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Research paper

Malaysian Technical University Students Mental Health Profile

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Abstract

This paper discuss about the Malaysian Technical University (MTU) students' mental health issue. This article aims to develop a profile of MTU students on mental health issue from the aspect of gender, year of study and field of study. A stratified random sampling technique was applied to select about 450 students as the sample in this study. The DASS-21 inventory was adopted as instrument for this study. The obtained data were analysed by using frequencies, percentage, mean, standard deviation, Independent T-test, one-way ANOVA and LSD post-hoc test. The findings showed that there is no significant difference in mental health issue from the gender aspect, but there is a significant difference from the aspect of year of study and field of study. As a conclusion, intervention program needs to be conducted to solve the mental health issue in order to help the students to achieve a better academic performance.

Keywords: *Mental Health; DASS-21; MTU students; gender; year of study; field of study*

1. Introduction

Mental health issue always related to stress, anxiety and depress. As mention by [1] and [2], mental health issue is a part of our life, no matter we are consciously or unconsciously. Moreover, it changed the form with the passage of time. Nowadays, the challenges and complicated lifestyle turn the mental health as the serious issue that the societal endeavor vigorously to fight. Currently, a lot of suicide cases involve the higher learning institution students because of mental health issue. As stated by [1], the third trend of tendency to dead among the American from age 15 to 24 is suicide, and majority of them do have the mental health issue. If the society and the community keep silent and ignore this issue, the situation will become worse. In addition, many research as mention by [2] showed that those student not able to confront with their mental health issue until they are fell into a serious mental condition that resulting in the change of depression, anxiety, and lost desire in their daily life [3].

In the context of Malaysia, the figure of mental health issue victims in 2006 compared to 2011 was increased from 1.12 to 1.26 among the Malaysians between aged 16 years and over according to the Morbidity Study carried out by the Ministry of Health in 2011 (Institute for Public Health, 2011). This findings are in line with study conducted by [4] that identified the correlation between anxiety and academic performance of the engineering students, involving as many as 205 students. Pearson correlation analysis of the findings found that the value p = 0.0. Anxiety is the negative impact learning and academic performance and proved that students have anxiety at a high level will contributed to low academic performance.

Unfortunately, many research has been conducted to identify mental health level among the students from primary until tertiary education in general. And yet, the research findings like [5] and [6], proved that university student suffered a mental health issue for every semester. However, specific study on technical students is limited due to the mindset that students only facing stress in academic. In this digital era, the climate of learning in academic world become complicated and the students from Malaysia Technical Universities are not excluded. As stated in the 11th Malaysia Plan, transforming Technical Vocational Education and Training (TVET) to meet industry demand is one of the focal point. Moreover, Malaysia Education Blueprint 2015-2025 clearly points out one of the main driven is to produce quality TVET graduates. Obviously, this circumstance will lead technical students to a more challenging environment compare to others discipline students in order to achieve the mission of Malaysian government. As a result, mental health become the hot issue among the technical students especially in higher learning institution.

Nevertheless, mental health has not got any kind of attention that it deserves, as a result of the lack of knowledge as well as misunderstanding of mental health issues in relation to academic performance and education among technical students in Malaysia. Since prevalence rates of students' mental health issues are increasing especially in the developing countries, risk factors of mental health are of special interest. This is a need to understand the mental health issues profile among the technical students and set up various mechanisms in higher educational institutions to help them. Thus, this study is necessary for the purpose of understanding the real phenomena in mental health issue in order to improve the academic performance of the students, focus on the engineering and non-engineering students in technical universities. By having better information about psychological condition among the students on depression, anxiety, and stress, the work for designing and organizing proper interventions to help them to achieve better academic performance can be reached.

2. Methodology

This study was employ a survey as the research design. The aims of this study was to develop a Malaysian Technical University (MTU) students' mental health issue profile. For this paper, the selected technical university was UTHM. A stratified random sampling technique was adopted to select about 450 students as sample in this study [7].

The DASS-21 inventory was adopted as the instrument for this study. The DASS-21 [8] examined the mental health level in three elements, namely stress, depression, and anxiety through 21 items. Mental health level of the student was measured throughout five levels, namely normal, mild, moderate, severe and extremely severe. They will only need a general intervention program for those tend to have a normal, mild and moderate mental health level. However, a specific intervention problem is strongly recommended for those tend to have a severe and extremely severe level help them to managed and conquer their mental health issue.

