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Knowledge of Balanced Diet and Awareness of Co-Curriculum Activities on Student Mental Health

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Abstract

The current pandemic has had an impact on the mental health of students with the implementation of new norms in daily practice that also changed the landscape of teaching and learning activities today. This study which utilized quantitative research methods with survey design involved a total of 352 students at the Islamic University College of Melaka. Questionnaires adapted from the Depression, Anxiety, Stress Scale (DASS-21) instrument as well as nutritional practices and physical activities by Burton (1999) were used to measure students' Depression, Anxiety and Stress. For the first hypothesis, the result of Pearson Correlation analysis found that there was no relationship between knowledge of balanced food intake and students' mental health ($r = -.002, k > .05$). Next, the second hypothesis found that there was a relationship between student's awareness of co-curricular activities on students' mental health. ($r = -.112, k < .05$). The results of the study clearly show that the level of knowledge on balanced food intake has no correlation with mental health. However, knowledge of physical activity does correlate with mental health. A balanced diet is very important for energy and fitness. Therefore, this clearly shows the need to emphasize the level of awareness of students on a balanced diet. It ensures a good level of mental health because they are more energetic, and can perform physical activities more effectively while adhering to the practice of new norms that have been set.

Keywords: Curricular Activities, Balanced Diet, Mental Health.

Introduction

In 2019, the world was greatly affected by the Novel Coronavirus outbreak or more commonly known as COVID-19 which has then spread across the globe. The pandemic has not only impact economic sustainability and socio-cultural activities but has also put pressure on other global human activities. The education system particularly, has been greatly affected. The practice of new norms is changing the landscape from face-to-face teaching and learning activities to online virtual activities. This lack of interpersonal interaction can cause students to experience physical, mental, and social problems.

It is vital in life to have a healthy life. The term healthy it is attributed to a balance between a person's physical, mental and social well-being. When it comes to mental health, it refers to the mental state of individuals and their ability to cope with stress, as well as being a productive worker and contributor to society (World Health Organization, 2007).

Referring to the statistics released by the Ministry of Health Malaysia (2016) the prevalence of mental health problems among individuals aged 16 years and above was 29.2% (approximately 4.2 million Malaysians). This meant that 1 in 3 Malaysians experienced issues related to mental problems. A worrying trend that was discovered was the frequency of mental health problems which was highest among those aged 16 to 19 years and among the low-income group (National Morbidity Health Study, 2016). University students who were somewhat in this age group were also prone to mental problems due to various psychosocial changes and academic stress. Therefore, university students need to adapt to these changes in order to prepare for a more challenging professional career (Uehara et al. 2010).

The report from the Institute of Public Health and the Ministry of Health Malaysia (2017), found that the number of individuals suffering from mental health burden was high among Malaysians, involving a total of 4.2 million (29%). Even more worrying was that adolescents aged 16 years and above were those who show an increase in percentage of high mental health problems of 30 percent. The state with the highest percentage of people with mental health problems was Sabah (42.9%) followed by the Federal Territory of Kuala Lumpur which was in second place (39.8%). The state of Kelantan recorded the third highest place to experience this problem at 39.1 percent. States with the fewest cases are Putrajaya (20.7%), Penang (19.1%) and Perak (17%). As for the percentage of gender, women recorded a high percentage of 30.8 percent compared to men (27.6%) in mental health problems. Based on the overall percentage of the Malaysian population, these findings indicated that mental health problems in the country were at a serious and alarming level.

According to Fazley (2020), due to the pandemic, most university students felt a negative impact on learning because they had to do more homework, had no access to university services and friends; thus, causing a decline in motivation. From the financial aspect, many students felt burdened when they had to spend money to buy internet data in order to attend online classes, online exams and even to submit assignments. To enable students to attend online classes, they need a fast and uninterrupted internet connection. However, all of these require high costs (Hasnah, 2020). Thus, they were forced to adapt to these changes which might actually prepare them to face a more challenging future career (Uehara et al, 2010). In addition, Shamzaefa et. al, (2016) also argued that the stability of students' mental health could also be disturbed due to lack of support from classmates and the increase in academic stress.

Hence, this study set out to find whether it will be beneficial for students to be actively involved in co-curricular activities in addition to maintaining a balanced diet since they were found to help students achieved a balanced of physical and mental health. Furthermore according to (Jeong, 2009), severe psychological effects and chronic illness are associated with unbalanced diet. An unbalanced diet was also found to affect concentration during learning sessions (Amey et al., 2016). These findings established the role of dietary habits and behaviors on physical and mental health.

