

## The relationship between leisure activities and mental health disorders among higher education students in Malaysia

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### ABSTRACT

This study investigates the association between leisure activities (recreation, sports, social contact, artistic, cultural, religious, and rest) and mental health disorders among Malaysian university students. There were 332 respondents enrolled in the public and private universities, polytechnics and other higher academic institutions in Malaysia were surveyed using a quantitative questionnaire. The study performed multiple regression and correlation analyses on the data using the statistical package for social science (SPSS). The findings indicated that six out of seven categories of leisure activities were significantly linked to mental health issues. The six types of leisure time activities were recreation, sports, social interaction, cultural, religious, and rest. Cultural activities have the highest impact on mental health, with the highest beta value. The universities and polytechnics should consider launching several types of leisure activities and tailor specific activities that may reduce mental health issues.

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## 1. INTRODUCTION

A clinically significant change in a person's cognition, emotional control, or behavior coupled with a deficiency in fundamental functioning is the hallmark of a mental health disorder [1]. The World Health Organization (WHO) reported that 970 million people worldwide were living with mental health disorders in 2019, dramatically increasing by 28% during the COVID-19 pandemic to 2,141 million people in 2020 [1]. The coronavirus disease 2019 (COVID-19) lockdown measures have partially or fully closed schools and universities for more than 90% of the world's student population across 186 countries and territories, as reported by UNESCO [2]. Previous studies have found that adolescents and university students suffered from mental health issues like stress, anxiety, depression, and sleeping disorders during the lockdown in developing countries [3], [4].

According to the Malaysia's Ministry of Health, Malaysia's latest epidemiological statistics, released in 2015, the prevalence of mental health issues among Malaysian individuals aged 16 and older is also increasing, going from 11.2% in 2006 to 29.2% in 2015, nearly tripling [5]. Additionally, the study revealed that women, young adults, and adults from low-income households are at risk of mental health problems. Another published report [6] showed that young people tend to suffer more from mental health problems: 33.4% of Malaysian between the 16-24 age group, 29.65% of Malaysian between the 25-34 age group, and 28.2% of Malaysian between the 35-44 age group. Higher education students are part of young people who may also suffer from mental health disorders. Samsudin *et al.* [7] reported that undergraduate

students suffer from depression (38.8%) and stress (36.5%). The COVID-19 pandemic was causing a major increase in the number of cases. During the lockdown, the universities adopted distance learning, which heavily strained students' daily life and study habits, resulting in mental distress, increased the risk of psychiatric illness, increased self-reported anxiety levels and negatively affected sleep patterns [8]. However, the situation became worse when the lockdown ended and the reopening of all higher education institutions. As reported by UCSI, students are worrying about the transition period from online distance learning to face-to-face classes [9]. Regrettably, there are not many studies focusing on higher education students' mental health disorder levels in the Malaysian context during the COVID-19 endemic phase. Additionally, for several reasons, including conventional cultural beliefs and practices, ignorance or misunderstanding of mental health illness, mental health has not received much attention in Malaysia to solve the sickness issues [10], [11]. Therefore, there is a need to conduct this research.

People engage in leisure activities when they are not required by their studies, jobs, families, or communities. Engaging in leisure time has been found to have significant physical and psychological benefits [12]. For physical benefits, leisure time can lower blood pressure, and heart rate, reduce disease risk, manage weight, and improve brain healthiness. On the other hand, for psychological benefits, leisure time can reduce stress, anxiety, and depression; improve daily mood; provide a sense of balance; and a higher level of positive emotion [13]. In summary, leisure activities are essential for maintaining good mental health. Some researchers have revealed the importance of leisure time activities for mental health [14]–[16]. However, the leisure time activities among higher education students in Malaysia may differ from these activities. Therefore, a few types of leisure time activities (i.e., recreation, sports, social interaction, artistic activities, cultural activities, religious activities, and rest) that suit the Malaysian culture were selected to establish the theoretical framework for this study.

## 2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

### 2.1. Mental health disorders

Mental health is characterized as a dynamic internal equilibrium that enables people to apply their skills in accordance with society's core ideals [17]. The WHO defines mental health adverse conditions as mental disorders, psychosocial disabilities, and mental states associated with significant suffering, functional impairment, or risk of self-harm [18]. In 2020, 2,141 million people had been affected by mental health disorders, making it one of the major global health challenges [1]. Mental illness, which accounts for 8.6% of all disability-adjusted life years (DALYs) in Malaysia, is one of the main causes of disability and health loss [19]. The prevalence of mental illness is continuing to rise, affecting youth and students [11]. According to previous study [20], 31% of the respondents (university students) had an overall prevalence of anxiety symptoms, and another 34% had an overall prevalence of depressive symptoms. According to the study [21], university students who were the survey's target respondents, experience moderate to high-stress levels at a rate of 64.4%.

