

THE DETERMINANTS OF MENTAL HEALTH STATE AMONG UNIVERSITY STUDENTS IN MALAYSIA

NOR AZILAH HUSIN^{1*}, MIMI ATIRAH MOHAMAD JAZMAN², BATRISYIA TIHANI HAMDAN³,
NOOR SYAFIAH NORRASHID⁴

^{1,2,3,4}Faculty of Business and Accountancy, Universiti Selangor, Malaysia

*Corresponding Author: nor_azilah@unisel.edu.my

Abstract: Cases of mental health issues among university students have been increasing. Study shows that various factors affect students' mental health that leads to various mental health problems. This research focuses on determining the relationship between stress, financial issues, lifestyle, and family issues towards mental health state among university students. This study conducts a questionnaire survey and collects primary data from university students from all over the states in Malaysia. Simple random sampling has been utilised and data from 157 respondents are analysed by using SPSS 20.0 software. The result of the study indicates that both lifestyle and family issues influence the most towards mental health state among university students. Therefore, choosing a healthy lifestyle and managing family roles are crucial in determining the psychological well-being of students. Stakeholders comprising students' counsellors, and Student Affairs Department may consider the findings of this additional empirical data to better manage student issues in the universities.

Keywords: Mental health, university students, stress, financial issues, lifestyle, family issues

1. Introduction

Many researchers have documented the fact that mental health problems in the community are a growing issue in the global context. World Health Organisation (WHO) has declared that 4.4% and 3.6% of the global population suffer from depressive disorders and anxiety disorders, respectively. Mental health is a condition of a human's psychological well-being, and emotional health and well-being. Comeau (2019) also discovered that even half of the youngsters by the age of 12 start to give indications of mental health illness and disorders. Since mental illness can disrupt students' academic abilities, there has been a lot of interest nationally, and internationally in building awareness related to the support of mental health (Eaton, 2019). In the extreme measure, mental distress has been concluded as the cause of suicide and the occurrence is not limited to only students (Duffy, 2019). The author also stated that suicide rates among university students are astronomical, and it keeps increasing globally. As of 2013, WHO has redefined mental health stating that it can be affected by a range of socio-economic factors such as the ability to manage one's thoughts, emotions, behaviour, and interactions with others, but also social, economic, political, and environmental factors. Globally, one-fifth of college students that is 20.3% of 1572 respondents across 21 countries have a 12-month Diagnostic and Statistical Manual of Mental Disorders (DSM) (Auerbach, Alonso, Axinn, Cuijpers, Ebert, Green, & Nock, 2016).

In Malaysia, mental health problems have worsened among Malaysian students. In 2011, there were one in 10 individuals experiencing mental health problems. However, this

number has increased significantly and in 2016, it is reported that one in every five individuals experience similar problems (Bernama, 2016). By the year 2017, one in five adolescents is depressed, two in five adolescents are anxious, and one in ten adolescents is stressed. Currently, Selangor is the second-highest state in Malaysia with mental health prevalence; 43.2% of adolescents have anxiety, 22.6% of them have depression and 12.5% of them have stress problems (IPH, 2017). Ministry of Health also has outlined that the number of mental health problems for adolescents needs urgent attention (MOH, 2017). In regards to mental health state, the issue of stress has always been centralised. Recent research also stated that the level of perceived academic stress has shown a significant mirror-like correlation with depressive symptoms among students (Romo-Nova et al., 2019).

At the same time, lifestyle preferences of university students have been getting more popular concerning a mental health state. This is because lifestyle has been linked to having a positive relationship with the mental health state of university students (Perveen, Govindasamy, Morgul, Abas, Kee, & Hamzah, 2019). Financial issues also have been documented in several studies before, that it does affect one's mental health state. Some students may work alongside their full-time studies due to inadequate funds to support themselves which may contribute to work stress and later influence their mental health state (Forbes-Mewett & Sawyer, 2019). Students who had high financial issues also scored higher scores on measures of feeling tense, anxious, or nervous (Cooke, Barkham, Audin, Bradley, & Davy, 2014). Moreover, social support from family is regarded as one of the most important determinants of mental health state among university students. Social support factors are linked to one's mental health and well-being (Sheikh, Abelsen & Olsen, 2016). Thus, this study aims to identify the determinants of the mental health state of university students in Malaysia.

