ORIGINAL ARTICLE

Depression, Anxiety and Stress among Postgraduate Students in Faculty of Education of a Public University in Malaysia

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ABSTRACT

Introduction: Psychological problems like anxiety, depression and stress significantly exacerbate the pressure on students to perform better. These factors collectively hamper their performance leading to low academic achievement especially among postgraduate students who majority of them are working and married. This study aims to identify the level of depression, anxiety and stress among postgraduate students, and to investigate the correlation between depression, anxiety and stress based on gender, marital status and age. **Methods:** The study was a quantitative survey and correlational research design using a clustered random sampling, selected from all postgraduate students (179) in Faculty of Education. The DASS-21 was used as measuring tools for depression, anxiety and stress among postgraduate students. **Results:** Findings of the study revealed that majority of the respondents are having moderate level of depression, anxiety and stress. Meanwhile, there were strong correlations between depression, anxiety and stress. However, there were no significant differences for level of depression, anxiety and stress based on demographic factors (gender, marital status and age). **Conclusion:** Based on the findings, it can be concluded that depression, anxiety and stress are strongly correlated. This study can give some insight to the educators, universities administration as well as students' family to develop common intervention on how to curb depression, anxiety and stress among postgraduate students.

Keywords: Depression, anxiety, stress, postgraduate students, a public university in Malaysia.

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INTRODUCTION

Psychological problems (depression, anxiety and stress) are very serious issue among university students. In Malaysia, there were 95% of patients seeking treatment for emotional disorder (depression, anxiety and stress) aged 17 years old and above (1). Although there are counseling centers, motivation talks and psychology treatments provided to prevent these problems, they keep getting more serious. According to World health Organization (WHO), depression is estimated to be the second leading cause of disability and disease worldwide by the year 2020. There was a study showed that more than 40% of university students experienced severe level of depression (2). University students are subjected to different kind of depression, anxiety and stress. As they face so many problems such as moving away from home or family, academic pressure such as an obligation to succeed, uncertain future, academic failure, health issue, financial problem and marital

conflict (3). Moreover, these problems may affect their learning processes and academic achievement, as well as mental and physical health. It is a very heart wrecking news that most of the college and university students who experienced high level of stress, often presented themselves with suicidal ideation, violent behaviour, self-abuse, anxiety, depression and dormitory conflicts which attracted numerous public concerns (4). Moreover, the effect of excessive stress on students are depleting their efficiency in studying and causing long term behavioural consequences such as poor attendance and skipping class, poor academic performance and resulted in dropout and expulsion. Hence, anxiety, depression and stress significantly exacerbate the pressure on students to perform better. These factors collectively hamper their performance leading to low academic performance. Therefore, it is essential for the education providers to get sufficient information and knowledge about students' psychological condition and wellbeing as it has a high impact on the students' academic achievement and performance.

Basically, university life is a very stressful period for both undergraduate and postgraduate students. A Swedish researcher revealed, the prevalence of depression symptoms among students was 12.9% and 2.7% of

students had attempted suicide. Up to 40% of university students experience high level of depression and it led to severe consequences such as suicide, substance abuse and memory impairment (5). Moreover, the undergraduate students who experienced stress or any negative emotions, might continue to experience it during internship and also postgraduate study period. Therefore, this research was conducted to look into depression, anxiety and stress among postgraduate students who majority of them are working, married and having children.

Anxiety is a psychological disorder that involved extreme fear and worry with significant effects and inability to complete everyday tasks. Meanwhile, stress can be defined as the brain and physical responses to any demand made upon it. It is often as a result of a person's response to external events. Stress can be categorized in short term or long term (National Institute of Mental Health, 2015). Anxiety and Depression Association of America (ADAA, 2015) explained that depression and anxiety carry a high risk of suicide. More than 90% of those who committed suicide have a diagnosable illness such as clinical depression and often combine with anxiety. This was the tenth leading cause of death in the United States. Meanwhile, News Strait times (2012) published an article about Malaysia Health Minister, Datuk Seri Liow Tiong Lai revealed that 1000 people committed suicide over three years period in Malaysia. One of the main reasons was due to depression and negative emotion and thoughts. Moreover, stress and anxiety have been recognized as the main factors that could lead to depression and also can affect the quality of life of those involved (6).

Many researchers reported about stress to be associated with anxiety and depression, the researches elaborated that these disorders are undiagnosed and untreated (7). However, when students failed to detect these disorders, consequently it leads to increase of psychological mobility and effects throughout their career and lives. Unfortunately, there were many cases reported in Malaysia. According to Malaysia Psychiatric Association, seven people killed themselves daily with young adult making up the majority. A research claimed that highly stressful life events were suggested to be antecedents and even predictors for the most depression cases (8).