However, according to previous study [22], there was some amount of anxiety among Malaysian university students during the COVID-19 pandemic, and the findings were supported by other research [11] that Malaysian university students felt depressed, anxious, and stressed. Much of the current literature on mental health issues was assessed during the COVID-19 pandemic. However, the post-COVID-19 mental health may be in a different situation. Hence, it is necessary to evaluate how the post-COVID-19 situation is affecting the general and mental health of Malaysian university students.

### 2.2. Leisure activities

Zare *et al.* [14] explained that leisure time is when a person is not required to fulfill any obligations and can spend it on their interests instead. Four categories of leisure activities can be established: indoor activities (such as reading, singing, playing music, painting, and cooking); outdoor personal activities (such as sightseeing, jogging and shopping); outdoor group activities (such as hobby clubs, sports teams); and outdoor cultural and entertainment activities (such as watching sports, traveling, and watching movies) [23]. The purposes of leisure activities include relaxation, enjoyment, self-development, physical body management, brain healthiness, and interpersonal and intrapersonal aspects [13]. Leisure activities will increase individuals' perceptions of spending their time effectively and indirectly improve their physical or psychological mental health benefits [12]. By encouraging pleasant feelings connected to self-fulfillment and well-being, leisure activities are thought to operate as a buffer that influences people's interpersonal and intrapersonal elements against stressful encounters.

Past studies have demonstrated the importance of leisure activities on mental health disorders [14], [15], [24]. The findings from this research study show that leisure activities decreased the chance of depression in older adults [15]. Adults can preserve their cognitive, physical, and mental health by

participating in leisure activities [16]. Researchers hypothesized that exercise leisure programs [24]; group singing bereavement [25]; physical activities [26]; sports [27]; video games [28]; and leisure activities (i.e., art club, sports association, community group) [29] could be helpful for adults and young people with mental health disorders. There are several types of leisure activities, but only a few types of the leisure activities (i.e., recreation, sports, social interaction, artistic activities, cultural activities, religious activities, and rest) were selected based on their suitability in the Malaysian context. According to the above discussion, it is hypothesized that: Recreation has a negative relationship with mental health disorders among higher education students (H1); Sports has a negative relationship with mental health disorders among higher education students (H2); Social interaction has a negative relationship with mental health disorders among higher education students (H3); Artistic activities have a negative relationship with mental health disorders among higher education students (H4); Cultural activities have a negative relationship with mental health disorders among higher education students (H5); Religious activities have a negative relationship with mental health disorders among higher education students (H6); and rest has a negative relationship with mental health disorders among higher education students (H7).

### 2.3. Conceptual framework

To examine the research objectives, a conceptual framework has been established. It has seven independent variables and one dependent variable. The conceptual framework for this study is shown in Figure 1.

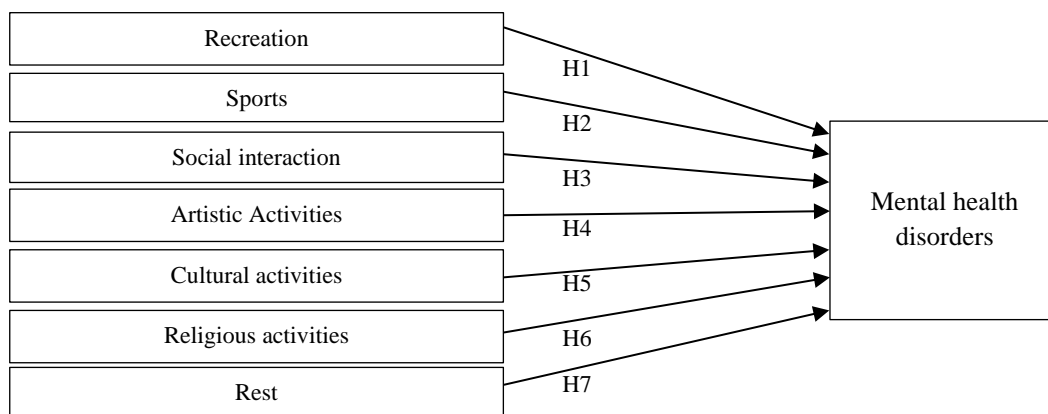


Figure 1. Conceptual framework

## 3. RESEARCH METHOD

### 3.1. Population and sample

The respondents who were enrolled in the public or private universities, polytechnics and other higher academic institutions in Malaysia were the study's target population. The G-Power calculation determined that 103 people would make up the minimum sample size for this investigation. By determining the number of samples to be included in the study by power analysis, it can be demonstrated that the results obtained are significant or not [30]. The convenience sampling strategy was adopted in this investigation because convenience sampling is usually low-cost and easy, with subjects readily available. In the absence of a sampling frame, convenience sampling allows researchers to gather data that would not have been possible otherwise [31]. The researchers have successfully collected 332 responses from the respondents.

