others' emotions, express and regulate them, and utilize them to guide thoughts and actions (Salovey & Mayer, 1990). The underlying idea of emotional intelligence is to imperative the force of emotions and serves to comprehend emotional outcomes as well as remain adaptable in the changing situation whenever necessary (Koubova & Buchko, 2013). Such awareness will often lead to the effectiveness of the regulation of affect within themselves and others, and so contribute to well-being (Goleman, 1995; Mayer & Salovey, 1993).

Emotional intelligence cover four important scope of interrelated emotional-ability process consist of (a) understanding verbal and nonverbal cues and expression of emotions, (b) managing emotion of oneself, (c) managing emotion of others, and (d) utilizing emotion for various purposes in life events. Those with higher emotional intelligence have a better intrapersonal functioning, greater optimism, and excellent social relationship with others (Schutte et al., 2007). Emotionally intelligent individuals are able to constructively understand, express and communicate their emotions through proper channel regardless of positive or negative effect (Koubova & Buchko, 2013). Hence, stressful events will have different effect to a highly emotional intelligent individual compared to those with lower emotional intelligence.

A study conducted by Forushani and Besharat (2011) indicated that emotional intelligence explains 58 percent of variance in perceived stress for 150 female students. The individual with high emotional intelligence were more aware with emotions, experienced lower stress-related emotions and reported higher well-being (Forushani, & Besharat, 2011; Gohm et al., 2005). Despite the justifications for anticipating higher emotional intelligence would be identified with better mental well-being, emotional intelligence may have maladaptive results in different circumstances. Petrides and Furnham (2003) found that individuals with higher emotional intelligence are more emphatic and sensitive to mood induction event, whether positive or negative actuation. For some individuals, sensitivity to mood-related stimuli under adverse circumstances may create greater distress if not manage well (Schuttee et al., 2007).

III. Methodology

The sample consisted of 153 full-time students (46 male and 107 female) attending University Malaysia Sabah, Labuan International Campus. Participants were recruited from Faculty of International Finance and Faculty of Computing and Informatics. 39.2 percent of the respondents were Malays, 36.6 percent were Chinese, 13.7 percent were Indian and 10.5 percent comprised the indigenous ethnic group of Borneo. A total of 60 respondents (39.2%) were in their second semester, 5 respondents (3.3%) in third semester, 69 (45%) in their fourth semester and 19 (12.4%) of them were in their final semester.

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Participants voluntarily completed an online survey in May, one week before the final examination started. The survey comprised a set of 33 questions to assess emotional intelligence, 10 questions to examine perceived stress and 3 questions on the demographic background (gender, ethnicity and the semester they are currently in).

a) Measure

Trait emotional intelligence was measured using the Assessing Emotions Scale (AES) by Schutte et al. (1998). The Assessing Emotion Scale consists of 33 items which cover four dimensions of emotional intelligence: perception of emotion, managing own emotion, managing others' emotion and the utilization of emotion. Examples of items used were "I am aware of my emotions as I experience them" (Perception of emotion), "When I experienced positive emotions, I know how to make it last" (Managing own emotion), "When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself" (Managing others' emotion); and "When my mood changes, I see new possibilities" (Utilization of emotion).

Stress was measured using the Perceived Stress Scale adapted from Cohen et al. (1983). The scale consists of 10 items which reflect how the respondent perceived their lives as unpredictable, uncontrollable and overload. Some of the items used in this study are : "How often have you been upset because of something that happened unexpectedly?", "How often have you felt nervous and stressed?" and "How often have you been able to control irritations in your life?" The items were assessed using a five-point scale ranging from "never" to "very often".

b) Statistical Analysis

The Smart PLS 2.0 was employed to assess the measurement construct and structural model of this study. Construct validity and reliability was determined by the significance of the path coefficient and bootstrapping option. Collinearity issue was also examined using IBM SPSS statistic software version 21. Measurement constructs of this study are operationalized formatively which high correlations are not expected between items. In the context of PLS-SEM, a tolerance value of 0.20 or lower and a VIF value of 5 or higher indicate a potential collinearity problem (Hair et al., 2014). Coefficient of determination, R2 value was identified to measure the model's predictive accuracy and the effect size (f 2) enables to analyze the relevance of construct in explaining the endogenous latent construct (Hair et al., 2014).

Figure 1 illustrates the path model under consideration, the path coefficients' value and the R2 value of the endogenous latent variable (stress). The exogenous latent variable (i.e. emotional intelligence) which consists of perception of emotion, managing own emotion, managing other's emotion, and utilization of emotion are operationalized formatively. Stress, which is the endogenous latent variable in this study is also operationalized formatively.