2. Literature Review

2.1 Mental Health State

Reddy, Menon, and Thattil (2018) reported that mental health comprises transactions that occur at an individual and social level. They reiterated that mental health cause students to be in depression, anxiety, and experience behavioural problems. The Bureau registered that 1.8% of students who have committed suicide are due to failing examinations and an 80% rise in the suicide rate during a one-year time frame. Ramli, Alavi, Mahrinezhad, and Ahmadi (2018) reported that it is a common emotional/mental state that students experience during their studies due to a wide range of issues, including test, and exam burdens. This shows that the relationship between the mental health state of students related to their burden exists and it contributes to the factor of students committing suicide. It shows that mental health makes students depressed, anxious, and stressed due to their studies.

Next, Tambawal and Solomon (2019) discover that mental health cause students to have low moods and inclined to activities that have a negative effect through, behaviour, feeling and worldview, and physical well-being. It is shown that the affected student demonstrates low motivation in doing assignments, or tasks in the university. Most of them have low-quality time such as eating, and sleeping problems, low activity, sadness, and

difficult relationships. The student then will not perform in their studies and the situation makes them more depressed in studies and eventually, they may commit suicide. An excessive level of poorly managed stress, especially over extended periods will harm the physical, and mental wellness of students (Mousavi et al, 2018). Moreover, lifestyle is a prominent element in predicting the mental health of a person (Perveen et al, 2019). Browne, Munro, and Cass (2017) stated that financial pressures are also associated with higher levels of psychological distress and mental disorders among university students. Finally, lack of social support from the community is a known determinant of mental health problems (Alsubaie, Stain, Webster & Wadman, 2019).

2.2 Stress

Stress phenomenon has been experienced by managers, financiers, politicians, and housewives and it is most common among students nowadays (Jain & Singhai, 2018). There have been a lot of discussions about a rigid definition of stress and there are several definitions of stress that have been concluded by some researchers. According to Marksberry (2019) for The American Institute of Stress, a typical definition of stress is known as 'physical, mental, or emotional strain or tension'. There is also a well-established definition of stress which refers to problems, or obstacles that people had throughout their life' (Holinka, 2015). Generally, both definitions highlight the negative features of stress. However, the stress term might also have positive effects, which should be considered as well to get a clearer picture of what stress is all about.

On the whole, although humans nowadays are less dependent on the psychological stress response for everyday survival, stress remains a basic part of life and the everyday stress response becomes common in modern environments (McGonigal, Micoulaud-Franchi, & Bartolomei, 2015). Dimitrov (2017) stated that stress can be proved by ensuring that the students give maximum attention to their well-being. For instance, food, exercise, work, and recreation are some of the areas that need to be highlighted. He also affirmed that the education system is more to do with academic competence and does not contribute enough to the comprehensive development of students. Students are usually facing a situation in a way that makes them anxious to take up approaching challenges as their focus is only on academics and not the development of better mental well-being. Subramani and Kadiravan (2017) proved the link between academic stress and mental health problem among students.

Research studies find that academic stress and mental health are interrelated and that students are narrowed with the academic structure. This is one of the reasons for the increase in stress among students. Sharma, Kumar, and Sarin (2016) emphasised that doing one physical exercise on daily basis can help in dealing with stress and they also stated that students should get involved with leisure activities that can benefit them. Also, it was suggested that colleges should have a conducive atmosphere to reduce stress because stress, affects the ability to study effectively. In addition, Stallman (2016) emphasises that there has been growing attention for researchers in investigating the risk factors of stress among the university student population and the impact on their well-being. Reddy et al, (2018) argue that streamwise difference in stress does exist in students.

Since research on the concept of stress among university students is lacking, further study has been carried out and found evidence that 'humans can adjust what they perceive as stressful and how they respond to it (Friedrichs, 2019). Dealing with stress at the personal, social, and institutional level are considered necessary. Professionals can implement a strategy to deal with stress and determine the main cause of stress as the indicator to deal with it. The unified well-being of the students is considered significant not only for the individual but as well as for the institute. The World Health Organization has stated that stress can cause a ruinous effect, for instance, heart disease (WHO, 2019).

H1: Stress significantly affects the mental health state of university students.