### 3.2. Measures

To acquire input from the intended respondents, we used a research tool in the form of a questionnaire. Three sections make up the questionnaire: i) Section A is used to compile the respondents' demographic data; ii) Section B measures mental health disorders using the general health questionnaire (GHQ) adapted from previous research [14]; iii) Section C measures leisure activities such as recreation, sports, social interaction, artistic, cultural, religious, and rest [14]. Respondents are asked to score their degree of vitality and performance on a 5-point Likert scale, with "1" standing for "Strongly disagree or not at all" and "5" for "Strongly agree or much more than usual". The measures were then examined by SPSS to get results for discussion from the hypothesis testing.

### 3.3. Data collection procedure

We conducted the research to its completion using a quantitative approach, whereby we prepared the survey questionnaires in English via Google document format. The researcher engages an administrator on-site to help to facilitate the data collection process. The on-site administrator will send the online survey questions to the students. We gave the respondents one week to complete the survey. The secondary data was collected from articles, proceedings, research studies, and websites to support literature review. Hypotheses were developed according to the relevant literature. All data collection activities were conducted with online written consent from the respondents. The study was conducted in accordance with the declaration of Helsinki.

## 4. RESULTS

### 4.1. Profile of the respondents

The number of male respondents is 152 (45.8%), while the rest are 180 (54.2%) of female respondents. Most respondents are between 23 and 26 years old (40.1%), followed by age between 27 and 30 years old (31.3%). The number of respondents currently enrolling in a diploma program is 120; 96 respondents in a bachelor's degree program; 60 respondents in a master's degree program; 37 Ph.D. respondents and 19 respondents in other programs. Among the 332 respondents, 41.6% of the respondents are from the private universities, followed by 25.6% from the public universities and 24.7% from the polytechnics. Most of the respondents are studying ICT (31.9%), followed by art and social science (21.4%), education (14.8%), and healthcare (13.3%). Table 1 depicts the demographic profile of the respondents.

Table 1. Profile of the respondents

	Description (n=332)	Frequency (n)	Percentage (%)
Gender	Male	152	45.8%
	Female	180	54.2%
Age	19-22	85	25.6%
	23-26	133	40.1%
	27-30	104	31.3%
	Above 30	10	3.0%
Education Level	Diploma	120	36.1%
	Bachelor's Degree	96	28.9%
	Master's degree	60	18.1%
	PhD	37	11.1%
	Others	19	5.7%
Institution	Public University	85	25.6%
	Private University	138	41.6%
	Polytechnics	82	24.7%
	Others	27	8.1%
Courses	Science & Engineering	38	11.4%
	Information communication technology (ICT)	106	31.9%
	Art & Social Science	71	21.4%
	Healthcare	44	13.3%
	Education	49	14.8%
	Others	24	7.2%

### 4.2. Reliability test

By using Cronbach's alpha, we evaluated the data's dependability. The reliability test results are shown in Table 2, which demonstrate that the Cronbach's alpha for the study variables were higher than 0.70 [32]. This indicates that the internal consistency was acknowledged, and suitable for further analysis.

Table 2. Reliability test

Study variables	No. of items	Cronbach's alpha ( $\alpha$ )
Mental health disorders	11	0.931
Recreation	3	0.891
Sports	3	0.889
Social interaction	3	0.835
Artistic activities	3	0.798
Cultural activities	3	0.705
Religious activities	3	0.767
Rest	3	0.844

**4.3. Correlation analysis**

The degree and direction of the association between mental health disorders and leisure activities were evaluated using the Pearson correlation coefficient. The closer the coefficients to an absolute value of 1, the stronger the relationship [33]. Table 3 shows that six out of seven leisure activities were significantly and negatively correlated with mental health disorders, with sports ( $r=-0.606$ ) having the strongest correlation. However, religious activities were not significantly correlated with mental health disorders.

