THE MENTAL HEALTH STATUS AMONG UNIVERSITY STUDENTS DURING OPEN DISTANCE LEARNING

MASSHERA JAMALUDIN[1*], SYAIDATUL AFIQAH YUSOF[1], HARRIS KAMAL KAMARUDDIN[1], ZULKIFLI ISMAIL[1] & NUR KHAIRUNNISA ABU TALIP[2]

[1] Faculty of Sports Science and Recreation, Universiti Teknologi MARA, Cawangan Perlis, Kampus Arau, 02600 Arau, Perlis, Malaysia

[2] Faculty of Sports Science and Recreation, Universiti Teknologi MARA, Cawangan Sarawak, Kampus Samarahan, 94300 Kota Samarahan, Sarawak, Malaysia

masshera507@uitm.edu.my

ABSTRACT

Mental disorders are a significant contributor to the disease burden worldwide, and in Malaysia, it is the second-highest form of health problem. In response to COVID-19, the teaching delivery method has shifted from conventional to online learning (OL), resulting in a few challenges, especially among university students. This transition led to a problem associated with mental health conditions. Thus, this study aimed to identify the prevalence of mental health status between gender and faculty during online learning among the students of UiTM Perlis. A total of 362 male and female university students completed the electronic questionnaires, which include demographics and a 12-item General Health Questionnaire (GHQ-12), to assess students' general mental health status. The results showed that 71.3% of the students scored below four, which showed good mental health. However, 28.7% of students were categorized as having poor mental health. The findings have shown no significant difference *(p<0.05)* between university students' GHQ scores and gender. Other results revealed that the overall mean score of GHQ for all students was (2.40 ± 2.419), though there was no significant difference in the GHQ score among the six faculties of UiTM Perlis students. The findings have important implications.

Keywords: health problem; health status; mental problem; online learning; open learning

ABSTRAK

Gangguan mental merupakan penyumbang utama kepada beban penyakit di seluruh dunia, dan menjadi masalah kesihatan kedua tertinggi di Malaysia. Berikutan keadaan Covid-19 yang melanda di seluruh dunia, cara penyampaian pengajaran telah berubah dari pengajaran kovensional ke pembelajaran atas-talian, menyebabkan timbul beberapa cabaran, terutama di kalangan pelajar universiti. Peralihan ini telah membawa kepada masalah berkaitan dengan keadaan kesihatan mental. Justeru, tujuan kajian ini dijalankan adalah untuk mengenal pasti kelaziman status kesihatan mental di antara jantina dan juga antara fakulti semasa tempoh pembelajaran atas-talian di kalangan pelajar UiTM Perlis. Sejumlah 362 pelajar universiti lelaki dan wanita telah menjawab soalan kaji selidik secara atas-talian, iaitu soalan demografik dan 12-soalan General Health Questionnaire (GHQ-12), untuk mengkaji status umum kesihatan mental pelajar. Hasil dapatan menunjukkan 71.3% pelajar mendapat skor di bawah 4, dimana ia merujuk kepada status kesihatan mental yang baik. Walau bagaimanapun, 28.7% pelajar telah dikategorikan sebagai keadaan mental yang kurang baik. Dapatan kajian juga menunjukkan tiada perbezaan yang ketara (p<0.05) di antara skor GHQ pelajar dan jantina. Dapatan lain turut menunjukkan skor purata GHQ keseluruhan untuk kesemua pelajar adalah (2.40 ± 2.419), walaupun tiada perbezaan yang ketara di antara skor GHQ dan fakulti UiTM Perlis. Kesimpulannya, status kesihatan mental kebanyakan pelajar berada dalam keadaan baik. Tetapi, mungkin terdapat beberapa faktor lain seperti biologikal dan sosial yang menjurus kepada aspek kesihatan mental.