2.3 Lifestyle Preferences

There is a relationship between mental health among students and lifestyle. Perveen et al. (2019) pointed out a lifestyle that includes among others diet patterns, physical activity, study habits, social support, financial stress, and sleep qualities is very important to predict mental health. Poor lifestyles will eventually drain their productive skills from being active, and healthy. Some students turned to drugs, or alcohol to relieve their stress. Many students experience stress including burdens in examinations, assignments, and studies in general, although most considered their mental health to be good. However, some students especially final year students are more likely to rate their mental health poorly. Most students report drinking alcohol to be sociable or have fun to relieve stress. At the same time, a healthy lifestyle means engaging in regular physical activity, refraining from smoking, practicing moderation in alcohol consumption, and eating healthy food to avoid being overweight (Ronksley, Brien, Turner, Mukamal & Ghali, 2011; Schane, Ling & Glantz, 2010; Velten, et al., 2018).

To avoid mental health problems, a person should practice a healthy lifestyle. Students who practice a healthy lifestyle such as more frequent physical activity and regular social rhythm are related to improvements in mental health over one year (Velten et al., 2014). Zafirah et al. (2016) recorded that most Malay medical students had significant psychological distress such as anxiety, depression, and stress, which were associated with their lifestyle. Students have to practice a good lifestyle for them to equip themselves to be safe. It is also reported that male students have better physical activity, and exercise compared to female students. Moreover, students, these days use their phones most of the time, and it is found that there is a significant positive relationship between dependence on mobile phones with mental health. An unhealthy lifestyle such as spending too much time on a mobile phone might as well affect students' academic achievement. Reduction of mobile phone dependency is possible and needed among college students to prevent their future depression and anxiety.

H2: Lifestyle preferences significantly affect the mental health state of university students.

2.4 Financial Issues

Financial issues in the study include debts, excessive expenses, credit cards, student loans, and other related financial problems (Bemel, Brower, Chischillie & Shepherd, 2016). The study also claimed that financial problems among students could impact the six dimension of health which is the individual's state of physical, emotional, intellect, spirit, social, and environment. Emotional health has been significantly influenced by financial health. The study on emotional health has shown that students who earn a monthly budget and have more discretionary money are highly likely to enjoy their lives and improve their concentration. This pattern has emerged over the years, particularly in a study by Northern, O'Brien, and Goetz (2010) that found financial issues among college students are commonly associated with adverse academic, mental health, and physical health outcomes.

Meanwhile, those who have less discretionary money are likely to face difficulty in paying debts and they have less control over their financial problem (Bemel et al., 2016). Students need to analyse and manage well their financial decisions (Albeerdy & Gharleghi, 2015) as low understanding, knowledge, and capability in handling finances may affect the financial decision-making of an individual would lead to adverse mental health. According to Alyousef's (2019) study, the results claim that one of the responses of the students said that social challenges may lead to stress. Financial problem is partly considered a social challenge. This shows fret over money may lead to many negative outcomes on mental health among students and managing finances can be the main factor that leads to it.

H3: Financial issues significantly affect the mental health state of university students.

2.5 Social Support from Family

Social support is defined as the perception, and actuality of a student being cared for, receiving assistance from a parent, a teacher, and a friend, and belonging to a supportive social environment (Cobb, 1976). Family plays an important role in shaping the student's attitude and behaviour. Based on Counts and John-Henderson (2019), students are more likely to be reported with poorer mental health when the risk of family environment is significant. The research findings show that a larger amount of negative impact and a smaller amount of positive impact have been reported on the mental health of college students. The study recognises that the risk of the family environment has contributed to the loneliness of university students. It is proven in this study that the social support from the family can contribute remarkably to students' mental health especially loneliness (Counts & John-Henderson, 2019).

According to Roksa and Kinsley (2019) psychological, and emotional support from the student's family is favourable to helping the student to achieve successful educational results. Family support is vital in students' life to help them improve academically, and mentally. The findings describe those students are more likely to score their CGPA of above 3.00 when they have adequate emotional support from their families. The results indicate that there is one (1) student gaining a CGPA of more than 3.00, 19% collect at least 24 credits, and 19% are

capable of continuing to their second year of study an increase in emotional support from their family exists.

The study claims that family emotional support is essential for the psychological well-being of the students and it offers a sense of acceptance to the student (Roksa & Kinsley, 2019). Hence, family is the most powerful influence in emotional support, and developing and shaping their behaviours and attitudes is important for their mental health. Poor social support can lead to depressive symptoms and it is one of the major determinant factors that contribute to the depression state. Related to Alsubaie et al. (2019) study, the research indicates that individuals often seek emotional support from family as family is the strongest element in the social support of a person. The same study concludes greater social support leads to the improved psychological well-being of an individual. Therefore, strategies to increase the awareness of social support from families need to be developed to protect the emotional, and mental health state of students.