Table 3. Correlations between leisure activities and mental health disorders

	MH	REC	SPO	SOC	ART	CUL	REG	Rest
MH	1							
REC	-0.522*	1						
SPO	-0.606*	0.733*	1					
SOC	-0.571*	0.635*	0.724*	1				
ART	-0.536*	0.651*	0.682*	0.698*	1			
CUL	-0.482*	0.144*	0.245*	0.191*	0.179*	1		
REG	-0.102	-0.026	-0.028	-0.041	-0.065	0.256*	1	
Rest	-0.024*	-0.165*	-0.146*	-0.178*	-0.131*	-0.048	-0.318*	1

\*correlation is significant at the 0.01 level (2-tailed). MH: Mental health disorders; REC: Recreation; SPO: Sports; SOC: Social interaction; ART: Artistic activities; CUL: Cultural activities; REG: Religious activities

**4.4. Multiple regression analysis**

To test the hypothesis and confirm the level of significance of the relationship, we employed multiple regression analysis. The findings of the multiple regression analysis are presented in Table 4. With an F value of 55.981, the multiple regression model was significant at the 0.001 level. The data revealed a substantial negative correlation between mental health disorders and recreation, sports, social interaction, cultural activities, religious activities, and rest. H1, H2, H3, H5, H6, and H7 are therefore accepted. The model can explain 54.7% ( $R^2=0.547$ ) of the variance in mental health disorders. Sports ( $\beta=-0.222$ ,  $p<0.05$ ) and cultural activities ( $\beta=-0.322$ ,  $p<0.05$ ) demonstrated the strongest unfavorable relationships with mental health disorders.

Table 4. Multiple regression analysis

Independent variables	Mental health disorders		Hypothesis	Result
	beta $\beta$	Sig.		
Recreation	-0.125*	0.032	H1	Supported
Sports	-0.222**	0.001	H2	Supported
Social interaction	-0.219**	0.000	H3	Supported
Artistic activities	-0.106	0.069	H4	Not supported
Cultural activities	-0.322**	0.000	H5	Supported
Religious activities	-0.082*	0.048	H6	Supported
Rest	-0.124**	0.002	H7	Supported
F value			55.981**	
R square			0.547	

Remarks: \*\* significant at the 0.001 level; \* significant at the 0.05 level.

**5. DISCUSSION**

The relationships between leisure activities and mental health disorders were examined in this study. The results showed that six leisure activities (i.e., recreation, sports, social interaction, cultural, religion, and rest) were negatively and significantly related to mental health disorders. The most significant impact came from the cultural activities. Similar findings were found in previous study [34], which showed that cultural activity engagement positively related to excellent perceived health, life satisfaction, and self-esteem, but negatively associated with mental health disorders, tension, and anxiety. The results imply that participation in cultural activities is essential for teenagers' health and social objectives [22]. The finding is also aligned with previous research [35] indicating that engaging in cultural activities benefit those struggling with mental health disorders.

Next, the results found that the other five leisure activities such as recreation, sports, social interaction, religion, and rest, were negatively related to mental health disorders. The results are aligned with several studies [24], [26], [27], [29], where leisure activities were discovered to have strong positive relationships with quality of life and negative relationships with mental health disorders, depression, and anxiety. Leisure activities are believed to work as a buffer that influences people's intrapersonal elements

against stressful interactions by boosting their pleasant sensations [12]. In a nutshell, relevant stakeholders need to develop strategies for encouraging higher education students to have healthier lifestyles by engaging with cultural and social activities, sports, recreational programs, religious activities and take intermittent breaks to relieve stress [3]. It is also essential to ensure that these leisure activities are embedded in the co-curricular activities as they can balance a student's life and academic performance as well as building several important life skills in areas such as leadership, organization, confidence, and socialization [4].

### 5.1. Limitation of the study

First, cross-sectional quantitative research is used in this research. The data is collected at one point in time and no further interviews are conducted with the respondents. Future research is suggested to use a mixed-method approach to obtain more comprehensive findings of the study. Next, this study was conducted in higher academic institutions where the findings may not be generalizable to a larger group of students in secondary schools in the country. Future study is recommended to expand the research population to a larger scale which involves students in secondary schools for better generalization of the findings.

## 6. CONCLUSION

This study revealed that recreation, sports, social interaction, cultural activities, religious activities and rests are negative significant predictors of mental health disorders. The lesson from this study is to alert the higher academic institutions' management to conduct these activities in taking appropriate actions to reduce mental health issues among the students. Additionally, this study draws the attention of health authorities to conduct counselling and open communication sessions in higher academic institutions to improve psychological health of the students and to ensure a healthy study place for them.

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