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STRESS DETERMINANTS AMONG UNIVERSITY STUDENTS IN UNIVERSITI UTARA MALAYSIA

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Abstract

The study of stress among university students in Malaysia is relatively low. The importance of understanding stress include its detrimental effects that may hinder progress and productivity among students, leading to an increase of dropout and low academic achievement. In this study, 288 undergraduate students in UUM responded to the questionnaires, in which the findings suggest three strong determinants as factors of stress, i.e., social factor, academic factor, and environment factor. Findings also found a strong demand for stress management programs for this young adult as a way to combat mental illness.

Keywords: Stress, university students, factors

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INTRODUCTION

Stress among university students is critical to understand as its immediate effect to personal well-being can cause detrimental health issue, emotional distress, burnout, academic failure and dropout (Ross, Nebling & Heckert, 1999; Shah et al., 2010; Gibbons, 2010; Pillay & Bundhoo, 2011). Stress arises when the combination of internal and external pressures exceeds the individual resources to cope with their situation. Low to high level of stress

has been reported among university students such as in medical school (Shah et al., 2010; Abdulghani et al., 2011; Alfaris, 2011; Ganasegeran et al., 2012), nursing courses (Por et al., 2011; Pulido-Martos et al, 2012), and other courses of study in general (Hunt et al., 2010; Rice et al., 2012; Ibrahim et al., 2013).

Among issue spurs from stress is an anxiety problem. Anxiety is a feeling of uncomfortable of nervousness or uneasy mind caused by fear of danger. Such emotion is a presence among university students such as in (Eisenberg et al., 2007; Khosravi & Bgdeli, 2008; Demirci, Akgönül & Akpinar, 2015). More critical issue is the potential of stress to become chronic and lead to clinical depression if the coping mechanism is not being introduced.

People suffer from depression would have cognitive biases about themselves, the future and the world around them. The bleak world would mean negative view to life, consequently reduce their ability to be optimistic and productive. Kansas State University reported 58% increase in stress-related issues 1988 and 2001 (Hoover, 2003). Disorganized schedules that are intermingled between studies and extracurricular activities added to the daily pressure, especially if students are not sensitive to their eating and sleeping requirements. Other notable outcomes from stress-related illness include heart disease, obesity, and asthma.

In Malaysia, study on stress among university students is fairly new. Most studies centered upon stress level among medical school students (Mohd Sidik, Rampal & Kaneson, 2003; Zaid, Chan & Ho, 2007; Yusoff, Rahim & Yaacob, 2010; Salam et al., 2015). Recent years showed the increase in literature on this subject, in particular stress and eating habit (Nasir, 2011; Ganasegeran et al., 2012), stress and academic achievement (Vitasari et al., 2010; Elias, Ping & Abdullah, 2011; Sohail, 2013;), and identified determinants that causes stress among university students (Yusoff, Rahim & Yaacob, 2010; Ahmad, Yusoff & Razak, 2011), though the determinants are mostly investigated towards respondent from medical-related school.

Thus, in this study, we aim to contribute towards more determinants that may cause stress among university students of different background of study by adopting factor analysis assessment (Thompson, 2004; Misiran et al., 2016; Misiran et al., 2018). In this work, university students from entry-level (foundation studies) towards the final year students will be considered. A case study in one of student residential hall in Universiti Utara Malaysia (UUM) is taken into account.

RESEARCH METHODOLOGY

In this study, a questionnaire was distributed to selected students from one of student's residential hall in Universiti Utara Malaysia. This study aims to identify the factors that cause stress among university students. Stratified random sampling was used to obtain the representative sample to ensure the presence of common characteristic of interest in population. Additional information obtained in the population that belongs to each stratum is based on the academic semesters of the students in this residential hall.

The number of sample size, n was calculated using the following formula (1).

$$n = \frac{\sum_{i=1}^{L} \frac{N_i^2 p_i q_i}{a_i}}{N^2 D + \sum_{i=2}^{L} N_i p_i q_i} \quad (1)$$

where a_i, is the fraction of observations allocated to stratum i , p_i is the population proportion for stratum i, and $D = B^2/4$.