Depression, anxiety and stress based on gender, marital status and age
Basically, many common factors leading students to encounter depression, anxiety and stress. For instance, socio-demographic factors such as gender, marital status and age have constantly been identified as important factors in explaining the prevalence rate of depression, anxiety and stress (9). Assessment of stress levels among college and university students is the most famous topic that being examined by the researchers. Stressful life events are substantially elevated in depressed and

anxious youth and mostly could lead to poor academic achievement. Stressful environment can exert a negative effect on the psychological and physical wellbeing of the university students. This situation will eventually result in poor academic performance and possibly a large number of psychological casualties. Previous studies have indicated student demographic characteristics are associated with depression, anxiety and stress. Depression has no social or cultural boundaries, as it may impact students of any age, sex, marital status, socio economic status, ethnicity and year level, affecting both their academic performance and social functioning within the university environment. Regarding gender, a study conducted in Egypt among medical students explained that female students have higher stress level than male counterpart (10).

A study conducted among postgraduate students showed that age and marital status were factors that affect depression and there was a relationship between depression and age, and marital status (11). Meanwhile, some researches mentioned that marriage mostly has positive impact on mental health by providing social and moral support and emotional connection. The significant of spousal support resulted in moderate level of depression among the samples. Thus, this can be a good reason for married couples to experience lower level of depression when compared to non-married. However, another research shown that marital distress is a risk factor for anxiety for both men and women, but women are more likely to experience marital distress. This makes gender differences in marital distress a plausible contributing factor to higher rates of depression or anxiety among married women in relative to married men (12).

Epidemiological studies have revealed that the prevalence of depression varies with age. A U-shaped relationship with age and major depression has been reported, with both younger and older age groups experiencing higher rates of depression than middle age groups. Anxiety and depressive disorders were found to be higher among age group of 30 years old and above (13). The younger age university students also scored higher in depression, anxiety and stress (14). However, another study reported that depression scores as measured by the Beck Depression Inventory did not change by age in college or university students, both younger and older students appeared to have similar level of depression (15). Apart from that, in Malaysia, 93% of patients' age 17 years old and above were found to have emotional disorders such as depression, anxiety and stress (1). However, there were researches which were contradicted with each other in terms of the differences between depression, anxiety and stress based on gender, marital status and age. The inconsistency of the results might be due to several factors such as cultural, socio-economic and different course of studies. Therefore, this study attempts to identify the level of depression, anxiety and stress

among postgraduate students, and to investigate the correlation between depression, anxiety and stress and the differences based on gender, marital status and age.

METHODOLOGY

The samples involved in this study were postgraduate students at Faculty of Educational Studies, University Putra Malaysia (UPM). This faculty was chosen because it has the highest number of postgraduate students as compared to other faculties in UPM. Furthermore, the majority of the postgraduate students in Faculty of Education, UPM are teachers and teaching is the most stressful job nowadays (16).

The sample was a clustered random sampling, selected from all postgraduate students in Faculty of Educational Studies. A previously validated and standardized survey instrument of Depression, Anxiety and Stress Scale (DASS-21), Malay version adapted from Ramli (2007) and developed by Lovibond and Lovibond (1995) was used to measure depression, anxiety and stress. DASS-21 is used as screening tool, all the results are based on presumption of the respondents and not a definitive diagnosis. The Depression Anxiety and Stress Test Scale (DASS-21) is a set of three self-report scales designed to measure the emotional states of depression, anxiety and stress. Each of the three DASS-21 scales contains seven items, divided into sub scales with similar content (DASS Web page). A pilot study was conducted before the actual study being carried out, with Cronbach Alpha value of 0.88. Scores for each respondents over each of the subscales (depression, anxiety and stress) were calculated as per the severity-rating index. The data were analyzed with SPSS v19.0 software. Continuous data were expressed in terms of mean and standard deviation (SD). Means were compared using t-test and ANOVA, and correlations between continuous variables were calculated using Pearson's correlation test.

RESULTS

The findings showed that female respondents were 113 (63 %) who were the majority of the samples involved in this research. There were only 66 (37%) male respondents participated in this study and 87 (49%) master of education students who participated are married. The age of students who participated in this study were between 20 to 49 years old. The respondents' age was distributed as follows: age from 20-29 years old were 81 (45%), age between 30-39 years old were 66 (37%), ages between 40-49 years old were 32 (18%).

