

Perceived Stress among International Postgraduate Students in Malaysia

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Abstract

Stress is an increasingly dilapidating factor among most individuals. Therefore the aim of this study is to identify the relationship between age, gender and perceived stress among international postgraduate students in Malaysia. Using a web administered survey, 222 respondents were selected via stratified random sampling technique. Perceived stress scale (Cohen et al., 1983) was used to measure stress. Frequencies, percentages, mean score and Chi-square was used to highlight the findings of the study. Results of the research revealed high stress levels of about 40% among the respondents. More so, the findings indicated no significant relationship between age, gender and perceived stress ($p > .05$). Later studies may consider other demographic variables as possible significant correlates of perceived stress, given the findings of the present study.

Keywords: stress, age, gender, students, web

1. Introduction

Severely stressful life event has been reported as the precipitative factor in numerous health challenges. Stress maybe defined as the negative evaluation of a condition as threatening (Lazarus, 1966), this is usually occasioned by the incapability of the person concerned in coping with a situation (Lazarus, 1993; Lazarus & Folkman, 1984). Available evidence based on recent research suggests that a substantial level of stress is important in academic performance (Sahranavard, Hassan, Elias, & Abdullah, 2012). In this regard existing proof indicates that many students pursuing their academic career in different countries across the globe experience varying degrees of stress. Students particularly face additional pressure in their adjustment to a new environment. For those studying abroad, many issues may positively or negatively alter their life course.

The present problem is important because most studies in Malaysia have relatively ignored the stressful situation experienced by international post-graduate students studying in the country and most importantly the contribution of age and gender in the preponderance of stress. This study therefore aims to resolve some of the inconsistencies in the results of the past studies discovered in the literatures. The challenge of seeking support and acceptance in a foreign country entails stress, anxiety and fear, given that traditional source of support such as the family and friends are absent. International postgraduate students studying in Malaysia are not an exception to this phenomenon. They face a variety of challenges in their sojourn to the country. Many of them experience a range of personal, cultural and educational adjustments (Lacina, 2002; Hyun et al., 2007; Mahmud et al., 2010). The prevailing challenges and issues they face include homesickness, loneliness, need to develop a new peer relationship, independence, adaptation to a new culture, food, climate and language barrier (Mahmud, Amat, Rahman, & Ishak, 2010).

Although studying abroad provides students a feasible and valuable opportunity to travel, make new friends, and learn a new language/culture. Studies suggest that international postgraduate students' needs and success in the academic environment are usually prone to stress and thus cannot be ignored (Abe, Talbot, & Geelhoed, 1998; Hyun, Quinn, Madon, & Lustig, 2007; Lacina, 2002). In addition, some scholars allege the influence of age and gender on the stress levels of international postgraduate students. In the contention of Dearing and Twaragowski (2010), the association between age and mental health is neither extensively investigated nor fully understood. The scholars argued that previous studies on the relationship between age and stress remain contradictory. In a study by

Rabinowitz et al. (1999), old age was related to the greater perceived need for mental health services. Remor (2006) however found decreases in stress as age increases, and that women between 30 and 34 years had a higher frequency of moderate stress than men of the same age group.

More so, evidence suggests that men and women manage stress differently. Women are more conscious of their stress levels and consequently seek solutions in coping with them, while men rarely seek psychological help or support. Men essentially express their physical illnesses rather than their stress levels (APA, 2009). McDonough and Walters (2001) discovered that women find themselves in stressful situations more than men. More so, women find their family life and responsibilities stressful (Oman & King, 2000). In comparison with males, females are more stressed by their environment, this can be due to their emotional nature and family ties (Matud, 2004). In contrast, other findings suggest no significant difference in the stress levels of males and females (Fontana & Abouserie, 1993).

