

Life Style Behaviors as Contributing Factors of Depression Among University Students

ASMA PERVEEN

Universiti Pendidikan Sultan Idris (UPSI)
Email: asmaperveen@fpm.upsi.edu.my
Tel: +601135542399

PRIYALATHA GOVINDASAMY

Universiti Pendidikan Sultan Idris (UPSI)
Email: Priyalatha@fpm.upsi.edu.my

EBRU MORGUL

İbn Haldun Üniversitesi
Email: ebumorgul@gmail.com

NURUL AIN HIDAYAH ABAS

Universiti Pendidikan Sultan Idris (UPSI)
Email: nurulain@fpm.upsi.edu.my

PAU KEE

Universiti Pendidikan Sultan Idris (UPSI)
Email: pau_kee@fpm.upsi.edu.my

HAZALIZAH BINTI HAMZAH

Universiti Pendidikan Sultan Idris (UPSI)
Email: Hzalizah@fpm.upsi.edu.my

Abstract

This study was proposed to evaluate student's life style behaviors as contributing factors of depression. Life style is very significant to predict mental and physical health. This study highlighted the importance of life style behaviors as predicating factors of depression. Students now a day's having challenging life style and having maladaptive behavior to handle stressors which eventually drain their productive skills to be active and healthy. Research design was cross sectional survey method, students (N=240), age (18-30 years) (Mean=22.0) were selected through randomly sampling from different faculties of Sultan Idris Education University. Structured questionnaire were used to assess the demographic information. Life style behaviors, including diet patterns, physical activity, study habits, social support, and mobile usage, financial stress, shopping behavior and sleep quality were measured by using Lifestyle Behavior Questionnaire. Depression was assessed by using Beck depression inventory. Results highlighted that students diet patterns, sleep patterns, social interaction and obsessed gadgets were significantly predicting depression among university students ($p < .000$). The study found the importance of life style behavior and depressive symptoms among students. This study is helpful for students and academician to increase their understanding about healthy life style behavior. Study results emphasis to enhance students healthy life style to promote healthy mental health.

Keywords: *Life Style, Behaviors, Depression, Mental Health, Social Support.*

Introduction

Not only in Malaysia, are countries all over the world also trying to increase the mental health of their students. A survey data obtained in a study conducted by Hunt and Eisenberg (2010) universities in United States found out that 17% of students had positive screens for depression, including 9% for major depression and 10% of students had a positive screen for an anxiety disorder. Stallman (2010) conducted a study on students from two major Australian universities showed the prevalence of elevated distress among the student health service sample double that of health service patients drawn from the general population. Depression has a lifetime prevalence approaching 17%, and is likely to become the second largest disease burden globally by 2020 (Whiteford et al., 2013). In Iran, it has been reported that 43.5% of the adolescent population is afflicted with depression (Sajjadi et al., 2013).

Each lifestyle behavior was independently associated with depression in the expected direction, and there was also evidence of a dose-response relationship. Compared to those having 0 positive lifestyle factors, those with 1, 2, and 3 positive lifestyle factors, respectively, were 15% ($p=0.38$), 67% ($p=0.001$), and 82% ($p=0.01$) less likely to be classified as having moderate or greater depression symptoms ($PHQ-9 \geq 10$). Study revealed that there is relationship between concurrent occurrence of positive lifestyle behaviors and depression symptoms (Paul & Sarah , 2014)

Literature Review

Unhealthy lifestyle and lower self-esteem held a more negative health promotion attitude. students needs special consideration in making healthy lifestyle choices, improving their self-perception and health promotion attitude. (Bake et al, 2017) Some studies have evaluated the association between various dietary patterns and depression status (Lai et al., 2014). Findings from a meta-analyses have indicated that adherence to a healthy pattern with high intakes of vegetables, whole grains, fruit and fish, may be related to a reduction in depression risk (Lai et al., 2014). The participants reported their physical activity over the past year. Specifying the frequency, duration, and thus intensity was determined for physical activity. (Demirci et al., 2015).

Ross and Hayes (1988) entitled "Exercise and Psychologic Well-Being in the Community" The outcome of the study suggested not only that exercise, sports, and physical activities is associated with improved psychologic well-being, exercise is linked to reduced symptoms of depression and anxiety. Compared to this study, our study is focused on only physical activity and depression.

