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PREVALENCE OF DEPRESSIVE FEELINGS AND ITS ASSOCIATED RISK FACTORS AMONG UNIVERSITY STUDENTS IN MALAYSIA

Chin Tee Suan¹, Anwar Khan² & Muhammad Anwar³

¹Faculty of Business, Multimedia University, Jalan Ayer Keroh Lama, Bukit Beruang, MALAYSIA

²Department of Management Sciences, Khushal Khan Khattak University, Karak, Pakistan

³Department of Media Studies, Khushal Khan Khattak University, Karak, Pakistan

KEYWORDS	ABSTRACT
Depressive Feelings, University Students, Malaysian University, Risk-Factors	In nowadays competitive environment, students face challenges and intense pressure both from social and university lives, which is perceived stressful, and it ultimately develop feelings of depression. Keeping this in view, the current study aims to know prevalence of depressive feelings and its associated risk factors among Malaysian university students. Utilizing a cross-sectional design, data were collected by an online-self-reported-questionnaire from 210 students. Demographic data were analyzed by descriptive statistics, while linkages between depression and its risk-factors were determined by multinomial-logistic regression analysis. Results show that depressive symptoms were moderately elevated among 19-to-22 years old students, female students, unmarried, having past-trauma and financially poor status. Depressive symptoms had impeded academic life of students and academic performance. This study recommends that the menace of depression should be dealt collectively by parents, teachers, and university administration by providing a conducive environment to students, which will prevent students from detrimental impacts of depression.
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Corresponding Author	Chin Tee Suan: tschin@mmu.edu.my
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INTRODUCTION

Depression is a global mental health issue, which has affected millions of people around the world (WHO, 2021). The depressive symptoms include feelings of sadness, low appetite, lack of interests in life and overall down feelings (Cooper, 2014). Depressive symptoms are common in all types of organizations, particularly universities (Osborn, Venturo-Conerly, Wasil, Schleider, & Weisz, 2019) because universities and higher education institutions are facing the modern challenges of 21st century that has put lot of pressure on students and teachers (Khan & Anwar,

2021). This is also evident from review of existing recent literature, which documents different studies, e.g., [Lun, Chan, Ma, Tsai, Wong and Yan \(2018\)](#), [Islam, Barna, Raihan and Khan \(2020\)](#) and [Yu, She, Luo, Xin, Li, Wang and Zhao \(2021\)](#) on depressive symptoms among university students. The university students develop feelings for depression because they pass through a transition from college life into university life, also, face challenges like, family issues, academic workload, financial crisis and peer pressure ([Keyes, Gary, O'Malley, Hamilton, & Schulenberg, 2019](#)).

Other factors of depression include, inability to adjust in social sphere by having conflict between social and academic lives ([Shaukat & Pell, 2015](#)); past traumatic experience ([Schrag & Edmond, 2018](#)); pressure due to high expectation of the parents and teachers ([Fawzy & Hamed, 2017](#)); on-campus harassment or bullying (particularly among female students) ([Hauge, Skogstad, & Einarsen, 2010](#)); breakoff in romantic relationship ([Fitzpatrick, 2017](#)); poorer class performance ([Sörberg et al., 2018](#)) and in some special cases few students have familial history of depression ([Choi & Back, 2015](#)). The high expectations both from the government policy makers and the university administration to achieve high performance standards ultimately put pressure on the teachers and students. As a result of which teachers and students feel stressed, exhausted and depressed ([Khan, Anwar, Khan, & Rehman, 2020](#)). This is a kind of vicious cycle. The university wants best results from teachers and students, and in return teachers and students work hard to meet expectations of university. Still, in this whole process, teachers and students sometimes get exhausted, and their energies get depleted due to which they feel stressed and depressed.

Malaysia being a developing country is struggling hard to compete with the competitive market of western developed economies. The Malaysian Government is particularly very conscious about its Shared Prosperity Vision 2030, which aims at achieving sustainable growth, fair distribution of the resources among Malaysians and developing of a broader system of supply chains ([SPV -2030, 2021](#)). To achieve these aims, Malaysian Government has actively engaged universities, which are working side-by-side with the Government to realize the Shared Prosperity Vision 2030 ([Povera & Yunus, 2021](#)). Consequently, in this whole process of developing nation towards sustainability, the administration of the Malaysian universities is under a constant pressure. This pressure is ultimately shifted to the teachers and students, which may feel exhausted and burnout. The existing review of literature documents different studies, e.g., [Shamsuddin et al. \(2013\)](#), [Jia and Loo \(2018\)](#), [Ismail et al. \(2020\)](#) and [Woon, Leong Bin Abdullah, Sidi and Mansor \(2021\)](#) on mental health of the teachers and students, which is a proof that both teachers and students in the Malaysian universities are experiencing stress, exhaustion and depressive like symptoms.