Masshera Jamaludin, Syaidatul Afiqah Yusof, Harris Kamal Kamaruddin, Zulkifli Ismail & Nur Khairunnisa Abu Talip

Katakunci: masalah kesihatan; status kesihatan; masalah mental; pembelajaran atas-talian; pembelajaran terbuka

1. Introduction

The World Health Organization (WHO) states that mental health "is a state of well-being" in which an individual is able to perform using his or her abilities to cope with the normal stresses of life, work effectively, and contribute to his or her community. Mental disorders are said to affect our daily activity and determine how we handle stress. According to the Malaysian Ministry of Health's National Health and Morbidity Survey, mental health problems among those aged 16 and above were 29.2 per cent, or nearly 4.2 million people. This means that out of every three Malaysians, one will have a mental health issue. Mental health difficulties are anticipated to be significant problems among Malaysians. Young people are suffering from sadness, anxiety, and other mental health issues due to the demands of modern life (Faizul Hassan et al., 2018). In 2017, the National Health and Morbidity Survey revealed that one-fifth of teenagers aged 13 to 17 experienced depression, two-fifths suffered from anxiety, and one out of 10 suffered from stress. Two common disorders in young adults are depression and anxiety (Boyd & Luebbert, 2019).

During the pandemic, the mental health of vulnerable population, particularly university students, was a major concern. During this period, mental health and health conditions have a strong positive correlation. The sources of stress for university students are countless. Students who experience higher levels of stress have lower self-esteem, are more likely to have health habits and have a greater chance of discouragement and suicide (Wilburn & Smith, 2005; Hudd et al., 2000). Going to university can be a source of pressure or an intense stressor for students. They regularly report that university life is more upsetting than predicted.

In response to the pandemic, students continue their education while staying at home. Starting March 2020, most tertiary education institutions converted face-to-face learning and teaching activities to online learning (Moy & Ng, 2021). The online mode of teaching and learning has emerged as a viable academic alternative to traditional teaching methods in the current environment. The increase in the number of students suffering from depression, and other psychiatric side effects is alarming (Mikolajczyk et al., 2007). Due to these stressful events university students are at risk of developing mental health problems such as stress, anxiety, or depression. The COVID-19 pandemic has been linked to increased stress and anxiety levels among university students (Wang & Zhao, 2020). Therefore, this study aimed to identify the mental health status among UiTM Perlis students during the Open Distance Learning (ODL). Another objective aimed to investigate the differences between gender among the six faculties in UiTM Perlis.

2. Materials and Methods

2.1. *Respondents and research design*

362 UiTM Perlis students (aged 20-22 years) from six faculties participated in this survey. They had completed three sets of questionnaires. The current cross-sectional study was conducted from May to July 2021. The survey was carried out by utilizing an online platform that could be accessed from any device with an internet connection. The Google form was used to collect the information for this survey. The link to the form was distributed through an institutional group and private social media such as WhatsApp.

2.2. *Ethical approval*

The UiTM Research Ethics Committee had approved this study, and all participants were provided with written informed consent.

2.3. *Instrumentation*

The online questionnaire consisted of two sections: the demographic profile of the respondents (age, gender, education level, marital status, faculty, current semester, and students' current place) and a 12-item version of the General Health Questionnaire (GHQ-12) (Goldberg et al., 1997). The GHQ-12 comprised 12 questions of identifying and evaluating indicators of psychological distress and overall functioning. Each item on the scale had four reactions, from "better than usual" to "much less than usual." For this consideration, the GHQ scoring strategy (0-0-1-1) was chosen. The scores were summed up by settling everything on a scale extending from 0 to 12. Due to the different GHQ-12 edge values, the GHQ score for the test was proposed as a rough marker for the most excellent cut-off point. Therefore, based on the mean GHQ score for this test, the cut-off point 4 was utilized to decide the level of the mental well-being of the respondents. A score below four indicated good mental health, while above four exhibited good mental health.