Robb et al. (2003) conducted a research on 474 adults older than 65 years and compared them with another national sample of 1001 individuals within the range of 21 to 65 years. The study revealed that despite the optimistic and satisfactory mental health of both groups, younger people were more likely to get mental health services than their older counterparts. Older adults the findings revealed have less confidence and accurate information about mental health services, but are willing and enthusiastic in the acquisition of information. Furthermore, other studies conducted by Dearing and Twaragowski (2010) discovered that individuals born in the first half of the 20th century sought psychological help less than those born in the second half of the century. Differences in attitudes and individual acceptance of help and understanding of psychological and mental health services are believed to be the most influential factors in age differences. Zheng and Derry (1991) demonstrated that psychological and physical problems were associated with stress and increased within four months of staying in a multicultural country, but reduced over time. Other studies suggest that longer periods of staying in a multicultural country entailed greater cultural conflict and lower stress levels (Wilton & Constantine, 2003).

Thus far, a large body of research has been reported on the well-being of international postgraduate students in other countries. However, no such study has been conducted on the stress situation of international postgraduate students in Malaysia. Research in perceived stress is particularly important because of its high prevalence among international post-graduate students. More so, efforts to fully comprehend the scope of stress may have been impeded by cultural barriers. Stress is often ignored by policy makers and law enforcement officials who only address the symptoms and do not remedy the causes. With the rising number of stressed post graduate students across the globe, neglecting the causes may inadvertently expand the problem.

This paper differs from earlier studies because it attempts to highlight the stressful situation experienced by international post-graduate students in Malaysia. It therefore expanded earlier studies conducted in other parts of the world by attempting to substantiate or situate age and gender in the prevalence of stress among international post-graduate students, within the context of Malaysia. The present study therefore responded to the above inadequacies identified in the literatures by responding to three research questions. First, what is the level of stress among international postgraduate students in Malaysia? Second, is there a relationship between perceived stress and age? Third, is there a relationship between perceived stress and gender?

2. Method

2.1 Procedure

Ethical approval for the research was granted by Universiti Putra Malaysia and via the informed consent of participants. Pertinent issues like confidentiality and the voluntary nature of the study was included in the questionnaire booklet. Data for the research was gathered through a web based survey. Following Cohen (1988), sample size was estimated based on the determination of prior confidence intervals (alpha levels), power and effect size. To avoid Type II error, Cohen (1988) suggested setting power at .80 ($\beta = .20$), p value was set at .05. G-Power statistical program, version 3.1.3 developed by Faul et al. (2010) was utilized. The initial calculated sample size for the study was 125, with power set at 0.80 and $\alpha = 0.01$, a reasonable criteria for the social sciences (Ary, Jacobs, & Razavieh, 2002; Cohen, 1988; Lehman, 1995). The researcher increased the minimum size to 222 participants. In selecting the sample, the population was divided into separate groups (strata) based on residency and location of the international postgraduate students. Finally a probability sample (simple random sample) was drawn from each group.

2.2 Participants

The participants consisted of 222 international postgraduate students (84 females and 138 males) aged 22 to 50 from University Putra Malaysia. The respondents were selected from a total population of 2864 students using stratified random sampling. Respondents who clicked on web-link in the solicitation notice of their portal were directed to the questionnaire where they viewed the online survey of Perceived Stress Scale. Only registered post graduate students were allowed to participate in the study. Some demographic questions related to age, gender, ethnicity and educational status were also solicited as a preview into the background of the respondents.

2.3 Measure

The perceived stress test (Cohen, 1983)

Stress was measured with The Perceived Stress Scale (PSS) (Cohen, 1983). PSS is a 10 item self-report instrument designed to measure the degree to which situations in one's life are appraised stressful. Example of questions include: "in the last month, how often have you found that you could not cope with all the things that you had to do?" Participants rated their level of agreement for each question on a 5-point Likert scale ranging from Never = 0 to Very Often = 4. Four items (i.e., 4, 5, 7, and 8) are positively worded, meaning the scores are reversed and the remaining items (1, 2, 3, 6, 9, and 10) are negatively worded. Higher cumulative scores indicate greater perceived stress. Cohen and Williamson (1988) computed the internal consistency (Cronbach alpha) of .78 for the PSS-10. In a recent study, the internal consistency of the PSS ranged from .87 to .89 (Wilson, 2003). Cohen and Williamson (1988) reported the normative information of their study on 960 male and 1,427 females from a nonclinical population above 18 years. The mean for the total sample was 13.2 (SD = 6.35). The PSS-10 has convergent validity with other assessments of stress. The instrument is a modified version of PSS-14 developed by Cohen. The PSS-10 also shows convergent validity with stressful life events, negative effects and perceived health (Cohen & Hoberman, 1983). The measure has been translated into several languages including Japanese (Mimura & Griffiths, 2004), Spanish (Remor, 2006), and Portuguese languages (Reis, Hino, & Rodriguez-Añez, 2010). In the current study, the reliability for the PSS-10 was .73.