The depressive and other eschatological problems are developed because various biological, social, economic and environmental risk factors creates its vulnerability ([Kinser & Lyon, 2014](#)). Keeping in view the above given facts, this study initially aims at determining the prevalence of depressive symptoms among university students in Malaysia and then this study will examine link of depressive symptoms with risk factors, which might have caused depressive symptoms among the university students in Malaysia. This study is important because in the current wave of COVID-19 pandemic, the students are suffering from the challenges in the online education system ([Anwar, Khan, & Sultan, 2020](#)). The universities have been closed and students face various barriers and problems in getting their education, therefore, it is more likely that they would have developed exhaustion and depression feelings. These symptoms need to be examined,

so that the correction measure may be taken for preventing the students from its detrimental effects.

LITERATURE REVIEW

Depression is characterized by feelings of melancholy, loss interests in life, lack of appetite, and overall down feelings (Velikova, 2021). The depressive symptoms are one of most commonly occurring mental health condition and it is affecting millions of people around the world each year (WHO, 2021). Depressive symptoms could be caused by various biological, psychological, social and economic factors, which intervene with normal Psychobiology of human beings and causes chemical imbalance (Blazer & Hybels, 2005). Moreover, there are various risk factors, including particular gender, age and social life pattern, which might increase the vulnerability of depression among human beings (Borçoi et al., 2020). No matter whatsoever is the cause or risk factor of depressive symptoms, the depressive symptoms badly hamper the routine social and working lives of the human beings, can cause disability and other problems in life (Schrag & Edmond, 2018). For this reason, the researchers around the world are studying and trying to understand the nature, causes and risk factors of depression among both adult and non-adult populations.

Depressive symptoms can prevail among any population, however, it is more likely to prevail among the working populations, because such population is exposed to both individual, social as well as work related stressors, which increases their vulnerability to depression (Theorell et al., 2015). Depressive symptoms are very common in all types of the organizations, particularly universities (Osborn et al., 2019) as universities and higher education institutions are facing the modern challenges of 21st century, which has put a lot of pressure on students and teachers (Khan & Anwar, 2021). It is evident from review of existing literature which documents diverse studies, e.g., Lun et al. (2018), Islam, Barna, Raihan and Khan (2020) and Yu et al. (2021) on depressive symptoms among university students. These symptoms include feelings of sadness and suicide (Mackenzie, 2011), lack of interests in life (Bahrami, Rajaeepour, Rizi, Zahmatkesh, & Nematolahi, 2011), fatigue and lethargy (Naeimi, 2015), lack of appetite and hunger (Moreira & Furegato, 2013), lack of sleep and insomnia (Almojali, Almalki, Alothman, Masuadi & Alaqeel, 2017).

The university students develop feelings for depression because they pass through a transition from college life into the university life, moreover, they also face challenges like, family issues, academic workload, financial crisis (especially their inability to pay fees) and the peer pressure (Keyes et al., 2019). Other factors of depression include, inability to adjust in social sphere by having conflict between the social and academic lives (Shaukat & Pell, 2015); past traumatic experience (Schrag & Edmond, 2018); pressure due high expectation of parents and teachers (Fawzy & Hamed, 2017); on-campus harassment or bullying (particularly among the female students) (Hauge et al., 2010); breakoff in romantic relationship (Fitzpatrick, 2017); poorer class performance in different situations (Wallin et al., 2018) and in some special cases few students have a familial history of depression caused by various factors (Choi & Back, 2015). In this connection, apart from the causes of depression among the students, there are certain risk factors that can increase the vulnerability of the students to depressive symptoms in different situations.

Typical risk factors include gender, especially being female increases risk of depression (Arcand, Juster, Lupien, & Marin, 2020), age, particularly young age below 20 years increases the risk of

depression (Maharaj et al., 2008), certain personality type, like Type-D personality (Gupta & Basak, 2013) and some of life styles, like smoking, and lack of exercise can also increase the risk of depression among the students (Halperin, Smith, Heiligenstein, Brown, & Fleming, 2010). The psychologists and theorists have worked on developing different theories and frameworks to explain and understand depressive symptoms among human beings, mainly among working population. In this regard, few of famous theories and models include Job Control Support Model (Johnson & Hall, 1988), which states that certain contents of job can act as stressors and these stressors may become out of control of employees and cause mental health problems. Employees can fight stress by gaining control over their stress; Effort-Reward Imbalance Model (Siegrist, 1996) that states that when there is imbalance between rewards that employees take and efforts they exert, then it could be perceived as stressful and such stress feelings can cause mental health problems.