IV. Findings

The multi-collinearity issue in this study is relatively low and does not pose a problem, with the highest variance inflation factor (VIF) of 2.027, and the lowest tolerance value of 0.493. The weight score of the exogenous latent variable obtained from the bootstrapping procedure indicated that nearly all indicators were significant at $p < 0.10$, two-sided test. This study retained indicators with non-significant outer weight, although it was advisable by Albers (2010) to eliminate them. It was due to the prior research and theory that supported the relevance of those indicators for capturing the emotional intelligence and stress dimensions. Based on table 1.0, the structural model indicates no collinearity issue among the exogenous latent variables.

Table 1.0 : Collinearity Assessment for Structural Model

EI dimension	VIF	Tolerance level	Collinearity
Perception of emotion (PE)	1.812	0.552	No
Managing own emotion (MOE)	1.415	0.707	No
Managing others' emotion (MOsE)	1.772	0.567	No
Utilization of emotion (UE)	1.484	0.674	No

Mean scores on the Perceived Stress Scale (PSS) for the complete samples were 29.34. The mean PSS score for females were 29 and 30.15 for males. The finding indicates that there was no large difference in stress level experienced by male and female in this study. Respondents experienced a relatively high level of stress due to the study was conducted a week before final examinations began. Based on the path coefficient model in figure 1.0, the ability to perceive own and other's emotions exert the strongest negative influence on perceived stress (path coefficient = - 0.464), followed by the ability to manage other's emotion and own emotion with path coefficient -0.302 and -0.216 respectively. The results of the bootstrapping analysis show that the relationship for the structural model with the ability to manage own emotion significant at

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$p < 0.05$; while, perception of emotion and ability to manage others' emotion are significant at $p<0.01$. However, the relationship between the ability to utilize emotion and stress is not significant at any level.

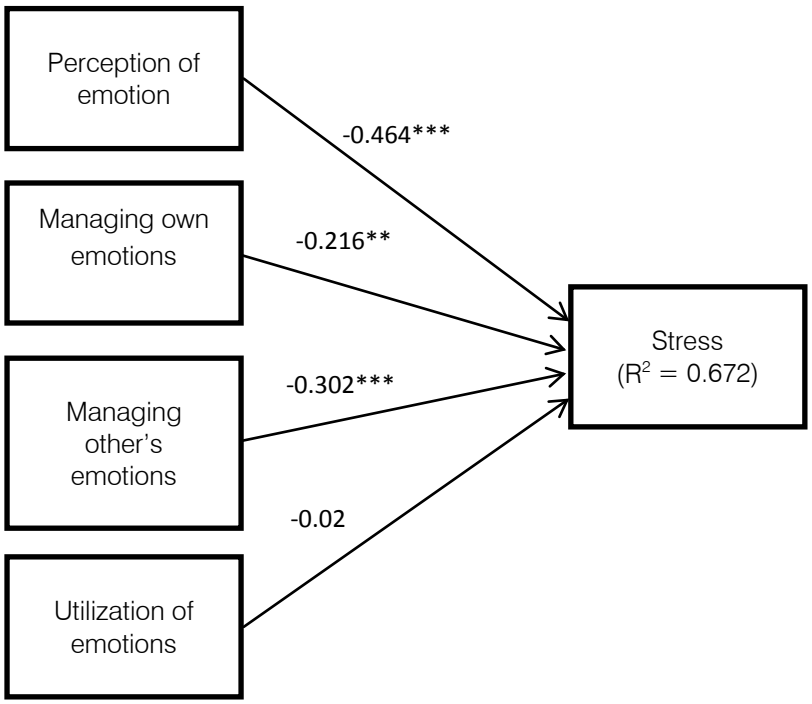


Figure 1.0 : Path Coefficient Model

The central criterion for the assessment of the structural model is the coefficient of determination R^2. With the R^2 value of 0.672, the endogenous latent variable 'stress' lies at a moderate level. The R2excluded value for the ability to perceive emotion is 0.584, the R2excluded value for managing own emotion is 0.644, the R2 excluded for managing others' emotion is 0.620 and the R2 excluded for utilization of emotion is 0.672. Consequently, the exogenous constructs perception of emotion (PE), managing own emotion (MOE), managing others' emotion (MOsE) and utilization of emotion (UE) for explaining the stress level among students have f2 effect sizes of 0.268, 0.085, 0.159 and 0, respectively. Therefore, the effect size of perception of emotion on stress is medium, the effect size of managing own emotion of stress is small, managing others' emotion has a medium effect on stress, and utilization of emotion has no effect on stress.