Whereas, the allocation formula that gives the variance of $\hat{p}_{st}$ equal to some fixed constant at minimum cost is:

$$n = n\ (\frac{N_i\sqrt{p_i q_i/c_i}}{\sum_{i=1}^{L} N_i\sqrt{p_i p_i/c_i}}, \quad (2)$$

where N_j denotes the size of the ith stratum, p_i denotes the population proportion for the ith stratum, and c, denotes the cost of obtaining a single observation from the ith stratum.

Specifically, online questionnaire are to be conducted in this study, and hence the cost of sampling is the same in all strata. The fraction p_i is approximated by 0.5 since there is no information about earlier study, i = 1, 2, 3. We aim to estimate the population proportion p with bound of error on estimation equal to 0.05.

Sampling Technique

For the purpose of this study, the respondents were selected from one of students residential hall in UUM. There is a mixture of students involved from foundation program to the first and final year undergraduate students. The total population of this study is 758, where 282 sample is enough for this study.

$$n = \frac{\left(\sum_{i=1}^{L} N_i\sqrt{\hat{p}_i\hat{q}_i}\right)^2}{N^2 D + \sum_{i=1}^{L} N_i p_i q_i} = n = \frac{(480)^2}{577.200625 + 240.25} \quad (3)$$

$$= 282.4394$$

In this research, we were collecting primary data by using questionnaire. Questionnaire survey is the technique that has been used by asking all selected respondents to answer the same question in order to get all information needed. In this study, 288 students were selected as sample.

Factor Analysis

To investigate the factors that cause stress among students in university, factor analysis method has been adopted. These factor analysis methods used to describe whether there is correlated of variable based on the factors that have been observed or unobserved. This factor analysis was conducted by using SPSS software. The questionnaire had been checked prior to distribution by the expert for validity of the content. A pilot test was conducted to check the reliability of the questions in the questionnaire.

RESULT

Descriptive Analysis

Table 1 reported a demographic analysis of 288 respondents consisting of gender, age, year, races, and school.

Table 1: Demographic details of respondents

	Frequency	Percentage
Gender		
Male	61	21.2
Female	227	78.8
Age		
18-20	149	51.7
21-23	138	47.9
24 and above	1	0.3
Year		
1- Foundation & Degree	138	47.9
2	54	18.8
3	49	17.0
4	27	16.3
Race		
Malay	232	80.6
Indian	19	6.6
Chinese	21	7.3
Other	16	5.6
School		
ASASI	65	22.6
CAS	63	21.9
COB	118	41.0
COLGIS	41	14.2

Table 1 shows 78.82% female student answering the question compared to male student (21.18%). The age of students range from 18 to 21 years old (51.74%), age 21 to 23 years old (47.92%) and age 24 and above (0.32%). Malay comprises of 80.56%, Indian 6.60%, Chinese 7.29% and others 5.56%. As for the students' academic year, the 4th year student was 16.32%, 3rd year student 17.01%, 2nd year student 18.75% and 1st year student is 47.925%. Note that the 1st year student is a combination of student of first semester for degree and foundation studies. Students come from College of Business (COB), College of Art and Sciences (CAS), College of Law, Government and International Studies (COLGIS) and Foundation (ASASI) of Management.

Table 2 shows the responses given by the respondent regarding their thought about their own stress. Respondent says that when they feel stress they might do some activities to release their stress. 35.4% choose to talk to a friend, partner or family member to reduce their stress, 8.7% opt for a walk and a jog, 24.0% listen to music, 19.8 % take a nap, 8.0% will eat a lot of food and only 4.2% will do other thing.

Table 2: Information about Stress

	Frequency	Percentage
How do you manage it, when you feel Stress?		
Talk to a friend/ partner/ family member	102	35.4
Go for a walk/ jog	25	8.7
Listen to music	69	24.0
Take a nap	57	19.8
Eat	23	8.0
Other	12	4.2
Do you show your stress out on others around you?		
Yes	87	30.2
No	201	69.8
How far are you willing to go to manage your stress?		
Take meditation	52	18.1
Seek professional adviser	70	24.3
Your own research (i.e. internet)	117	40.6
Others	49	17.0
How do you feel when you are stress?		
Feeling tired during the day	125	43.4
Cannot sleep at night	70	24.3
Occasionally do not feel well all times	67	23.3
Others	26	9.0
In your opinion should stress awareness be taught at the university?		
Yes	274	95.1
No	14	4.9

The 30.2% of the respondents show their stress to others while 69.8% otherwise. 18.1% will take the meditation when they feel stress, while 24.3% will seek for professional adviser, 40.6% will do their personal research online on how to handle stress and 17% will do other thing. 43.4% respondents feeling tired during the day when they feel stress, 24.3% cannot sleep at night and 23.3% occasionally they do not feel really well. A strong 95.1% would like to have stress awareness program to be taught at the university.