Finally, the most famous and recent is Job Demands Resource Theory (Bakker & Demerouti, 2017). This theory states that each profession has certain unique risk factors, which are called stressors and resources. The stressors can cause mental health problems, while resources can help the employees to combat stressors. This theory can be applied to any profession including educational institutions. Therefore, in current study, the Job Demands Resource Theory has been chosen to examine depressive symptoms and its risk-factors among university students in Malaysia. Findings of this study revealed that students in Malaysian universities were made vulnerable to depression due to different risk-factors ranging from individual to social and economic.

RESEARCH METHODOLOGY

This was a one-time study, and data was online collected from student on a particular time-point, so cross-sectional research design was adopted for this study. Quantitative cross-sectional research design is widely used since of its cost and time effectiveness (Mills, Durepos, & Wiebe, 2010).

Population of Study

The population of study was students enrolled in different universities of Malaysia. However, due to time and cost limitations, it was not possible to collect data from all the universities of Malaysia. Therefore, following three universities were randomly selected. These universities were selected because these are structure and overall productivity wise biggest universities of Malaysia:

- a) Universiti Sains Malaysia
- b) University of Malaysia Pahang
- c) University of Malaysia Sarawak

Since the COVID-19 pandemic is ongoing, therefore, in-person data collection was not possible, therefore, data was online collected from the students. The online link of the questionnaire was posted on Facebook pages of these universities and the students were requested to participate in this study by filling out online questionnaire. The students were told that the confidentiality of the collected data shall be ensured, and obtained information shall only be used for research purposes.

Data Collection & Questionnaire

The online self-reported questionnaire was developed by taking the items from the following scales:

- a) Data on gender, age and marital status was collected on the nominal scale for the study.
- b) Data on economic and social profile was collected by three items of scale developed by [El-Gilany, El-Wehady, and El-Wasify \(2012\)](#);
- c) Data on past trauma experience was collected on four items of scale by [Kimerling et al. \(2006\)](#);
- d) Data on the depressive symptoms was collected by nine items of the PHQ-9 scale by [Kroenke and Spitzer \(2002\)](#).

The results regarding data collection process shows that total 210 students (respondents) had participated in the present study by filling out the online questionnaires which thus used for data analysis.

Data Analysis & Assessment

Data were analyzed by using following techniques the different techniques based on nature of study:

- a) Missing data analysis was done by running Little’s Test for Missing Data Completely at Random ([Little, 1988](#)).
- b) The reliability of data were established by through the Cronbach Alpha Coefficients.
- c) Construct validity was established through exploratory factor analysis with principal components analysis ([Kaiser, 1974](#)).
- d) Mean values were calculated for determining the level of socioeconomic status, past trauma experience and depressive systems according to following criteria:
 - i) Low level having score ranging from 01 to 08.
 - ii) Moderate level having score ranging from 09 to 16.
 - iii) High level having score ranging from 19 to 27.
- e) Finally, the linkages of depression with the risk factors was determined by running a Multinomial Logistic Regression ([Menard, 2010](#)).

RESULTS OF STUDY

Missing Values Analysis: Total 210 students had online filled the questionnaire. Initially, the missing data analysis were performed and after running the Little’s Test for Missing Data Completely at Random ([Little, 1988](#)), it was revealed that 40 questionnaires had missing values exceeding the limit of 10%. Such questionnaires were deleted because cases having more than 10% missing values are ideal for discarding ([Hair, Black, Babin, Anderson, & Tatham, 2016](#)). In this way, the respondents were reduced from 210 to 170.

Reliability and Validity

Table 1 shows that the Cronbach’s Alpha Coefficients for all variables are normal, that is >0.50 ([Hair et al., 2016](#)), thus providing sufficient evidence for reliability of the data.

Table 1
Cronbach’s Alpha Coefficients

Variables of Study	Cronbach's Alphas
Economic and Social Status	0.66
Past-trauma Experience	0.53
Depressive Symptoms	0.60

Table 2 present results of exploratory factor analysis. It is obvious from factor loadings, KMO values and communalities that all variables possess construct validity as the values are within the normal range, that is >0.50 (Hair et al., 2016).