2.4. *Data analysis*

The data were analyzed using SPSS v.25 (IBM Corp., Chicago, IL, USA). The frequency and percentage (%) were used to show the descriptive statistics of subjects' characteristics. Since the data were not normally distributed, the non-parametric test was used. Thus, the hypothesis was tested using a Mann-Whitney U test and Kruskal-Wallis test with a significant value of <0.05.

2.5. *Result*

Table 1 shows the respondents' demographic data with the prevalence of mental health status. The good and poor mental health rates were based on the GHQ score. Good mental health was indicated by a GHQ score below four (<4), which was reported by 261 (71.3%). Meanwhile, students who showed poor mental health were reported by 105 (28.7%). Gender comparison revealed that females were recorded as having a slightly higher-good mental health (n=139, 72.4%) than males (n=122, 70.1%). Evaluation between BMI categories showed that normal-weight had stated the highest good mental health (n=174, 74.4%) followed by overweight category (n=66, 68.8%), and underweight category (n=12, 57.1%). The least was from obesity-weight (n=9, 60%).

Table 1: Demographic Data of UiTM Perlis Students

	Good (<4)		Poor (>4)	
	Frequency	%	Frequency	%
	261	71.3	105	28.7
Gender				
Male	122	70.1	52	27.6
Female	139	72.4	53	29.9
BMI Category				
Underweight	12	57.1	9	42.9
Normal	174	74.4	60	25.6
Overweight	66	68.8	30	31.3
Obesity	9	60	6	40
Faculty				
Business and Management	15	55.6	12	44.4

	Good (<4)		Poor (>4)	
Plantation and Agro-technology	36	83.7	7	16.3
Sports Science and Recreation	90	72.6	34	27.4
Applied Sciences	61	74.4	21	25.6
Architecture, Planning and Surveying	28	75.7	9	24.3
Computer and Mathematical Sciences	29	59.2	20	40.8
Students' Current Place				
College	64	80	16	20
Parent's house	159	67.4	77	32.6
Rented house	32	76.2	10	23.8

	Good (<4)		Poor (>4)	
	Frequency	%	Frequency	%
	261	71.3	105	28.7
Lifestyle				
Smoking	34	77.3	10	22.7
Non-smoking	227	70.5	95	29.5
Exercise status				
Active	200	77.5	58	22.5
Non-active	61	56.5	47	43.5

Table 1 (continued)

The mean GHQ score for all students was 2.40 ± 2.419. Based on Table 2, the Faculty of Computer Science and Mathematics stated the highest mean GHQ score (3.02 ± 2.618), and the Faculty of Plantation and Agrotechnology recorded the lowest (1.93 ± 2.120).

Table 2: Mean and Standard Deviation for GHQ Score of UiTM Perlis Students

	Mean	Std. Deviation
Faculty of Plantation and Agrotechnology	1.93	2.120
Faculty of Applied Science	2.22	2.293
Faculty of Sports Science and Recreation	2.31	2.528
Faculty of Computer Science and Mathematics	3.02	2.618
Faculty of Business Management	2.93	2.800
Faculty of Architecture Planning and Surveying	2.49	1.937

Based on Table 3, The Mann-Whitney test indicated no significant difference between GHQ score and gender ($p > 0.05$). Also, there were no significant differences between the six faculties in UiTM Perlis after conducting the Kruskal-Wallis test (Table 4).

Table 3: Mann-Whitney Test between GHQ Score and Gender

Gender	n	Mean Rank	Z	p
Male	174	186.56	-0.903	0.367
Female	188	176.82		

Table 4: Kruskal-Wallis Test between Six Faculties and GHQ Score of UiTM Perlis Students

	n	Mean Rank	p
Faculty of Plantation and Agrotechnology	43	163.38	
Faculty of Applied Science	82	175.38	
Faculty of Sports Science and Recreation	124	173.71	0.226
Faculty of Computer Science and Mathematics	49	207.46	
Faculty of Architecture Planning and Surveying	37	194.51	