H4: Family support significantly affects the mental health state of university students.

In regards to the previous discussion, a research framework has been established between the independent variables and the dependent variable. Figure 1 illustrates the conceptual framework of this study.

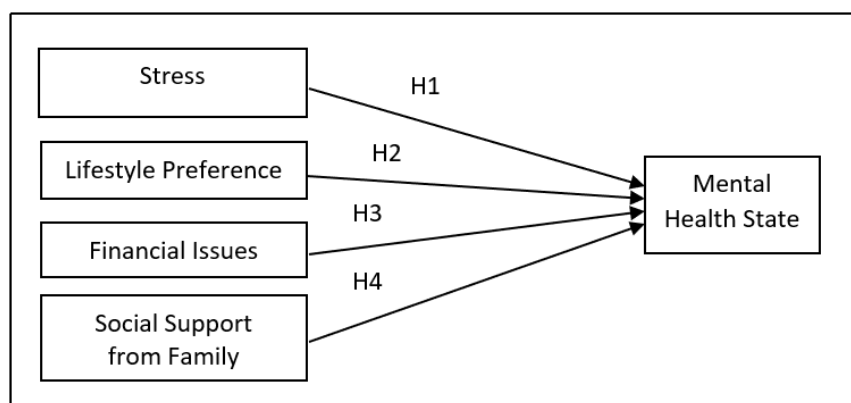


Figure 1. The Conceptual Framework

3.0 Methodology

The present study utilises a survey method to collect the relevant data and a descriptive approach is used to determine the relationships between the variables (Husin, Mohd Salleh, Saad, Abbas, Alias & Yulia, 2017). Descriptive research is used in studies that have conclusive data based on quantitative ability. The targeted population is the university students in Malaysia who are experiencing mental health issues and the population comprises 672 280 students as recorded in 2017 (Hirschmann, 2019). This study employs a probability sampling technique where a sample from a much larger population and a simple random sampling by using the Sample Size Calculator by Raosoft, Inc. is utilised. The calculation of sample size is set by setting a confidence level of 98%, a margin error of 2.5, and a population proportion of 50. The population size is 112.29. The data was collected in the year 2020 and

the study managed to receive feedback from 157 respondents, which is slightly more than the suggested sample size.

3.1 Data Collection

The questionnaire is developed into two (2) parts: section A consists of demographic information that includes eight (8) items comprising information such as gender, programme enrolled at university, current year of study, living situation, the distance between home to campus, financial resources, and employment status. The second part of the questionnaire consists of five (5) sections; (B) Mental Health State, (C) Stress (D) Lifestyle, (E) Financial Issues, and (F) Family Issues. The respondents were requested to indicate their extent of agreement on a six-point Likert scale, ranging from '1' (strongly disagree) to '6' (strongly agree). The data was collected via Google Forms Excel sheet and uploaded into Statistical Package for the Social Sciences (SPSS) for analysis. Descriptive analysis was conducted to analyse the demographic information, a reliability test to analyse the reliability between independent variables, and the dependent variable, and Pearson Correlation Coefficient measures the statistical relationship, or association, between two continuous variables. Finally, multiple regression was run to determine the factors that could determine the most mental health state among university students in Malaysia.

4.0 Result

4.1 Demographic Analysis

The respondents consist of male students, 36.3%, and female, 63.7% and they are enrolled in different programmes comprising Bachelor of Accountancy (17.8%), Bachelor of Business Management (3.2%), Bachelor of Finance (4.5%), Bachelor of Human Resource Management (24.2%), and other programmes (50.3%). Year 1 students consist of 10.8%, Year 2 (22.9%), Year 3 (50.3%), and Year 4 (15.9%). Most of the respondents live in Hostel/ Tenant (78.3%) while 21.7% of them live with their families at home. Table 1 shows the demographic characteristics of the respondents.