Table 2
Results of Construct Validity

Variables of Study	Factor- Loadings	Communalities	KMO Values
Economic and Social Status	0.63 to 0.77	0.65 to 0.81	0.62
Past-trauma Experience	0.56 to 0.88	0.61 to 0.71	0.56
Depressive Symptoms	0.55 to 0.85	0.53 to 0.81	0.77

Descriptive Analysis

Table 3 shows that most of students (90%) had moderately high socioeconomic status. Also, majority of the students (80%) had low level of past-traumatic experience. Finally, most of the students (80%) had low level of depressive symptoms.

Table 3
Level of Depressive Symptoms according to Sociodemographic and Economic Factors

Outcome Variables	Frequency (%)
Socioeconomic Status	
Low	17 (10%)
Moderate	102 (60%)
High	51 (30%)
Past-traumatic Experience	
Low	136 (80%)
Moderate	17 (10%)
High	17 (10%)
Depressive Symptoms	
Low	136 (80%)
Moderate	34 (20%)
High	00 (00%)

Association of DS with RF

Before running Multinomial Logistic Regression, variables were properly coded. The dependent variable was depression, which was coded as (01-low depression; 02-moderate depression; 03-high depression). The predictor variables included a) gender, which was coded as (01-male and 02-female); b) age, that was coded as (01-18 to 22 years, 02-23 to 25 years and 03-26 and above years); c) socioeconomic status, that was coded as (01-low; 02-moderate; 03-high) and d) past-traumatic experience that was coded as (01-low; 02-moderate; 03-high). Table 4 shows results of Multinomial Logistic Regression. According to Sweet and Martin (1999), if β coefficients and Odds Ratios are positive then it shows that the predictor variable is positively associated with the outcome variable, whereas Odds Ratios <01 denote that the outcome is more likely to be existing among referent group of predictors. Table 4 shows Multinomial Logistic Regression. Gender wise, low level of depression was among the male students ($\beta = -0.290$, p value = 0.035),

also, Odds Ratio was <01, indicating that female students were more likely to develop depressive symptoms.

Similarly, marital status wise, low level of depression was experienced among married students ($\beta = -0.150$, p value= 0.083), moreover, the Odds Ratio was <01, indicating that the unmarried students were more likely to develop depressive symptoms. Age wise, a low level of depression was experienced among all the age categories indicating that students in all the age categories experience low level of depression, however, it was more likely to occur among students in 26 or above age (the Odds Ratio was <01 for 23 to 25 years category). Finally, the results for the socioeconomic status and past trauma revealed that students with low socioeconomic status had more chances of developing depression, as clear from the negative β coefficient (-0.217) indicating a negative link between low depression and low socioeconomic status. Similarly, low trauma experience is positively related to low level of depression, as clear from positive β coefficient (0.187), indicating that if students with low level of past trauma experience were less likely to develop depressive symptoms. The negative β coefficients of some of the dependent variables are negative since it shows inverse relationship between independent and dependent variables. Like for example, low economic status is negatively associated with the low level of depression.

Table 4
Results of Multinomial Logistic Regression

		β Coefficients	Sig Level	Ratios	95% CI for Odds Ratios	
					Lower Bound	Upper Bound
	Level of Depression					
	Intercept	-1.609	0.000			
Low	Male	-0.290	0.035	0.748	0.299	1.870
	Female	Reference	--	--	--	--
	Intercept	-1.253	0.027			
Low	Married	-0.150	0.083	0.861	0.264	2.803
	Unmarried	Reference	--	--	--	--
	Intercept	-0.325	0.071			
Low	18 to 22 years	-2.547	0.000	0.078	0.029	0.211
	23 to 25 years	-2.068	0.000	0.126	0.043	0.370
	Above 26 years	Reference	--	--	--	--
	Intercept	-0.225	0.010			
Low	Low Economic	-0.217	0.020	0.327	0.211	0.314
	Moderate Economic	0.128	0.010	0.212	0.198	0.233
	High Economic	Reference	--	--	--	--
	Intercept	-0.432	0.000			
Low	Low Trauma	0.187	0.010	0.312	0.228	0.298
	Moderate Trauma	-0.165	0.000	0.454	0.365	0.497
	High Trauma	Reference	--	--	--	--

DISCUSSION

The current study initially examined level of socioeconomic status, past-traumatic experience, and depressive symptoms among students of three Malaysian universities. This study moreover

determined the linkages between depressive symptoms and risk factors like, age, gender, age, socioeconomic status, and past-traumatic experience. Results of this study revealed that most of students (90%) had moderately high socioeconomic status. Similarly, majority of students (80%) had low level of past-traumatic experience. Finally, most of the students (80%) had low level of depressive symptoms. The risk factors like, being female, unmarried, low socioeconomic status and moderate past-traumatic experience were likely to be positively associated with the depressive symptoms. The results of this study are in-agreement with the results of other similar studies on depression among the university students. It means that depressive symptoms are universally existing among the university students and certain demographic, socioeconomic, psychological risk-factors are universally likely to cause depressive symptoms among university students.