The data of this study was gather during the midterm examination period of the students who have been selected as sample. The gathered data were analyzed by using frequencies, percentage, mean score, standard deviation, Independent T-test, one-way ANOVA and LSD post-hoc test.

3. Analisis and Results

Table 1 shows the mental health level among the technical student. Findings determined that majority of the technical students tended to need a general intervention as they have a normal to moderate mental health level in the three different mental health aspects. The findings indicated that 281 students (64.2%) are inclined towards the normal level for the stress, followed by mild level with the numbers of student was 71 (15.8%), and then moderate level with 77 students (17.1%); 20 of the student (4.4%) possess the severe level, and only one (0.2%) of them tended to have extremely severe level. On the other hand, findings indicated that a majority of students tend to have normal level for anxiety element, with the numbers of student 208 (46.2%). Then followed by mild level for anxiety with the numbers of student was 87 (19.3%), and moderate level is about 63 students (14%). However, the finding also indicated that there were 44 students (9.8%) tended to have severe level for anxiety, and 48 students (10.7%) posse to have an extremely severe level. Besides, the findings identified that majority of the students tend to have normal level in depress (67.1%) and followed by the mild level (14.2%). About 39 students (8.7%) tend to have moderate level, 38 students (8.4%) at a severe level in stress, and seven (1.6%) of them inclined towards extremely severe level of depress. Surprisingly, there is quite a portion, about 4.6% for stress, 20.5% for anxiety, and 10% for depression of technical students that need a specific intervention.

Table 1: Mental Health Level among the Students

Level	Mental Health Aspects					
	Stress		Anxiety		Depress	
	f	%	*f*	%	*f*	%
Normal	281	62.4	208	46.2	302	67.1
Mild	71	15.8	87	19.3	64	14.2
Moderate	77	17.1	63	14.0	39	8.7
Severe	20	4.4	44	9.8	38	8.4
Extremely Severe	1	0.2	48	10.7	7	1.6
Total	450	100	450	100	450	100

The comparison of mental health score between male and female student using independent t-test is showed in Table 3. Even though the findings show that there is no significant difference in mental health score for the three aspects between male and female students, which are stress (t = -1.41, p = .172), anxiety (t = -.627, p = .531) and depression (t = 1.37, p = .161). But obviously, female students possess to have a higher score in stress and anxiety compare to male students. Nevertheless, male tends to have higher score in depress compare to the female, as shown in Table 2.

Table 2: Mental Health Score between Male and Female Students

Mental Health Issue	Gender	Mean	Std.Deviation
Stress	Male	6.16	4.02
	Female	6.68	3.67
Anxiety	Male	5.25	3.99
	Female	5.49	3.68
Depress	Male	4.70	4.15
	Female	4.17	3.62

Table 3: Mental Health Score between Male and Female Students using Independent T- test

	t	df	p-value	Mean difference
Stress	-1.41	448	.172	0.52
Anxiety	-.627	448	.531	0.23
Depress	1.37	306.35	.161	0.53

Table 4 shows the analysis of differences in mental health among the technical students with difference year of study using one way ANOVA. Findings indicated that there were no significant difference two aspects of mental health among the students which difference year of study, which were stress (F = 1.29, p = .279), and depression (F= 1.98, p = .117). However, there is a significant difference in anxiety level among the students with difference year of study (F= 4.24, p = .006). The students in year one (M = 6.30) scoring the highest in anxiety compare to the final year of students (M = 4.13), as shown in Table 5.

Table 4: Mental Health Score Comparison among the difference year of study using One-Way ANOVA

Mental Health Issue		Sum of Squares	df	Mean Square	F	p value
Stress	Between Groups	55.87	3	18.62	1.29	.279
	Within Groups	6458.57	446	14.48		
	Total	6514.44	449			
Anxiety	Between Groups	179.61	3	59.87	4.24	.006
	Within Groups	6296.59	446	14.12		
	Total	6476.20	449			
Depress	Between Groups	86.52	3	28.84	1.98	.117
	Within Groups	6507.99	446	14.59		
	Total	6594.50	449			

Table 5: Anxiety Score Comparison among the difference year of study using LSD

Year of Study	Mean	Std Deviation	Significant difference with	Mean difference	Std. Error	p-value (LSD)
Year 1	6.30	4.10	Year 2	1.13	.477	.019
			Year 4	2.17	.632	.001
Year 2	5.17	3.73	Year 1	1.13	.477	.019
Year 3	5.40	3.60	Year 4	1.27	.607	.038
Year 4	4.13	3.53	Year 1	2.17	.632	.001
			Year 3	1.27	.607	.038
a. The mean difference is significant at the 0.05 level.						