Uebelacker, Eaton, Weisberg, Sands, Williams, Calhoun et al. (2013) revealed Social support and Physical Activity as Moderators of Life Stress in Predicting Baseline Depression to indicate the role of social support and physical activity between stressors and increasing risk of depression symptoms at baseline and at 3-year follow-up. The study emphasis the social support and physical activity can reduce the level of depression among youngsters. Thomee, Harenstam and Hagberg (2011) have determined the association between psychosocial aspects, mobile phone use and mental health symptoms among young adults. Study revealed significant relationship of mobile usage and depression. Stoical support can reduce the level of depression and mobile usage can increase the chances of depressive symptoms. Having depression or anxiety, showed statistically significant associations with smartphone addiction. Depression and anxiety scores emerged as independent positive predictors of smartphone addiction, after adjustment for confounders.(Boumosleh, 2017)

Varveri, Novara, Petralia, Romano and Lavanco (2014), analyzed the relationship of depression, coping strategies and levels of problematic shopping behaviors among adults. The result of study indicated the presence of significant correlation between problematic shopping and depression. The behavior related to impulsive buying also effect on our mood and can increase the level of depression in high score of impulsive buying.

Cho, Kim, Park, Lee, Jeong, Kang et al. (2013) have conducted a study involving Korean workers to understand sleep quality and depression. This study presented that the depressive symptoms of female workers are closely interrelated to their job stress and sleep quality. Considering the fact that the students had an average score of health promoting lifestyle, paying attention to the health education and the behaviors related to the health promotion of this population is more essential and cost-effective. (Moghaddam et al , 2017). It is significant for students to overcome their stressors related to academic tasks.

The lifestyle is closely connected to the health. It means that if a person follows a healthy lifestyle, it will improve the person's health promotion. The aim of enhancing people's lifestyle is to empower the people in order to modify their lifestyle and have more control over their health, and finally enjoy their lives (Ayaz, 2015). Health promoting lifestyle help in maintaining mental health, being responsible for maintaining and promoting the individual and social health, maintaining interpersonal relationships to enhance the social aspect of health, stress management to prevent physical and mental diseases, and physical activity and finally having a healthy diet in order to maintain good health in life (Kim, 2017).

Health problems such as obesity, cardiovascular disease, hypertension, diabetes, and cancer are closely linked to lifestyle (Alpar et al 2016). Two objectives are considered for promoting public health and preventing disease. The first one is promotion of health-inducing behaviors and the second one is creation of a healthy social and physical environment in order to improve the people and society health (Anderson & Pullen 2013).

A large number of youth population in Iran are students. Due to their age and social status, this group can be a pattern for others. Hence, their choices for having a healthy or unhealthy lifestyle not only have impact on their own personal life, but also affect the lifestyle of other society groups. Therefore, promotion of healthy lifestyle in this group is very important, because they can promote health enhancing issues associated to themselves, family, and community (Tavassoli et al, 2011).

Students daily life style behavior are significantly effecting on their mental and physical health. Social support, physical activities, friendly and open atmosphere can increase the mental well-being among students. (Cha, 2016) because their lifestyle improvement is even more essential to increase their efficiency and productivity.

Research Questions

- a. To evaluate the level of depression among university students.
- b. To highlight the significance of life style behavior and depression among university students.

Theoretical Framework

The general purpose of this study is to determine whether life style behavior will affect depression. It measures a variety of aspects in life such as diet, physical activity, mobile usage, social support, study habit, sleep quality, financial stress and shopping behavior.

Beck's Cognitive Theory of Depression

Beck's Cognitive Theory of Depression was formed under the foundation of nature of depressive thinking. Dysfunctional belief added with significant life event leads to negative self-schema. It causes an individual to interpret experiences in negative and distorted ways. Therefore, these negative interpretation, in turn, causing oneself to view himself or herself, the world and the future negatively.

These 3 elements are referred as negative cognitive triad, which are viewed as primary symptoms of depression (Beck, 1972). They also are connected to other features of the disorder such as somatic, motivation and affective disturbances. These thoughts are believed to have reflective quality. They becoming increasingly repetitive and intrusive as depression worsens. Thus, in extreme cases, an individual may unable to concentrate and engage in normal activities.