Several studies involving university students found that they did not adopt healthy eating habits and patterns in dietary intake. Many among the younger generation today especially teenagers do not care about the importance of taking breakfast. This condition occurs especially among students who live far away from family (Antonopoulou et al., 2020).

This study attempts to fill in the gaps from past studies that mostly examine the impacts of co-curricular activities on physical and mental health of students (Iqbal 2019; Jasmi et al, 2015; Mammen 2013 & Mohamad et al, 2002) and there are several studies about the role of diet and nutrition on mental health and wellbeing (Antonopoulou et al., 2020; Aune et al, 2017; Gangwisch et al, 2017; Knuppel et al, 2017; Lang et al 2015 & Smith et al, 2014). However, there is a lack of studies examining these combined variables which is the relationship between knowledge of balanced diet and awareness of co-curricular activities on students' mental health.

Methodology

This study involved a total of 352 students at the Islamic University College of Melaka. The sample size was determined by looking at the factors selected in the study. Other factors considered in determining the sample size are accuracy, cost, and type of statistical test, variable characteristics and population size. According to Hair et. al., (2010), when determining the right sample size, it should follow a five to one ration. This meant that for the study, five samples are required in each independent variable in the regression equation. Additionally, it was also suggested that the number is increased from fifteen to twenty samples for all variables to strengthen the data collected. Because the study had two variables, forty respondents were considered as the appropriate sample size. The determination of the sample size of this study was also determined by referring to the table of Krejci and Morgan (1970). The estimated population of the study is 5000 students. Therefore, the suggested sample size was 350 to 360 people.

Quantitative research methods using survey design was conducted by distributing survey forms as an instrument to measure the hypotheses that had been formed. This questionnaire consisted of five sections, namely the profile of respondents, menu selection and meal intake time, experience and knowledge on balanced diet, student awareness related to co-curricular activities and items related to mental health. The research instrument was adapted from the Depression Anxiety Stress Scale (DASS-21) questionnaire. While the variables related to nutritional practices and physical activity contain 26 items that have been adapted using a questionnaire instrument by Burton (1999). Pearson Correlation Analysis was used to test the hypotheses that had been developed by the researcher.

Findings

Descriptive Analysis

The table below (Table 4.2.1) identifies the distribution of gender among the respondents.

Table 4.2.1: Distribution of Respondents Based on Gender

Gender	Frequency	Percentage (%)
Male	52	14.8
Female	300	85.2
Total	352	100

Referring to the table above, the number of male respondents was 52 (14.8%) while the number of female respondents was 300 (85.2%). Thus, it was clear that female respondents outnumbered male respondents in this study.

Inference Analysis

Hypothesis 1:

There is a Relationship between Knowledge of Balanced Food Intake and Students' Mental Health

Table 1: Knowledge of Balanced Diet and Students' Mental Health

Variable	Mental Health
Knowledge of balanced diet	-.002

$k > .05$

Based on table 1, the results from the Pearson correlation test showed that there was no correlation between knowledge of balanced diet and the mental health of students ($r = -.002$, $k > .05$); hence, the first hypothesis was rejected. In essence, the study found no correlation between knowledge about balanced diet and the mental health of students. In other words, the mental health of students did not correlate with a balanced diet.

This definitely contrast with the findings of a similar study conducted by Jeong (2009). According to him, severe psychological effects are associated with unbalanced diet and chronic illness. Another study by Amey et al., (2016) also stated that an unbalanced diet also affects concentration during learning sessions. Many among the younger generation today especially teenagers do not care about the importance of taking breakfast. They leave breakfast for various reasons such as no appetite in the morning and do not have time to prepare breakfast (Shariff et al., 2008)

This finding was also different from the study conducted by Sominsky and Spencer (2014), who found that the quality of diet, attitudes and behaviors of food intake are in relations with mental health and stress. In contrast, this study found no significant correlation between sweets, cakes, and snack scores with stress. El Ansari et al., (2015) in their study stated that dietary compliance index was not associated with stress, while subjective assessment of healthy eating was consistently linked negatively to stress. These findings were seen in line with the findings of this study which showed no relationship between balanced food intake and mental health.

However, the same study found that groups of students who ate less fruits and vegetables in their diet scored higher in stress related items (El Ansari et al., 2015). This relationship was seen to be more pronounced among male students than female students. It also proved that the selection of healthy foods such as fruits could reduce the level of stress among students particularly on male students who consumed less fruits.