The review of existing literature revealed that depressive symptoms vary across student population and depressive symptoms are relatively low among those students who have good socioeconomic status and have no or less past-traumatic experience. Like for example, [Wahed and Hassan \(2017\)](#) did their study on depressive symptoms among university students in Egypt and found that students with poor socioeconomic status had high level of depression. Similarly, [Ibrahim, Dania, Lamis, Ahd, & Asali \(2013\)](#) conducted their study on the risk-factors and symptoms of depression among university students in Saudi Arabia and obtained similar results, i.e., those students who had past trauma experience and poor financial status had high level of depression. It means that depressive symptoms are largely associated with the past trauma experience and poor financial status. In this connection, apart from this, the literature review has also revealed that numerous risk factors like gender, age and marital status were consequently also making students vulnerable towards the depression. For example, [Gao, Ping and Liu \(2020\)](#) found that gender was one of potential risk factor of depression and anxiety among college students in China.

The gender differences can make the students vulnerable towards depression because there are physiological, emotional, and psychological differences between the male and females, whereas females tend to experience more depression. Similarly, [Mofatteh \(2021\)](#) found that age wise young students were more likely to develop depressive symptoms. It is because in the young-aged students are immature and they have less stress coping capacities to combat stress, due to that they are more prone to depressive symptoms. Finally, [Hashim, Ahmad and Shahid \(2021\)](#) found that marital status was associated with depressive symptoms, and unmarried students were more likely to develop depressive symptoms as compared to the married one. It is because marriage is by itself a social support and married students tend to get social support from their partners, therefore, their chance of developing depression also decreases. In this connection, etiology of depression is complex and various factors are involved in its development. However, a significant question still arises that why certain particular factors like for example, particular gender, as well as poor socioeconomic status can more likely causes the depression among the students.

There can be many possible explanations for such etiology of depression. For example gender wise, female students are more likely to experience the depressive symptoms, because they are immature by having the less stress coping capacities ([Lian & Tam, 2014](#)). Similarly unmarried students although have familial support but they do not have social support from their spouse ([Kim, Yang, Chee, Kwon, & An, 2015](#)). Finally, female students who live with a poor economic status and also have a past trauma are more likely to experience depressive symptoms because

the poverty creates a sense of the deprivation and unfulfillment (Yilmaz, Ozcan, Gokoglu, & Turkyilmaz, 2020), woveevr, while past trauma creates flash backs and re-experiencing of the traumatic experiences that results in development of melancholic feelings (Schrag & Edmond, 2018).

CONCLUSION

The recent changes in the higher education setup have made this sector highly competitive. The students and faculty members are expected to meet new performance standards. This creates pressure on them and resultantlly they feel under strain. This strain is ultimately creating the mental health problems among the students and faculty. Depressive symptoms are one of the outcomes of such strain, because once students and faculty are subjected to immense pressure and strain, then they feel broken and burnout and ultimately feel depressed. Depression as a mental health problem is therefore recognized workplace hazard among students in universities around the world and specifically in the Malaysian universities. Management of depression is a multi-stage and multi-task process in which at the individual level the teachers should play their supportive role, while at university level, the administration of university should provide a conducive environment to the students. Finally at policy level, the policy makers in the higher education ministry should formulate such policies and strategies that focus on mental health of students and teachers. Together once every actor of the society plays its role in management of depression among the students then students could be saved from the harmful effects of the depression.

Implications & Future Directions

Findings of this study will be significant at individual level by providing sufficient information about the nature and risk factors of depression among students. In this way, the students and teachers can get awareness about problem of depression. At institutional level, administration of universities can get awareness about the stressors that can cause depression, and in this way, they can try to provide a conducive working environment to the students and teachers. Final at policy level, the policy makers in ministry of education can get awareness about the problem of depression among students. They can work on formulating such policies that address the mental health of the students and teachers. This study has certain limitations and future recommendations, which are worth to mention. First, this was cross-sectional study, therefore, future researchers can work on longitudinally studying depressive symptoms among students in other Asian countries. Second, this study was done on relatively the small sample, therefore future researchers can study large sample from different universities in Asian countries. Third, this study was conducted on students, and no faculty members were included in it, thus, the future researchers can comparatively study depressive symptoms both among students and faculty members.

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