According to Beck, people who are depressed possess a negative self-schema that results them to interpret information in a distorted fashion. They focus on the negative aspects of their life and such behaviour cause the negative cognitive triad to persist within their mind. Most common interpretation that depressive individuals usually have are arbitrary inferences, selective thinking, overgeneralization, catastrophizing, personalizing and black and white thinking.

Method

The purpose of this study was to evaluate and understand student's lifestyle behaviors as contributing factors of depression. Thus, the researchers used cross-sectional survey in order to collect the data as different respondents are studied at different points in time (Cohen, Manion & Morrison, 2011).

For sampling selection, stratified random sampling procedure was applied to select the sample from 9 faculties. The total number of responded (N=240), age (18-30 years). There are 15,108 undergraduates in Universiti Pendidikan Sultan Idris. Research was carried by following the Ethical committee of Research and Innovation center, Sultan Idris Education University.

However, as the number of students in each faculty differed, different number of students will be selected from each faculty as representatives. For instance, there are 2161 undergraduates in Language and Communication Faculty. Using formula of number of undergraduates in selected faculty over total number of undergraduates times 240, 34 students from each faculty participated in the study.

Measures

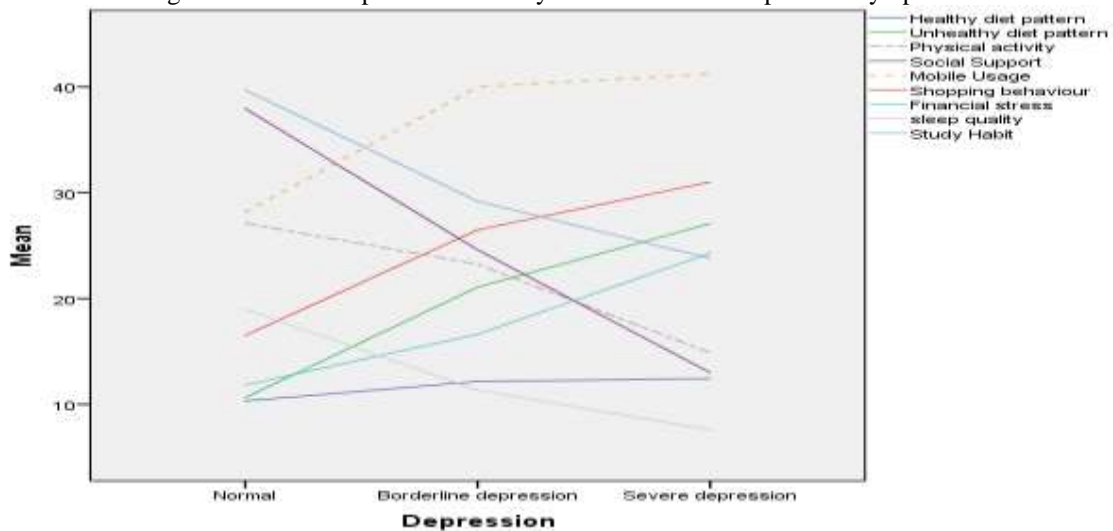
Adapted Diet Questionnaire, Godin Time-Leisure Exercise Questionnaire, Mobile Phone Involvement Questionnaire (MPIQ), Multidimensional Scale of Perceived Social Support (MSPSS), Adapted Sleep Quality Index (SQI), Buying Impulsiveness Scale, Financial Well-Being Questionnaire, Study Habits Questionnaire and Beck Depression Inventory (BDI).

Analysis

Results were interpreted to highlight the significance of variables scores. According to results students' life style behavior is highly contributing depressive symptoms. Most of the students in the study were students between 18 -30 years, with the mean (mean=27.0) female were (N=198), male (N=42), with most reported race Malay (N=200).

The students were studying in different faculties as from Languages and Communication Faculty (n = 34), Human Development Faculty (n = 34) , Art, Computing and Creative Faculty (n = 34), Human Sciences Faculty (n = 31) and Science and Mathematics Faculty (n = 31), Management and Economics Faculty (n = 24), Sport Sciences and Coaching Faculty (n = 24), Music and Performing Art Faculty (n = 13) and Vocational and Technical Education Faculty (n = 15) participated. The higher percentage of student were studying in degree program (N= 230).