Table 1. Demographic Characteristics of Respondent (N=157)

Characteristics	Frequency	Percentage(%)	
Gender	Male	57	36.3
	Female	100	63.7
Programme	Bac. of Accountancy	28	17.8
	Bac. of Bus Management	5	3.2
	Bac. of Finance	7	4.5
	Bac. of Human Resource Management	38	24.2
	Others	79	50.3
Year of Study	Year 1	17	10.8
	Year 2	36	22.9
	Year 3	79	50.3
	Year 4	25	15.9
Living	Home with Family	34	21.7
	Hostel/ Tenant	123	78.3

4.2 Reliability Test

A reliability test is conducted to determine the compatibility, or consistency of measurement and the reliability coefficient of Cronbach's alpha is acceptable if the value is greater than 0.7 (Heale and Twycross, 2015). Therefore, based on the result of the reliability test, it shows that the Cronbach's alpha of variables in the study is all above 0.7. This means that the reliability test among the variables has relatively moderate and high internal consistency. Based on Table 2, the Cronbach's alpha for Mental Health State is 0.792, 0.830 for Stress, 0.734 for Lifestyle, 0.729 for Financial Issues, and 0.921 for Family Issues.

Table 2. Reliability

Variables	No of items	No of deleted item	Cronbach's alpha
Mental Health State	4	1	0.792
Stress	5	-	0.830
Lifestyle	5	-	0.734
Financial Issues	5	1	0.729
Family Issues	5	-	0.921

4.3 Correlation

The correlation coefficient is a statistical measure that calculates the strength of the relationship between the relative movements of two variables. Table 3 shows the results of the correlation between the mental health state of university students in Malaysia, and the stress faced by them has a negative correlation of -0.191 and it correlates weakly. It also has a significant level of 0.017, which is less than 0.05 implying that stress correlates with mental health state. Next, the correlation between the mental health state of university students in Malaysia and the lifestyle preferences that they chose has a positive correlation of 0.342 and they correlate in a moderate strength with a significant level of 0.000 which is less than 0.05. Therefore, it is analysed that lifestyle preferences correlate with mental health state.

Based on the same table below, the correlation between the mental health state of university students in Malaysia and the financial issues that they face has a negative correlation at -0.178 and correlates at weak strength. The significant value for financial issues is 0.026 and is considered as correlating with mental health state as the value is more than 0.05. Additionally, the correlation between the mental health state of university students in Malaysia, and social support from their families have a positive correlation at 0.380 and they correlate moderately. The significant value for this variable is 0.000 which is less than 0.05. Thus, it shows that there is a correlation between social support from family and the mental health state of students.

It can be concluded that two independent variables (lifestyle preferences and social support) correlate with the dependent variable (mental health among university students in Malaysia). Pearson's correlation coefficient is the statistical test that measures the relationship, or association, between two continuous variables. In this case, the Pearson correlation shows that family issues have the highest contribution to the mental health state at 0.380 while the least contribution is financial issues at -0.178.

Table 3. Correlation

		Mental Health State	Stress Level	Lifestyle	Financial Issues	Family Issues
Mental State	Health	1	-.191*	.342**	-.178*	.380**
	Pearson Correlation (2-tailed)		.017	.000	.026	.000
	N	157	157	157	157	157

*. Correlation is significant at the 0.05 level (2-tailed).

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

4.4 Multiple Regression

Based on Table 4, it shows that the R Squared value is 0.227 implying that 22.7% of the dependent variable; the mental health state of university students in Malaysia is explained by the current independent variable; stress, lifestyle preferences, financial issues, and family issues. A low R-squared value indicates that the independent variable does not explain much in the variation of the dependent variable. The relatively low R-squared of the model also suggests both the limitations of the parsimonious model and the need to incorporate the additional factors (Akossou & Palm, 2013). Students these days could easily experience mental health issues not just to the studied variables and many other factors that could contribute to the mental health of university students that can be probed in the future study.

Table 4. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.477 ^a	.227	.207	.61153

a. Predictors: (Constant), Family Issues, Stress Level, Financial Issues, Lifestyle

According to Table 5 below, the significant value of the model is 0.000 which is less than 0.005. It depicts those significant relationships that exist between all four independent variables; stress, lifestyle preferences, financial issues, and family issues with the mental health state of university students in Malaysia. The findings indicate that the model utilised in the study is compatible and fits, and therefore, all variables used in this study are considered valid.