V. Conclusion

Predicting stress from emotional intelligence variables can have different results based on how each variable involved is operationalized. This study found that emotional intelligence has a medium influence on stress with three (ability to perceive emotion, managing own emotion, and managing other's emotions) out of four EI dimensions were significantly correlated with the exogenous variable. The finding is align with previous studies that have found a significant negative relationship between emotional intelligence and stress (Forushani and Besharat, 2011; Matthews et al., 2006). It is also stated that those with higher emotional intelligence can deal with environmental demands better that those with lower emotional intelligence. The current study identified the ability to perceive emotions as the most prominent EI dimension in reducing stress. Those with a competency to accurately assess emotion of own or others will experience less stress due to their ability to predict emotional state and future behavior (Salovey and Mayer, 1990; 1993). Emotional forecast is only possible when individuals are well-aware of their own affects as well as how others feel which enable the manipulation or adjustment of reaction so it will fit the current situation.

The ability to manage other's emotion is the second most influential EI dimension in this study. Those who are able to manage other's emotion reported lower stress level compared to those with lower emotional intelligence. The ability to regulate other's emotion can enhance mood and emotions, motivate others towards a constructive behavior, avoid unnecessary conflict that can put strain on a relationship which consequently will create stress. The importance of intrapersonal relationship among undergraduate students is noted as part of the common stressors among undergraduate students (Votta et al., 2010; Yen-Yee and Yusoff, 2013). This study also indicates there is

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a significant negative relationship between an ability to manage own emotion and stress. Mathew et al. (2006) stated that high EI individuals tend to use social support by expressing their emotion clearly to others. Social support is only possible with an ability to regulate and express emotions properly so other people are able to comprehend the current emotional state and respond with appropriate attitude. Social support is crucial to lessen psychological and emotional burden that often generates stress if not expressed properly.

Although three dimensions of EI relate to reduced stress, there is no significant relationship identified between the ability to utilize emotion and stress. Utilization of emotions require individuals to fully capitalize the changes of their own and other's affect in the problem solving process which involve creative thinking, flexible planning, and ability to redirect attention (Gignac et al., 2005). The participants involved in this study range from 21 to 24 years old. They are able to perceive, decipher and manage emotions well; but, there is a possibility that their ability to harness emotion to facilitate various cognitive activities is not well-developed. It may be caused by lack of exposure to divergent life events that can be acquired through socialization with individuals from various characteristic and backgrounds. However, there is no known study examining emotional intelligence as a separate dimension using AES that can be compared with the current study. Therefore, more study should be conducted to examine EI dimensions separately rather than just assessing them as a global measure for better understanding of the impact of each dimension of stress.

This study had several limitations. It is a cross-sectional study, which has been conducted with students from one local university. Therefore, the findings do not represent the whole undergraduate students in Malaysia. It is suggested that longitudinal study to be conducted for better understanding on the influence of emotional intelligence from different level of stress. Future studies should also include undergraduate students from private institutions to apprehend the environmental factors at play. In conclusion, this study has addressed the research gap on examining emotional intelligence as a separate dimension on different group of students instead of just emphasizing on students from medical and health disciplines.

The prevalence of an ability to perceive, express, and managing (own and others) emotions are found to be influential in reducing stress. This highlights the needs to incorporate emotional intelligence elements in the higher educational syllabus to enhance students' competencies in integrating affect for current and future cognitive activities. By integrating emotional intelligence as part of the syllabus in the formal education system can help accelerate the development of EI rather than waiting for students to figure it out on their own. It will improve their ability to comprehend the essence of EI and utilize it more effectively in their lives. Emotional intelligence unites the field of emotion and intelligence by viewing emotions as subsidiary sources of information that avail one to make sense of and navigate the environment (Salovey & Grewal, 2005). It is worth noting that the capability of positive emotion in altering memory organization for better integration of diverse and abstract reasoning into something coherent. Emotions can assist individual to prioritize life demands on their attention and allocate it accordingly for better physiological and emotional well-being.

References Références Referencias

1. Albers, S. (2010). "PLS and success factor studies in marketing", in Vinzi,V.C., Handbook of partial least squares: concepts, methods and applications. (Vol. 2), Springer, New York, pp. 409-425.
2. Cohen, S., Kamarck, T., and Mermelstein, R., (1983), "A global measure of perceived stress", Journal of Health and Social Behavior, Vol. 24 No.4, pp. 385-396.
3. Crandall, C.S., Preisler, J.J., and Aussprung, J., (1992), "Measuring life event stress in the lives of college students: The undergraduate stress questionnaire", Journal of Behavioral Medicine, Vol. 15, pp. 627-662.
4. Forushani, N.Z. and Besharat, M.A. (2011), "Relation between emotional intelligence and perceived stress among female students", in Social and Behavioral Science proceeding of the 2nd world conference on psychology, counselling and guidance, Elsevier Ltd., pp. 1109-1112.
5. Gardner, H., (1983), Frames of mind., Basic Books, New York.
6. Gignac, G.E, Palmer, B.R., Manocha, R. and Stough, C., (2005), "An examination of the factor structure of Schutte Self-Report Emotional Intelligence (SSREI) scale via confirmatory factory analysis", Personality and Individual Differences, Vol. 39 No.6, pp. 1029-1042.
7. Gohm, C. L., Corser, G. C., and Dalsky, D. G., (2005), "Emotional intelligence under stress: useful, unnecessary or irrelevant?", Personality and Individual Differences, Vol. 39, p. 1017–1028.
8. Goleman, D., (1996), Emotional intelligence: Why it can matter more than IQ, Bantam Books, New York.
9. Greenberg, J., (2011), Behavior in Organizations, Pearson Education Limited, USA.
10. Hair, J.F., Hult, G.T.M., Ringle, C.M., and Sarstedt, M., (2014), A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM), SAGE Publications Inc., USA.
11. Ibrahim, N.F. and Bohari, A.M., (2012), "An empirical study of stressors among Multimedia