Figure 1: Mean comparison of life style behaviors with depressive symptoms



Results revealed that high score on mobile usage, shopping behavior, financial stress, and unhealthy diet pattern shows high level of mean with sever symptoms of depression. Meanwhile high score on healthy diet patter, physical activity, sleep quality and study habits have low level of score on severe depressive symptoms.

Table 1: Depression frequency among Students

Depressive symptoms	Frequency	Percent
Normal	63	26.3
Borderline depression	37	15.4
Severe depression	140	58.3
Total	240	100.0

Results shows that among university students 63% reported normal score, 37% borderline score and 140% severe level of depressive symptoms

Table 2: Taking Self Prescribed Medication and Depressive symptoms

		Take Self Prescribed Medication				
		Never	Most of the time	Sometimes	Very often	Total
Depression	Normal	48	1	12	2	63
	Borderline depression	24	0	11	2	37
	Severe depression	77	4	55	4	140
	Total	149	5	78	8	240

According to the results, most of the respondents never taken self-prescribed medication, but (N=77) reported sometime. This indicate that students have unhealthy behavior to manage physical or psychological health by using self-prescribed medication. According to analyses taken self-prescribed medication sometimes (N=55) have reported sever depressive symptoms.

Table 3: Multiple regression analysis of life style behavior and Depressive symptoms

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.969 ^a	.940	.937	2.163

a. Predictors: (Constant), Healthy diet pattern, physical activity , Mobile Usage, Study Habit , Shopping behavior, sleep quality, Unhealthy diet pattern, Social Support , Financial stress

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	16753.339	9	1861.482	397.810	.000 ^b
Residual	1076.245	230	4.679		
Total	17829.583	239			

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	21.734	1.844		11.789	.000
Study Habit	-.113	.022	-.117	-5.040	.000
sleep quality	-.227	.039	-.155	-5.822	.000
Financial stress	.349	.043	.250	8.036	.000
Shopping behavior	.053	.023	.054	2.347	.020
Mobile Usage	.048	.022	.048	2.235	.026
Social Support	-.157	.022	-.222	-7.237	.000
Physical activity	-.177	.031	-.142	-5.732	.000
Unhealthy diet pattern	.161	.029	.155	5.486	.000
Healthy diet pattern	.032	.032	.016	.972	.332

a. Dependent Variable: Depression

Results shows that study habits, sleep quality, financial stress, social support, physical activity and unhealthy diet pattern predict significantly depressive symptoms among students. $F(9,230)=397.1, p<.000$, R^2 94%. Shopping behaviour, mobile usage also predict low level of depression. Results revealed that increased score on study habits, sleep quality physical activity, and social support reduce the score of depression. Meanwhile increased score on financial stress, unhealthy diet pattern, shopping behaviour, and mobile usage increase the score of depression.

Discussion

Results revealed that life style behavior have significant contribution in depressive symptoms among students. There is high reported severe depression scores among students, which reflects students need to understand there life style behavior which are contributing to depression. Mental health issues, according to the World Health Organization (WHO) are one of the leading causes of disability worldwide. Three of the

ten leading causes of disability in people between the ages of 15 and 44 are mental disorders, and the other causes are often associated with mental disorders, majority of young adults are suffering with depression which is associated with many life style behaviors. (Abdel, et al 2017). The mental health action plan for 2013–2020, recently published by the WHO, demonstrated the need for a collective evidence based effort to improve mental health. (World Health organization, 2013).

Results showed in table 2 revealed that there are high prevalence of self-prescribed medication among university students, which might reason of undiagnosed depressive symptoms. The prevalence of the practice of self-medication was high among the age group of 25 – 44 years but lower in the 15 - 24 and \geq 45 year age groups, respectively. Females exhibited higher prevalence of self-medication than males. Among undergraduates, self-medication increased as the students' class level in the university increased, self-medication effect negativity on emotional problems like depression. (Osemene & Lamikanra, 2012). Recent reports indicate that mental health disorders and substance misuse are an important cause of disability adjusted life years and the leading cause of all non-fatal diseases globally (Whiteford et al., 2013). Depression is one of the most common mental health conditions. It is a heterogeneous disorder with behavioral, psychological, and somatic symptoms (Jacka et al., 2015).