Fruits and vegetables are part of a dietary composition which are beneficial to general health that can prevent cardiovascular disease, cancer, and premature death (Aune et al., 2017). However, the mechanism of its influence on mental health is still unknown (Rooney, 2013). The amount of nutrients contained in certain fruits and vegetables may contribute to a positive effect on mental health. Among those known to be related to mental health are complex carbohydrate elements associated with glycemic index (Knuppel et al., 2017; Gangwish et al., 20165). However, Lang et al., (2015), explained that the relationship between a healthy diet intakes may occur due to higher levels of mental health which led to increase consumptions of healthy food, including higher fruit and vegetable intake. Smith et al., (2014) also argued that psychologically, better diet including higher intake of fruits and vegetables can lead to positive emotions and better mental health.

Hypothesis 2: There is a relationship between student awareness in co-curricular activities and students' mental health

Table 2: Students' Awareness in Co-curricular Activities with Mental Health

Variable	Mental health
Students' Awareness in Co-curricular Activities	-.112

* $k < .05$

The table above shows the results of the correlation analysis between student awareness in co-curricular activities with students' mental health. The result from the test suggested that there was a relationship between student awareness in co-curricular activities and students' mental health ($r = -.112, k < .05$). Thus, the second hypothesis was accepted, namely that there was a relationship between student awareness in co-curricular activities and students' mental health. Therefore, it is clear that when students engage in co-curricular activities such as sports, clubs and associations, they will gain a healthy mind as a result of good socialization with friends and people around them.

Students who schedule their daily physical activities as a daily routine will be more energetic and fit and able to focus during the teaching and learning sessions. Stretching activities that become a daily routine are important to ensure the level of fitness and intelligence is at an optimal level so that they are at a high level of fitness in acquiring knowledge (Jasmi et al., 2016).

According to Rosli and Muda (2010), having a strong and energetic body to perform various outdoor activities are important to maintain health. This is because good health gives us the confidence to face people and the courage to voice or give opinions and views. In addition, good body health also makes us comfortable to communicate with the people around us.

The level of mental health of university students is an important issue because it is closely related to their academic performance as well as their overall well-being. Academic performance is one of the signals to the productivity of a student and individuals with high productivity are important assets to the development of the country (Shamsudin, S. & Chee Hong, K. T. 2016). The ability to communicate and voice views and opinions can contribute to mental health stability. Jaafar and Yusof (2002) and Sumarni Dahrir and Borhan Yusof (2002) also stated that co-curricular activities are activities that can develop social skills, mix, be friendly, positive personality, leadership, community and responsible nature and finally be able to form skilled students in public relations.

Walsh (2011), argued that lifestyle factors affect physical and mental health. Meanwhile, Mohamad and Fauzee (2002), argued that in sports activities there are motivational factors, training process, self-satisfaction and life, personal relationships and performance achievement which are among the determinants of positive self-image and subsequently produce positive thinking and ensure the achievement of a goal.

Mammen and Faulkner (2013) who analyzed 30 studies related to the relationship of lifestyle and mental health had identified physical activity as an important protective factor in reducing the risk of depression. Mammen and Faulkner (2013) also found positive effects of exercise and sports in reducing anxiety symptoms in anxiety patients and reducing the risk of getting chronic diseases. This proves that lifestyle choices have contributed to a person's mental health. Therefore, the findings of this study are in line with previous studies that

healthy physical activity contributes to good mental health. Therefore, it is very appropriate for students to be actively involved in co-curricular activities to ensure balanced physical and mental health.

Conclusion

This study was conducted to provide exposure to students on the importance of nutritional care and active co-curricular involvement in college. This is important to ensure that the physical and mental health of students is in good condition. Furthermore, this study is also beneficial for university administrators and counselors in helping students to actively engage in co-curricular activities in accordance with the new norms to produce healthy students. In addition to doing physical activities, a balanced diet should also be given attention to get complete nutrition. This situation also helps them to be mentally and physically healthy students. In conclusion, the selection of quality nutrition and active involvement in the co-curriculum is very important in ensuring one's mental and physical health. The university administration needs to provide leisure facilities and increase health promotion programs to motivate students to be actively involved in physical activities to ensure students to stay healthy at all times even in the new norms. At the same time, students also need to find initiatives to maintain peak levels of health to deal with stress, anxiety and depression.

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