Table 5. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.712	4	4.178	11.172	.000 ^b
	Residual	56.843	152	.374		
	Total	73.555	156			

a. *Dependent Variable: Mental Health State*

b. *Predictors: (Constant), Family Issues, Stress, Financial Issues, Lifestyle*

Based on Table 6, it shows that both stress and financial issues do not significantly relate to students' mental health state. It can be implied that these students might have financial problems but the major issues concerning their fees for instance are taken care of by the availability of the students' loans and pocket money given by their parents. Stress issues that relate to the academic standing are not of importance as they could easily handle the issues very well. Hence mental health state is not determined by the stress faced by the students and their financial issues. Lifestyle preferences of the students and social support from family have a significant relationship with the mental health state among university students in Malaysia. Both variables, lifestyle preferences of the student and social support from family have the same influence on the mental health state as both significant values are at 0.002.

Table 6. Multiple Regression

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	2.668	.347		7.685	.000
	Stress	-.108	.075	-.109	-1.450	.149
	Lifestyle	.191	.060	.251	3.178	.002
	Financial Issues	-.097	.053	-.140	-1.819	.071
	Family Issues	.151	.047	.251	3.175	.002

a. *Dependent Variable: Mental Health State*

5. Discussion

The findings indicate that there is a significant relationship between lifestyle towards mental health state among university students. The significant value for these variables is 0.002 which is less than 0.05 and it is considered significant. Therefore maintaining a healthy lifestyle is essential in promoting a robust mental health state. The findings are similar to Perveen et al's 2019 study indicating that poor lifestyles will lead to the depletion of students' productivity levels. Similarly, a study conducted by Velten et al (2018) has also concluded that a healthy lifestyle has a positive effect on an individual's mental health state. Students who practice a healthy lifestyle are reported to have an improvement in their mental health state (Velten et al, 2014). Zafirah et al. (2016) discover that Malay students have significant psychological distress which is associated with their choice of lifestyle. Thereby, the results of choosing the right peers that determine one's lifestyle remarkably impact the mental health of university students.

This study also shows that there is a significant relationship between family issues and mental health state among university students demonstrated by a significant value of 0.002. Family issues matter to them as they are key to the well-being state of university students. This finding is consistent with previous Roksa and Kinsley (2019) indicating that family support plays a vital role in a student's life to help them improve mentally and academically. A similar study by Counts and John-Henderson (2019) also highlighted that emotional support from family increases student's psychological well-being and raises their self-acceptance.

In addition, the study found that 19% of the sample obtain a Grade Point Average (GPA) of more than 3.00, and 19% of them collect at least 24 credits when they have adequate emotional support from their family. Students that are exposed to a distressed family environment are linked to poorer mental health compared to those who have better family relationships. The absence of social support from family also contributes to the feeling of loneliness, which could be bad for students' mental health state especially when they live far away from their families. Lack of social support can lead to depressive symptoms and it is one of the major determinants in the psychological well-being of individuals (Alsubaie et al., 2019). Their study also shows that individuals' psychological well-being is greatly improved when they receive greater social support from family. This finding adds to the current literature on mental health issues in higher institutions.

6. Conclusion and Recommendation

Based on the current study, lifestyle and family issues can be considered to have a significant impact on a student's mental health state. The University Student Affairs Department, Student counsellors, government, or any agency bodies could design intervention plans to help improve the mental health problems among university students. The purpose is to promote healthy psychological well-being among students, at the same time prevent the growth of mental health illnesses thus improving and increasing the academic performance of students as well as the quality of education. The intervention plans could vary according to the stages of mental health among the students. For instance, one could design a social programme to deliver an awareness of a healthy psychological lifestyle or a specific mental health assessment for students who are dealing with serious mental health problems. The implementation of the intervention plans could help students to maintain a healthy mental state and portray good behaviour.

The main aim of this study is to help family members acknowledge their role in promoting a healthy mental health state. Unsettling family issues could contribute to an adverse effect on an individual mental health state. Parent's divorce, physical abuse, the death of a family member, and sexual abuse can be one of the common issues in a family structure. Therefore, the family should find ways in solving the problems to help boost their motivation, hence promoting healthy well-being. Students that are under a good upbringing and a positive parenting system are more often likely to lead a better performance.