3. Discussion

This study was conducted during the Open Distance Learning (ODL) period from May to July 2021. The present study shows that the prevalence of mental health among UiTM Perlis students was good (71.3%). A similar result from Bolatov et al. (2020) revealed that medical Kazakhtans' students' mental state improved during online learning. Most students showed good mental health due to staying with their parents. This finding is different from the findings by Bolatov et al. (2020) and Liu et al. (2021), where students who lived alone during the OL period were more likely to suffer from depression than those who did not. Parents' financial support is vital during OL as they need to invest more money to get sufficient internet data connections. Regardless of the learning styles, one factor influencing academic performance is motivation. Since 2000, researchers have found that learners can achieve the same level of success in the online environment regardless of their preferred learning style (Aragon, Johnson & Shaik, 2000). Therefore, as long as their motivation is under control, their mental state condition is good, irrespective of their current location. Another factor to be discussed based on the data is that two hundred respondents practiced an active lifestyle Hakim et al. (2021) found that people who had a sedentary lifestyle might affect their overall quality of life, including mental health. In line with this, while studying during the OL period, practicing an active lifestyle may contribute to excellent mental condition.

However, the minority of poor mental health among students should not be ignored. One hundred and five respondents (28.7%) showed poor mental health which was caused by excessive concern about the Covid-19 outbreak. The findings from Huang and Zhou (2021) suggested that mental health among university students cannot be overlooked. The present study reported that students who lived by themselves at college or rented houses had poor mental health (40.6%). Living alone or independent during the OL period might induce depression (Bolatov et al. 2020). A study on 1090 healthcare workers in China discovered that those who lived alone suffered from depression during the COVID-19 pandemic compared to those who were not (Liu et al. 2021). Another study by Stahl, Beach, Musa & and Schulz (2017), conducted in the United States, found that living alone was associated with increased levels of depressive symptomatology.

The present study found no significant difference in gender, which is in line with previous studies (Fu et al., 2021). This indicates that male and female university students experience similar good and poor mental health. Although there is no significant difference between gender and the level of mental health, the current study reported that females have slightly higher levels of both good (72.4% vs 70.1%) and poor mental states (29.9% vs 27.6%). When it comes to stressful events and emotional issues and being confronted with unfavourable circumstances and feelings, women are more likely than men to be exposed. This finding is similar to Ahmed, Al-Radhwan, Al-Azmi & Al-Beajan (2014). Yet, female students have a higher overall prevalence of stress (44%) than male students (41%); the difference is not statistically significant. The variability in the findings on gender differences could be explained by the differences in the participants' demographics or disagreements in socio-cultural backgrounds. Lastly, there are no significant differences among the six faculties in UiTM Perlis. Most students are in good mental health conditions.

4. Conclusion

Overall, most students are in good mental health, with only a small group of students having poor mental states. No significant differences were found either between gender or among the faculties. The study's limitations include the fact that it is a cross-sectional study; as this epidemic now will change to an endemic era, the mental health of university students may evolve as well. The findings of the present study have important implications to higher

education leaders, faculty, student affairs practitioners, and mental health providers in various settings.

Acknowledgements

References

Ahmed, F., Al-Radhwan, L., Al-Azmi, G. Z. S., & Al-Beajan, M. (2014). Association between stress and dietary behaviours among undergraduate students in Kuwait: gender differences. *Journal of Nutrition and Health Sciences*, *1*(1), 1-8.

Aragon, S. R., Johnson, S. D., & Shaik, N. (2002). The influence of learning style preferences on student success in online versus face-to-face environments. *The American Journal of Distance Education*, *16*(4), 227-243.

Bolatov, A. K., Seisembekov, T. Z., Zh Askarova, A., Baikanova, R. K., Smailova, D. S., & Fabbro, E. (2020). *Online-Learning due to COVID-19 Improved Mental Health Among Medical Students.* https://doi.org/10.1007/s40670-020-01165-y/Published

Boyd, M. A., & Luebbert, R. (2019). *Essentials of psychiatric nursing.* Lippincott Williams & Wilkins.