3. Results

To determine the level of perceived stress among international postgraduate students, the score of the PSS-10 was subjected to frequency distribution, mean and standard deviation. Finally, Chi square statistical technique was used in the determination of relationships. Table 1 presented the descriptive statistics of the respondents. Additionally, the mean and standard deviation for perceived stress was presented in Table 2. As shown in Table 1, the sample included more male participants (62.2%, $n = 138$) than female participants (37.8%, $n = 84$). The age of the respondents ranged from 22 to 50 years with a mean of 32.04 and a median of 30 years. Slightly more than half of the sample (52.1%, $n = 114$) were aged 30 to 44 years and 43.8% ($n = 96$) were 22 to 29 years, while only 9 (4.1%) were 45 years and older.

Table 1. Distribution of demographic variables

Variables	Frequency	Percentage
Age		
18-29	96	43.8
30-44	114	52.1
45-64	9	4.1
Gender		
Female	84	37.8
Male	138	62.2
Ethnicity		
African	55	24.77
Arab	28	12.61
Persian	107	48.21
Other	32	14.41
Length of stay		
<1	88	39.6
1-3	88	39.6
3-5	43	19.4
>5	3	1.4

Marital Status		
Married	111	50
Single	104	46.8
Other	7	3.2

Note. Age Min. = 22, Max = 50

The sample consisted of 55 (24.77%) Africans, 28 (12.61%) Arabs, 107 (48.20%) (Iranians), while 32 (14.41%) were from other nationalities (East and South Asian). The sample was almost equally distributed between married 111 (50%) and single postgraduate students 104 (48.20%), with only about 7 (3.15%) reported as divorced or widowed. The respondents included 88 (39.6%) participants who have lived in Malaysia between one to three years, and an equal number who have lived less than a year in the country. About 43 (19.4%) lived three to five years, while only 3 (1.4%) lived more than five years. The demographic variables included in the research mainly described the respondents of the study. The variables were however not included in the main analysis of the study. The sample mean score of perceived stress scale was 18.19 with a Standard Deviation (SD) of 4.95 and scores ranging from 7 to 36. The distribution of scores approached normality with a skewness of 0.26 and a kurtosis value of 0.21 (see Table 2).

Table 2. Descriptive statistics of perceived stress scale

Variable	Mean	SD	Range	Min	Max	Skewness	Kurtosis
PSS-10	18.19	4.95	29	7	36	0.26	0.21

The result shows the frequency of stress across each age group, 40.6% (n = 89) of the sample reported considerable levels of stress (see Table 3). About 6.80 percent (n = 15) reported significantly high stress, while 33.80% (n = 74) reported high stress levels. More than half (56.2%) of the participants were above the age of 30, of the number 23.3% (n = 51) experienced high levels of stress. About 43.80% were 18 to 29, of the number, 20.50% (n = 45) reported moderately-high stress. Only 9.6% (n = 21) experienced low levels of stress, 39.30% (n = 86) reported moderately high perceived stress and 20.10 % (n = 44) reported low perceived stress. Chi-square statistics was computed to measure the association of perceived stress and age. The result revealed no significant relationship between stress and age ($X^2 = 7.727$, $p > 0.05$).