References

- Akossou, A. Y. J., & Palm, R. (2013). Impact of data structure on the estimators R-square and adjusted R-square in linear regression. *Int. J. Math. Comput*, 20(3), 84-93.
- Albeerdy, M. I., & Gharleghi, B. (2015). Determinants of the financial literacy among college students in Malaysia. *International Journal of Business Administration*, 6(3).
- Alsubaie, M. M., Stain, H. J., Webster, L. A. D., & Wadman, R. (2019). The role of sources of social support on depression and quality of life for university students. *International Journal of Adolescence and Youth*, 1-13.
- Alyousef, S. M. (2019). Psychosocial stress factors among mental health nursing students in KSA. *Journal of Taibah University medical sciences*, 14(1), 60-66.
- Auerbach, R. P., Alonso, J., Axinn, W. G., Cuijpers, P., Ebert, D. D., Green, J. G., ... & Nock, M. K. (2016). Mental disorders among college students in the World Health Organization world mental health surveys. *Psychological medicine*, 46(14), 2955-2970.
- Bemel, J. E., Brower, C., Chischillie, A., & Shepherd, J. (2016). The impact of college student financial health on other dimensions of health. *American Journal of Health Promotion*, 30(4), 224-230.
- Bernama. (2016, September 12). Mental health of Malaysian students cause of worry: Health Ministry. *New Straits Time*.
- Browne, V., Munro, J., & Cass, J. (2017). Under the radar: The mental health of Australian university students. *JANZSSA-Journal of the Australian and New Zealand Student Services Association*, 25(2), 2617.
- Comeau, J., Georgiades, K., Duncan, L., Wang, L., Boyle, M. H., & 2014 Ontario Child Health Study Team. (2019). Changes in the prevalence of child and youth mental disorders and perceived need for professional help between 1983 and 2014: evidence from the Ontario child health study. *The Canadian Journal of Psychiatry*, 64(4), 256-264.
- Cooke, R., Barkham, M., Audin, K., Bradley, M., & Davy, J. (2004). Student debt and its relation to student mental health. *Journal of Further and Higher Education*, 28(1), 53-66.
- Counts, C. J., & John-Henderson, N. A. (2019). Risk in childhood family environments and loneliness in college students: Implications for health. *Journal of American college health*, 1-6.
- Dimitrov, G (2017). A study on the impact of Academic Stress among college students in India, *Ideal Research*. 2(4).
- Duffy, M. E., Twenge, J. M., & Joiner, T. E. (2019). Trends in mood and anxiety symptoms and suicide-related outcomes among US undergraduates, 2007–2018: Evidence from two national surveys. *Journal of Adolescent Health*, 65(5), 590-598.
- Eaton, W. W., & Fallin, M. D. (Eds.). (2019). *Public mental health*. Oxford University Press.
- Forbes-Mewett, H., & Sawyer, A. M. (2019). International students and mental health. *Journal of International Students*, 2016 Vol. 6 (3), 6(3), 661-677.
- Friedrichs, P. A. M. (2019). *Stress and Stress Mindsets in Relation to Substance Use Among University Students: A Moderation Analysis* (Bachelor's thesis, University of Twente).
- Hirschmann, R. (2019). Students in public higher education institutions in Malaysia 2012-2017 by gender.
- Hj Ramli, N., Alavi, M., Mehrihezad, S., & Ahmadi, A. (2018). Academic stress and self-regulation among university students in Malaysia: Mediator role of mindfulness. *Behavioral Sciences*, 8(1), 12.
- Holinka, C. (2015). Stress, emotional intelligence, and life satisfaction in college students. *College Student Journal*, 49(2), 300-311.