Reliability Analysis

Table 3 and Table 4 show the Cronbach's alpha value of 0.711 and 0.801 respectively, indicate that both questionnaires are reliable

Table 3: Reliability Analysis for Pilot Test

Reliability Statistics	
Cronbach's Alpha	N of Items
.711	28

Table 4: Reliability Analysis for Overall Question

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.801	.793	28

Factor Analysis

In this research, the factor analysis has been used to identify the factors that cause stress among students.

KMO and Bartlett's Test

The KMO and Bartlett's test is used to measure sampling adequacy. The KMO value, which is 0.765, is adequate and shows that it is suitable to use factor analysis for this data. The list of factors along with the supporting statement is displayed in Table 6. In this factor analysis, the Kaiser's normal varimax method has been used. Varimax is one of the orthogonal rotation method that always been commonly used because it tends to produce the factors either very low or very high

Table 5: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.765
Bartlett's Test of Sphericity	Approx. Chi-Square	2147.185
	df	378
	Sig.	.000

Rotation Component Matrix

Based on Table 6, rotation component matrix shows that there are 3 factors that cause stress among students. The factors are Social, Academic and Environment. The total questions representing Social Factors are 11 questions (question 1 to question 11), Academic Factor consists 7 of questions (question 12 to question 18) and Environment Factor consists of 10 questions (question 19 until question 28).

Table 6: Rotation Component Matrix

	Social	Academic	Environment
My roommate makes me uncomfortable when I want to study at our room	.581		
I do not have a good relationship with my lecturer	.722		
I have a problem with my partner	.785		
I have a loan while study	.454		
My friend make me stress	.694		
I asked money from my parents to pay for assignment	.609		
I do a part time job while studying in the university	.646		
I feel so burden by handling programs that not related to academic	.341		
By having a conflict with my parents make me stress	.474		
My sleeping habit make me stress	.503		
I have a health problem that make me feel so stress	.695		
The examination questions are usually difficult		.724	
I have too many quizzes and midterm examinations		.640	
I have experienced pressure of grades		.697	
The competition with my peers for grades is quite intense		.604	

The expectation of my parents stress me out	.483	
The size of workload is too much	.634	
By not having a laptop to do assignment make me stress	.313	
The time allocated to classes and academic work is enough		.369
My financial for every semester is enough		.368
I confident that I will be successful student		.542
I have enough time to relax after study		.482
My surrounding when study was very quiet and make me feel good		.466
My room was in good condition to study		.365
The library is my favourite place to study		.447
I can make academic decisions regarding my courses easily		.561
I confident I will be successful in my future career		.689
I like to working with new people that I do not know		.543

Reliability Analysis for each factor

Based on the Table 7, we can see that the Cronbach's alpha of Social Factor is 0.826. Which means it has high level of internal consistency for all the questions representing Social Factor.

Table 7: Reliability Analysis for Social

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.826	.827	11

Based on the Table 8, we can see that the Cronbach's alpha value for Environment Factor is 0.663. Which means has high level of internal consistency between questions representing Environment.

Table 8: Reliability Analysis for Environment

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.663	.668	10

Based on the Table 9, we can see that the Cronbach's alpha of Academic Factor is 0.697.

Table 9: Reliability Analysis for Academic

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.697	.721	7

CONCLUSION

This study was conducted to investigate factor that may causes stress among university students. This study specifically focuses in one of public university in Malaysia. A finding from this study shows three factors that

may causes stress among university students. These factors include are social, academic and environment. We encourage the university to introduce stress management courses or programs for students as a strong demand (95.1%) for the said program. Such effort could equip students to handle stress better and increase their productivity.

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