Table 6 shows the independent t-test output on the difference in mental health score between engineering and non-engineering students. The findings show that engineering and non-engineering students tend to have a significant difference in three aspect of mental health, which is stress (t = -2.02, p = .003), anxiety (t = -2.87, p = .004) and depression (t = -2.94, p = .044). Unexpectedly, as showed in Table 7, non-engineering students tend to have high-

er score in three aspects of mental health compare to the engineering students, with the mean difference for these three aspects are in the range of 0.7 to 1.1.

Table 6: Independent T-Test analisis on Mental Health Score between Engineering and Non-Engineering Students

	t	df	p-value	Mean difference
Stress	-2.02	448	.003	0.73
Anxiety	-2.87	448	.004	1.03
Depress	-2.94	426.37	.044	1.05

Table 7: Mental Health Score Comparison between Engineering and Non-Engineering Students

Mental Health Issue	Students	Mean	Std. Deviation
Stress	Engineering	6.06	3.79
	Non-Engineering	6.79	3.80
Anxiety	Engineering	4.80	3.63
	Non-Engineering	5.83	3.86
Depress	Engineering	3.75	3.51
	Non-Engineering	4.80	3.99

4. Discussion

The findings in this study determined that technical students are manageable to control their emotion and mental during their difficulty moment. Majority of them possess a normal level in mental health issue even tough in examination period and only need a general intervention. Academic performance as a student in university demands wellbeing from all aspects, including physical, emotional, spiritual and intellectual. Community expect those students are good in physically and psychologically to have a better achievement than those who are not fit in physically, mentally and psychologically. In other words, students who are suffering mental health problem like stress, anxiety and depress are tend to fail in managing their academic performance. In summary, mental health stability is an important predictor that contributes to high academic achievement.

Even thought the findings show that the most of the student's mental health is at a normal level, as an educator or those who involve in educational discipline should not abandon those small group who are still experiencing from severe mental health problems. There are quite a numbers of technical students need our attention to help them leave the suffering environment. The findings of this study determined that about 5 from 100 students possess severe and extremely severe stress issue; 21 from 100 of them possess severe and extremely severe anxiety issue; and 10 from the 100 students possess severe and extremely severe depress issue. As we all know the worldwide education concept "LEFT NO ONE BEHIND", we shall not neglect the needs of this group of students that waiting for our assistance to solve their mental health issue. Depression, stress, and anxiety are among the psycho-logical problems that are common among students. Many of them left the university and not completing their degree because of failing to manage mental health issue especially to cope with stress during examination period. The common symptoms of mental health problem students are hard to concentrate in class, poor attendance record, lacking of interest or motivation in class activities, and physical health problem like headache and migraine. All these condition are affecting their academic performance.

Findings also showed that students in first year is facing mental health issues more serious than students in the other. This may be due to first year students just begin to adapt to new learning environments in universities that are far different in college. Female students' mental health issue is higher than male student is expected because gender is a matter that highly correlated to mental health as stated by [9]. Surprisingly, the non-engineering students mental health issue score is higher that engineering students. The findings is totally difference compare to the research findings of [10], which stated that non-engineering colleges students showing a better mood, more efficiency and effort at work compared to engineering student. This situation happen may due to the differences in focus and learning between Engineering and Non-engineering students from aspect cognitive and spiritual. The focus of engineering discipline is more on logical and fact in finding the solution. Additionally, the answer for the solution in engineering usually is static and unchangeable. Compare to non-engineering discipline, the focus is more on methods to find solutions. Besides, the answer in non-engineering discipline is dynamic and can be open discussed with reasonable arguments, as stated by [11]. This nature difference between engineering and non-engineering students affect mental health issues.

5. Conclusion

In conclusion, although majority of the technical university students possess a normal levels in mental health, those tend to have severe and extremely serve level in mental health issue should not be eliminated from achieving excellent academic performance. However, the findings of comparison between engineering and non-engineering students is astonishing. Findings showed that non-engineering students possess higher score in mental health issue compare with engineering student. Moreover, first year students do have a higher mental health issue score compare with second, third and fourth year students. These students' profile on mental health are the key information for the universities, lecturers, counselor, parents, students and even psychiatrist to increase knowledge and awareness of recognizing sighs of mental health issues to design the treatment or intervention for the students who experiencing mental health issue.

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