Level of depression, anxiety and stress
Table I shows majority of respondents 37.4% (means=8.00; SD=1.15) are having moderate depression. A total of 27.4% (mean=2.28; SD=1.06) of respondents are having normal depression, 7.3% (Mean=11.69; SD=0.95) are having severe depression and only 3.4%

(Mean=16.67; SD=1.51) are having extremely severe depression. Meanwhile, a total of 29.1% (Mean=6.63; SD=0.49) of respondents are having moderate anxiety which indicates the highest level while lowest is normal anxiety 13.4% (Mean=1.67; SD=1.05). A total of 19.0% (Mean=8.50; SD=0.51) of respondents are having severe anxiety level while 15.6% (Mean=11.82; SD=2.07) of respondents are having extremely severe anxiety. Finally, the finding for stress level revealed majority of respondents are having moderate stress level 60.9% (Mean=4.70; SD=1.86) while only 1.1% (Mean=17.50; SD=0.71) of respondents are having extremely severe stress level. A total of 12.3% (Mean=10.77; SD=0.81) of respondents are having normal stress level and 20.1% (Mean=8.47; SD=0.51) of respondents are having mild stress level.

Table I: Level of depression, anxiety and stress

Depression level	Frequency	Percent (%)	Mean	SD
Normal	49	27.4	2.28	1.06
Mild	44	24.6	5.45	0.50
Moderate	67	37.4	8.00	1.15
Severe	13	7.3	11.69	0.95
Extremely severe	6	3.4	16.67	1.51
Total	179	100.0		
Normal (Anxiety)	24	13.4	1.67	1.05
Mild	41	22.9	4.49	0.51
Moderate	52	29.1	6.63	0.49
Severe	34	19.0	8.50	0.51
Extremely severe	28	15.6	11.82	2.07
Total	179	100.0		
Normal (Stress)	22	12.3	10.77	0.81
Mild	36	20.1	8.47	0.51
Moderate	109	60.9	4.70	1.86
Severe	10	5.6	14.10	0.57
Extremely severe	2	1.1	17.50	0.71
Total	179	100.0		

Depression, anxiety and stress based on gender, marital status and age
A t-test analysis was conducted in order to determine the differences between depression, anxiety and stress levels based on gender. The finding of t value is -1.820 while the significant value is .070. This indicates that there is no significant difference for level of depression based on gender, t (177) = -1.820, p>.05; no significant difference for anxiety based on gender, t (177) = -.997, p>.05 and no significant difference for stress based on gender, t (177) = -1.935, p>.05. Thus, it can be concluded that there are no differences for male and female students in term of depression, anxiety and stress based on gender.

Meanwhile, t-test analysis for depression, anxiety and stress based on marital status revealed the t value is .880 while the Sig. value is .380. This indicates that there is no significant difference for depression based on marital status, t (177) = .880, p>.05, no significant differences

for anxiety based on marital status, t (177) = .052, p>.05 and no significant difference for stress based on marital status, t (177) = .880, p>.05. Thus, it can be concluded that there is no difference of depression, anxiety and stress in terms of married and unmarried students.

An ANOVA analysis was conducted to determine the differences between the depression, anxiety and stress based on age. The Sig. value is .069, which is greater than .05 indicating that there is no significant different among the age group, F = 2.717, p>.05; F = 1.225, p>.05 and F = 2.717, p>.05. There is no significant difference between depression, anxiety and stress based on age groups. Thus, it can be concluded that there is no differences between depression, anxiety and stress based on age groups.

Relationship between depression, anxiety and stress

There is a significant relationship between depression and anxiety, r=.759, p<.01 which indicates strong correlation association. The output also shows that there is a significant relationship between depression and stress, r=.787, p<.01 and a significant relationship between anxiety and stress, r=.769, p<.01, both indicate strong correlation, as shown in Table II.

Table II: Correlation between depression, anxiety and stress among postgraduate students

	Correlation	Depression	Anxiety	Stress
Depression	Pearson Sig. (2-tailed) N = 179		.759** .000	.787** .000
Anxiety	Pearson Sig. (2-tailed) N = 179	.759** .000		.769** .000
Stress	Pearson Sig. (2-tailed) N = 179	.787** .000	.769** .000	

**. Correlation is significant at the 0.01 level (2-tailed).

DISCUSSION

The findings of the study showed majority of the postgraduate students scored moderate on depression (37.4%). These findings pointed out the importance of screening this vulnerable population and taking appropriate intervention to prevent the complications of depression. Therefore, the students can seek further consultation treatment from the health care practitioners. This finding was in line with a research conducted on Turkish university students that showed moderate level of depression among the students (17). Although 27.4% of the respondents had normal level depression, unfortunately this finding showed that 72.6% of the respondents were experiencing mild to extremely severe level of depression. Meanwhile, a study explained that 41.9% students in one of the Malaysian public

institution were found to have depression, 13.4% of the respondents had normal level of anxiety, 29.1% had moderate level of anxiety and 86.6% of the respondents had mild to extremely severe level of anxiety (1), 70% of the university students were experiencing anxiety, 60.9% respondents had moderate level of stress and 39.1% had mild to extremely severe level of stress (18). Previous research conducted showed a similar result that majority of university students scored normal level of stress (5).