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University students: A case of MMU Malacca campus", IBIMA Business Review, Vol. 2012, pp. 1-10.
12. Koubova, V. and Buchko, A.A, (2013), "Life-work balance: Emotional intelligence as a crucial component of achieving both personal life and work performance", Management Research Review, Vol.6 No.7, pp. 700-719.
13. Lazarus, R., (1966), Psychological Stress and the Coping Process, McGraw-Hill, Michigan.
14. Lazarus, R., (1990), "Theory-Based Stress Management", Psychological Inquiry, Vol. 1 No.1, pp. 3 - 13.
15. Mayer, J.D. and Salovey, P., (1993), "The Intelligence of Emotional intelligence", Intelligence, Vol. 17, pp. 433-442.
16. Parker, J.D.A., Summerfeldt, L.J., Hogan, M.J., and Majeski, S.A., (2004), "Emotional intelligence and academic success: examining the transition from high school to university", Personality and Individual Differences, Vol. 36, pp. 163-172.
17. Petrides, K.V. and Furnham, A., (2006), "The role of trait emotional intelligence in a gender-specific model of organizational variables", Journal of Applied Social Psychology, Vol. 36 No.2, pp. 552-569.
18. Reeve, K.L, Shumaker, C.J., Yearwood, E.L., Crowell, N.A., and Riley, J.B., (2013), "Perceived stress and social support in ndergraduate nursing students' educational experiences", Nurse education Today, Vol. 33, pp. 419 - 424.
19. Salovey, P. and Grewal, D., (2005), "The Science of Emotional Intelligence", Current Directions in Psychological Science, Vol.14 No.6, pp. 281-285.
20. Salovey, P. and Mayer, J.D., (1990), "Emotional Intelligence", Imagination, Cognition, and Personality, Vol. 9, pp. 185-211.
21. Schutte, N.S., Malouff, J.M and Bhullar, N. (2007), "The Assessing Emotion Scale", In Stough, E.A. (Ed), Assessing Emotional intelligence: theory, research and application, Springer Science and Business Media, New York, pp. 119-132.
22. Schutte, N.S., Malouff, J.M., Hall, L.E., Haggerty, D.J, Cooper, J.T., Golden, C.J. and Dornheim, L., (1998), "Development and validation of a measure of emotional intelligence", Personality and individual Differences, Vol. 25, pp. 167-177.
23. Shamsuddin, K., Fadzil, F., Wan Ismail, W.S., Shah, S.S., Omar, K., Muhammad, N.A., Jaffar, A., Ismail, A. and Mahadevan, R., (2013), "Correlates of depression, anxiety and stress among Malaysian university students", Asian Journal of Psychiatry, Vol. 6, pp. 318-323.
24. Votta, R.J. and Benau, E.M., (2014), "Sources of stress for pharmacy students in a nationwide sample", Currents in Pharmacy Teaching and Learning, Vol.6 No.5, pp. 675-681.
25. Walsh, J.M., Feeney, C., Hussey, J., and Donnellan, C., (2010), "Sources of stress and psychological morbidity among undergraduate physiotherapy students", Physiotherapy, Vol. 96, pp. 206-212.
26. Yen-Yee, L. and Yusoff, M.S.B, (2013), "Prevalence and sources of stress among medical students in Universiti Sains Malaysia and Uiversiteit Maastricht", Education in Medicine Journal, Vol.5 No.4, pp. 34-41.
27. Yusoff, M.S.B., Abdul Rahim, A.F., Baba, A.A., Ismail, S.B., Mohamad Najib, Mat Pa, N. and Ab, Esa, A.R., (2013), "Prevalence and associated factors of stress, anxiety and depression among prospective medical students", Asian Journal of Psychiatry, Vol. 6, pp. 128-133.

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