- Husin, N.A., Mohd Salleh, M.F., Saad, M., Abbas, M.S., Alias, Z., Yulia, A. (2017). *Business Research A Step-by-Step Approach for Beginners*. Shah Alam, Selangor: Imtiyaz Multimedia & Publication.
- Institute for Public Health (IPH) 2017. National Health and Morbidity Survey (NHMS) 2017: Adolescent Health Survey 2017, Malaysia.
- Jain, G., & Singhai, M. (2018). ACADEMIC STRESS AMONGST STUDENTS: A REVIEW OF LITERATURE. *Editorial Board*, 58. Malaysian Healthcare Performance Unit, Malaysian Mental Healthcare Performance: Technical report 2017, Ministry of Health Malaysia: Putrajaya. p. 1-67.
- Marksberry, K. (2019). What is Stress? - The American Institute of Stress. Retrieved 8 January 2020, from <https://www.stress.org/what-is-stress>
- McGonigal, A., Micoulaud-Franchi, J. A., Bartolomei, F. (2015). Ultra-short screening instruments for major depressive episode and generalized anxiety disorder in epilepsy: the NDDIE-2 and the GAD-SI. *Journal of affective disorders*, 210, 237-240.
- Mousavi, M. P., Sohrabpour, Z., Anderson, E. L., Stemig-Vindedahl, A., Golden, D., Christenson, G., ... & Bühlmann, P. (2018). Stress and mental health in graduate school: How student empowerment creates lasting change. *Journal of Chemical Education*, 95(11), 1939-1946.
- Northern, J. J., O'Brien, W. H. & Goetz, P. W. (2010). The development, evaluation, and validation of a financial stress scale for undergraduate students. *Journal of College Student Development*, 51(1), 79-92.
- Perveen, A., Govindasamy, P., Morgul, E., Abas, N. A. H., Kee, P., Hamzah, H. B. (2019). Life style behaviors as contributing factors of depression among university students. *International Review of Social Sciences (IRSS)*, 7(4), pp. 161–170.
- Reddy, K. J., Menon, K. R., & Thattil, A. (2018). Academic stress and its sources among University students. *Biomedical and Pharmacology Journal*, 11(1), 531-537.
- Roksa, J., & Kinsley, P. (2019). The role of family support in facilitating academic success of low-income students. *Research in Higher Education*, 60(4), 415-436.
- Romo-Nova, F., Bobadilla-Espinosa, R. I., Tafoya, S. A., Guízar-Sánchez, D. P., Gutiérrez, J. R., Carriedo, P., & Heinze, G. (2019). Major depressive disorder in Mexican medical students and associated factors: A focus on current and past abuse experiences. *Journal of affective disorders*, 245, 834-840.
- Ronksley, P. E., Brien, S. E., Turner, B. J., Mukamal, K. J., & Ghali, W. A. (2011). Association of alcohol consumption with selected cardiovascular disease outcomes: a systematic review and meta-analysis. *Bmj*, 342, d671.
- Sharma, B. Kumar, A. and Sarin, J. (2016). Academic Stress, Anxiety, Remedial Measures Adopted and Its Satisfaction among Medical Student, A Systematic Review, *International Journal of Health Sciences and Research*, 6(7), 368-376
- Schane, R. E., Ling, P. M., & Glantz, S. A. (2010). Health effects of light and intermittent smoking: a review. *Circulation*, 121(13), 1518-1522
- Sheikh, M. A., Abelsen, B., & Olsen, J. A. (2016). Clarifying associations between childhood adversity, social support, behavioral factors, and mental health, health, and well-being in adulthood: a population-based study. *Frontiers in psychology*, 7, 727.
- Stallman, H. M. (2016). Psychological distress in university students: A comparison with general population data. *Australian Psychologist*, 45(4), 249-257.

- Subramani, C. and Kadiravan, S. (2017). Academic Stress and Mental Health among High School Students, *Indian Journal of Applied Research*, 7(5).
- Tambawal, M. U., & Solomon, B. T. (2019). Relationship among Academic Stress, Depression and Mental Health of Final Year Students of Tertiary Institutions in Sokoto Metropolis. *Prestige Journal of Education*, 2(1).
- Velten, J., Bieda, A., Scholten, S., Wannemüller, A., & Margraf, J. (2018). Lifestyle choices and mental health: a longitudinal survey with German and Chinese students. *BMC public health*, 18(1), 632.
- Velten, J., Lavallee, K. L., Scholten, S., Meyer, A. H., Zhang, X. C., Schneider, S., & Margraf, J. (2014). Lifestyle choices and mental health: a representative population survey. *BMC psychology*, 2(1), 58.
- World Health Organization. (2013). Mental health action plan 2013-2020.
- World Health Organization. (2017). *Depression and other common mental disorders: Global Health estimates*. Geneva: World Health Organization.
- WHO | Mental health: a state of well-being. (n.d.). Retrieved 24 February 2019 from https://www.who.int/features/factfiles/mental_health/en/
- Zafirah, H. R., Salwa, H. M. S., Kamaruddin, N. F. L., Ahmad, M. W., Nurzhafri, Z., Aini, M. N. N., ... & Razali, S. (2016). Psychological Distress and Lifestyle of Malay Medical Students. *Journal of Medical Education*, 15(2).