There were no significant differences on level of depression, anxiety and stress based on students' gender. This research revealed that male and female students' pattern of stress, depression and anxiety were the same (19, 20). The study, did not find any significant gender differences for anxiety and depression. However, other findings reported that female students experiencing lower level of stress as compared to male students (19, 20). This might due to females are less forthcoming about their feeling of anxiety or depression and also most probably able to utilize more effective coping mechanism to deal with anxiety and depression. Nevertheless, some study found that female students have higher level of depression, anxiety and stress. This may due to the fact that female articulate depressive symptoms, even minor ones, more easily (21). These findings revealed that gender differences were not affecting the level of depression, anxiety and stress among students (22). This might originate from the fact that postgraduate students have equal experience and the same pressure. Basically, all students face similar or same level of depression, anxiety and stress during their college and university life. It is important to note that other factors such as financial, accommodation, perceived discrimination, language proficiency, academic stress, social support, and mismatched expectations also contributed to the psychological distress of university students regardless of gender.

The findings of this study, showed there were no significant differences between depression, anxiety and stress based on marital status. However, a study done in 2014 revealed that married students exhibited a lower level of anxiety then those who were never been married. In fact, marriage can be a social and emotional support for them and this could make them stronger and cope well with depression, anxiety and stress (23). On contrary, there is a study states otherwise. Married (versus never married) was associated with reduced risk of the first onset of most mental stress in both men and women but there were gender differences in the associations between marital status and onset of depressive. These differences may be related to gender differences in the multiple role of demands within marriage, especially those concerning parenting (24).

The current study showed there was no differences in the level of depression, anxiety and stress based on

respondents' age. The finding revealed that all students are equally affected by depression, anxiety and stress. This probably because students of all age face same level of workloads and have similar thoughts about their graduation and future. This result clearly explained that there was no significant difference between age group and depression among students. Depression has the same effect on age in any college or university students and both younger and older students are quite similar in their level of resiliency. However, previous studies do not support the current finding, and reported that older age group students have higher level of depression, anxiety and stress because they were afraid to face failure in their academic achievement (19). Meanwhile, students age 20-29 were reported to develop depression due to major life transitions, lack of coping skills, relationship issues and lack of support in new environment (25).

The current study provides significant information pertaining to the relationship between depression, anxiety and stress among postgraduate students. As expected the result revealed a strong correlation between depression, anxiety and stress given that similar outcomes were observed in previous studies (26). Many researchers found that students' performance in schools, colleges and universities are influenced by the symptoms of depression, anxiety and stress which lead to poor concentration, poor attendance, physical health problem and lack of motivation and interest in studies (5, 23). Moreover, there were studies that consistently reported a high rate of psychological problems among university students globally, which is really unhealthy in educational environment (27). Researchers found that students' stress is related to anxiety and depressive symptoms and high frequency of health problems (28). Therefore, the policy makers as well as universities administration need to give additional support and guidance to the students. This research concluded that depression, anxiety, and stress were found to be interrelated. Thus, these overlapping symptoms of three psychological problems (depression, anxiety and stress) can give impact on students' mental health. Further study is recommended to be carried out to measure the participants' mental health. Future study can be conducted on students in different field of study and faculties. Method of the study can be change to qualitative to allow the respondents to express more information on their level of depression, anxiety and stress without restricting their emotions with limited questions. Since it was a cross-sectional study, the causal relationship could not be determined as the outcome and contributing factors were measured at the same time. Self-administered questionnaire, which was used in this study, could lead to recall bias. As this study only involves one faculty, it cannot represent other postgraduate students. In future, a wider scope of population with exploration on factors that are uncovered in this study could be adopted to obtain more comprehensive understanding in the subject matter.

CONCLUSION

Postgraduate students' life are really hectic with pressures of work, family, study and other daily responsibilities. Therefore, this study is useful in acquiring an insight and knowledge about postgraduate students psychological well being. Based on the findings of the study, it can be concluded that depression, anxiety and stress are strongly correlated. Most of the postgraduate students had depression, anxiety and stress which are common psychological problems that may affect their professional development and adversely impact their academic performance and everyday life. This study also concluded that there is no significant difference between depression, anxiety and stress based on gender, age and marital status. This study can give some insight to the educators, universities administration as well as students' family to develop common intervention on how to curb depression, anxiety and stress among postgraduate students.

ACKNOWLEDGMENT

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