Faizul Hassan, M., Mohd Hassan, N., Suzila Kassim, E., & Iskandar Hamzah, M. (2018). *Issues and Challenges of Mental Health in Malaysia.* https://doi.org/10.6007/IJARBSS/v8-i12/5288

Fu, W., Yan, S., Zong, Q., Anderson-Luxford, D., Song, X., Lv, Z., & Lv, C. (2021). Mental health of college students during the COVID-19 epidemic in China. *Journal of Affective Disorders*, *280*, 7-10.

Goldberg, D. P., Gater, R., Sartorius, N., Ustun, T. B., Piccinelli, M., Gureje, O., & Rutter, C. (1997). The validity of two versions of the GHQ in the WHO study of mental illness in general health care. *Psychological Medicine*, *27*(1), 191–197. https://doi.org/10.1017/S0033291796004242

Hudd, S. S., Dumlao, J., Erdmann-Sager, D., Murray, D., Phan, E., Soukas, N., & Yokozuka, N. (2000). Stress at college: effects on health habits, health status and self-esteem. *College Student Journal*, *34*(2).

Huang, Y., & Zhao, N. (2021). Mental health burden for the public affected by the COVID-19 outbreak in China: Who will be the high-risk group?. *Psychology, health & medicine*, *26*(1), 23-34.

IPH (2014). National Health and Morbidity Survey 2014: Malaysian Adult Nutrition Survey (MANS) Vol. I: Methodology and General Findings. Institute for Public Health, Ministry of Health Malaysia, Kuala Lumpur.

Kris-Etherton, P. M., Petersen, K. S., Hibbeln, J. R., Hurley, D., Kolick, V., Peoples, S., Rodriguez, N., & Woodward-Lopez, G. (2021). Nutrition and behavioral health disorders: depression and anxiety. *Nutrition Reviews*, *79*(3), 247–260. https://doi.org/10.1093/nutrit/nuaa025

Liu, Y., Chen, H., Zhang, N., Wang, X., Fan, Q., Zhang, Y., ... & Li, M. (2021). Anxiety and depression symptoms of medical staff under COVID-19 epidemic in China. *Journal of affective disorders*, *278*, 144-148.

Mikolajczyk, R. T., Maxwell, A. E., El Ansari, W., Naydenova, V., Stock, C., Ilieva, S., & Nagyova, I. (2008). Prevalence of depressive symptoms in university students from Germany, Denmark, Poland and Bulgaria. *Social psychiatry and psychiatric epidemiology*, *43*(2), 105-112.

Mohd Hakim, S. A., Abu Talip, N. K., Wan Chik, W. F., Md Nadzalan, A., Ismail, Z., Jamaludin, M., & Md Razali, M. R. (2021). Physical activity among undergraduate university students during the pandemic Covid- 19. *International Journal of Academic Research in Business and Social Sciences*, *11*(10), 594-604.

Moy, F. M., & Ng, Y. H. (2021). Perception towards E-learning and COVID-19 on the mental health status of university students in Malaysia. *Science progress*, *104*(3), 00368504211029812.

Reuter, P. R., Forster, B. L., & Brister, S. R. (2021). The influence of eating habits on the academic performance of university students. *Journal of American College Health*, *69*(8), 921–927. https://doi.org/10.1080/07448481.2020.1715986

Robotham, D. (2008). Stress among higher education students: Towards a research agenda. *Higher education*, *56*(6), 735-746.]

Stahl, S. T., Beach, S. R., Musa, D., & Schulz, R. (2017). Living alone and depression: the modifying role of the perceived neighborhood environment. *Aging & mental health*, *21*(10), 1065-1071.

Wang C and Zhao H. The impact of COVID-19 on anxiety in Chinese University Students.Front Psychol2020; 11: 1168.

Wilburn, V. R., & Smith, D. E. (2005). Stress, self-esteem, and suicidal ideation in late adolescents. *Adolescence*, *40*(157).