Table 3. Cross tabulation between stress level and age

Stress		Age		
		18-29	Above 30	Total
Low Stress	n	21	23	44
	%	9.6	10.5	20.1
Medium-high stress	n	45	41	86
	%	20.5	18.8	39.3
High stress	n	23	51	74
	%	10.5	23.3	33.8
Sig. High stress	n	7	8	15
	%	3.2	3.6	6.8
Total	n	96	123	219
	%	43.8	56.2	100

Note. Pearson Chi-Square = 7.727, $p = .052$

The findings demonstrated the frequency of stress among the male and female participants (see Table 4). Over 60% (n = 138) of the participants were males, of the number, 24.30% (n = 54) reported high levels of stress and 22.10% (n = 49) experienced moderately high stress levels. Among the male participants, 5.40% (n = 12) were significantly highly stressed and only 10.40% (n = 23) reported low stress levels. Of the 84 (37.80%) female participants, 38 (17.10%) reported moderate levels of stress, 26 (11.70%) experienced high levels of stress, and 8 (3.60%) reported significantly high stress levels. Chi-square statistics were used in measuring the relationship

between perceived stress and gender. The result illustrated no significant relationship between stress and gender ($X^2 = 2.458$, $p > 0.05$).

Table 4. Cross tabulation between stress level and gender

Stress		Gender		
		Female	Male	Total
Low Stress	n	12	23	35
	%	5.40	10.40	15.80
Medium-high Stress	n	38	49	87
	%	17.10	22.10	39.20
High Stress	n	26	54	80
	%	11.70	24.30	36.00
Sig. High Stress	n	8	12	20
	%	3.60	5.40	9.00
Total	n	84	138	222
	%	37.80	62.20	100

Note. Pearson Chi-Square = 2.458, $p = 0.483$

4. Discussion

This paper appraised three research questions. First, what is the level of stress among international postgraduate students in Malaysia? Second, is there a relationship between perceived stress and age? Third, is there a relationship between perceived stress and gender? The result of the study indicated no significant relationship between age and perceived stress among the respondents. Previous studies on the relationship between age and perceived stress reported contradictory findings in relation to age. While some discovered no significant relationship (Dearing & Twaragowski, 2010), others found significant associations. The finding of the current study therefore supports earlier findings revealing no significant relationship between age and perceived stress.

In the relationship between gender and perceived stress, inconsistent results were also found in the literatures. Among the American population, it was reported that women had higher stress levels than men (APA, 2009). Findings of another study conducted among school teachers discovered no significant relationship between male and female teachers in relation to stress (Fontana & Abouserie, 1993). Females are more keen to receive psychological help than males Leong and Zachar (1999) reported in an earlier study. Although no significant relationship was found between stress and gender, however the study revealed that 39.20% of the respondents experienced high levels of stress.

The failure to find a relationship between stress, age and gender might be the result of the limited measure of stress. The main construct measures only perceived stress over other forms of stress and fails to appraise the intensity of the concept or whether other behaviors affect the perception. The observed result may also have been occasioned by the self-report nature of the instrument, the small geographical area of the study, the use of a cross-sectional design, and the inclusion of a restricted number of variables in the study. Finally, data used for this study was obtained from only international postgraduate students in Universiti Putra Malaysia. The observed insignificant relationship between stress, age and gender may therefore be limited to only the students of the institution.

Overall, results reported in this study should be interpreted with caution as this study is embedded with some methodological limitations. The most critical limitation perhaps is that the data were obtained at a single point in time. The cross-sectional design therefore does not allow the assessment of competing arguments. Despite these limitations, the present study represents the first attempt in the examination of the relationship between stress, age and gender using the worldwide web, particularly within the confines of Malaysia. The research also helped in the understanding of the well-being of international postgraduate students in Malaysia. More so, the results of this research could be expanded upon in several ways. First, it would be helpful to examine how marital status, length of stay and ethnicity affect the notion of perceived stress. Some researchers indicated the effect of these constructs in the perception of stress among individuals. Thus, further research is necessary in the examination of the above constructs. Given the sensitivity of the subject matter and the prevalent contradictions in earlier studies, later studies may utilize longitudinal design, particularly in the assessment of the causal relationship

between stress, age and gender. Finally, future research is needed also to further validate the study design through the inclusion of a more representative sample.

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