Current study indicated that unhealthy diet pattern can increase level of depression among students. Depression had a greater risk for less healthy diet quality which can affect overall health and well-being. (Ismaeel, et al. 2018). Increased sleep quality, study habits, and physical exercise and social support can reduce depression among university students. There is a significant association between leisure-time physical activity and depression, (Xu, Liu, et al 2018), sleep quality and social support has a potential effect on perceived stress level and academic performances among undergraduate students (Sertel, et al , 2017).

There are many evidence that students who actively engaged in exercising showed lower level of depressive symptoms. Physical activity and depression was measured among the university students. (Galper, et al 2016) The result indicated that there is an inverse association between physical activities and estimated mean scores of depression, which is in line with the result found by Goodwin (2003) and reflected the consistency in findings in the relationship between physical activity and depression. Uebelacker, Eaton, Weisberg, Sands, Williams, Calhoun et al. (2013) carried out a study “Social support and Physical Activity as Moderators of Life Stress in Predicting Baseline Depression and Change in Depression Over Time in the Women’s Health Initiative” to indicate the role of social support and physical activity to reduce stress and depression. Social support is significant element of our life style behavior. More social connection can reduce the feelings of isolation and enhance the personal and social well-being.

Healthy intake of diet, like vegetables, fruits, fresh juices and timely taken meal can increase the quality of life and positive emotions. Peltser and Pengpid (2017) conducted a study to determine the effect of dietary behaviors on psychological well-being. The findings demonstrating that healthier dietary behaviors were correlated with better psychological well-being and lower mental distress. Breslau, Roth, Rosenthal and Andreski (1996) to indicate the relationship between sleep disturbance and psychiatric disorders. Ayodele & Adebisi, (2013) revealed in a study the relationship of sleep quality and mental health, the result suggested that students who claimed that they had experienced anxiety or depression showed higher scores in PSQI which indicates poor sleep quality.

Bahrami, Rajaeepour, Rizi, Zahmatkesh and Menatolahi (2011) suggested that there was significant relationship between happiness and studying time and found negative correlation in study time and depression, students those spend more quality time in study have less score on depression scale. In present research there is evidence of sleep quality score and its negative association with depression score.

Results of study revealed that there was sleep quality and study habit and social support can predict depression, the increase score on study time and sleep quality and social support reduce the score on depression($p < .000$).

Mobile usage, shopping behavior and financial stress are reported significantly predicating depression among university students. According to results, it is concluded that depression have significant correlation with depression, shopping behavior have significant positive relationship with depression, as financial stress is positively correlated with depression. Students those who reported high scores on depressive symptoms, have significantly higher symptoms of depression. Demirci, Akgönül and Akpınar (2015) carried out a study entitled "Relationship of Smartphone Depression, and Anxiety in University Students. Smartphone Addiction Scale was also given to all groups except non-user group. Positive correlations were found between the Smartphone Addiction Scale scores and depression levels, anxiety levels, and some sleep quality scores. Present research found that increase score on mobile usage, shopping behavior and financial stress significantly predict ($p < .000$) depression. The increase score on mobile usage, shopping behavior and financial stress also increase the score of depression among students.

Tummala & Sathasivam (2013) determine that low level of finance, escalate the risk of depressive symptomatology among youngsters. The study indicated that financial strain can have negative effects on depressive symptoms and relationships in couples who are coping with job loss. Varveri, Novara, Petralia, Romano and Lavanco (2014) indicated that the presence of significant correlation between problematic shopping and depression. Bani-Rshaid and Alghraibeh (2017) have also conducted a study related to buying behavior and depression and the results indicated that there is a significant positive relationship between compulsive buying disorder and depressive symptoms. This study supporting the finding of our results that there is positive relationship between scores of depression and shopping behavior.

Conclusion

Research study had concluded that the life style behaviors are affecting our mental health. The way we spend our daily routine can increase or decrease our quality of well-being. Study emphasis on healthy life style behavior to promote good mental health. Student's healthy mental health and productive behavior is main focused of our institutions. Universities need to highlight the significance of healthy life style behavior to promote healthy behavior and education outcome among students. Our University system need to promote healthy behavioral activities to encourage the students to increase their well-being. Future studies are needed to explore the barriers that prevent students from practicing health-promoting behavior.

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