ORIGINAL RESEARCH ARTICLE

Mental Health Evaluation Of Students In A Private University In Malaysia During The Pandemic.

Ching Xiu Wei[1], Lee Wei Jun[1], Tan Zi Tien[1], Muhammad Syahmi bin Nadzri[1], Humas Nasir[1], Philip George[1], John Pinto[2]

Corresponding Author Email: CHING.XIUWEI@student.imu.edu.my

Key Words: Pandemic, Mental Health, University Students

ABSTRACT

Mental health disorders in Malaysia have been on the rise, especially among youth. The data from the National Health and Morbidity Survey, 2015 conducted by the Ministry of Health Malaysia recorded an increasing trend of mental health problems among adults, of age 16 years and above in Malaysia from the year 1996 (10.7%) to 2015 (29.2%). Changes in the learning environment due to the COVID-19 pandemic cause an increased burden on their mental health. This survey evaluates 118 students from a local private university using several scales such as the- DASS-21, Satisfaction with Life Scale (SWLS), and Brief Resilience Scale (BRS) to screen for mental health wellbeing. The results showed the prevalence of moderate to extremely severe depression symptoms at 33.9%, anxiety symptoms at 30.51%, and stress at 19.49%. About 31.3% of students have poor satisfaction with life and 29.7% of students have poor resilience. There seemed to be no significant association between different ethnicity, course of study, family income, and relationship status. However, there is a significant relationship between the age group of 15-24 years compared to 25-34 years in stress scores. Younger students seemed to record more stress symptoms.

INTRODUCTION

In recent years, issues on mental health have been on the rise and are beginning to capture more attention. In Malaysia, the prevalence of depression in secondary school was studied among 2927 students in South Malaysia and revealed that 33.2% of respondents suffered from mild depression while those who faced moderate, severe, and extremely severe depression were 21.5%, 18.1%, and 3.0% respectively [1]. Another study conducted on secondary students in urban and rural areas in Selangor

which involved 2048 participants using the children's depression inventory (CDI) developed by Maria Kovacs. This study revealed that 10.3% of the students were much above average on the depression scale following interpretive guidelines for the T-scores [2].

Meanwhile, a study was conducted among 1602 first-year undergraduate students in a university in 2019 using the DASS-21 questionnaire [3]. The findings revealed that the prevalence of moderate to extremely severe depression was 21% ($n = 341$), anxiety was 50% ($n = 793$), and stress was 12% ($n = 197$ [3]. In the Klang Valley, a study was done on 506 students from 4 different public higher learning institutions and showed that 27.5% had moderate, and 9.7% had severe or extremely severe depression; 34% had moderate, and 29% had severe or extremely severe anxiety, and 18.6% had moderate and 5.1% had severe or extremely severe stress scores based on the DASS-21 inventory [4].

From an international standpoint, studies of university students suggested increased stress, anxiety, substance use disorders, and suicidal thoughts in countries such as Australia, Mexico, and Belgium. In fact, medical students experience higher depression rates as compared to the general population according to two different studies done in Sweden [7] and Iran [11]. On the other hand, studies were conducted among university students in the United Kingdom [5], Saudi Arabia [6] and Sweden [7] reported a significant association between mental disorder and year of study. This high prevalence of stress and pressure are observed in the first three years of being a medical student in medical school [8]. From a gender perspective, women were associated with higher stress levels compared to men [9,10].

Mental health issues can affect anyone regardless of ethnicity, gender, age, and location. Stigma, discrimination, and prejudice prevent sufferers from seeking appropriate help. Unawareness and poor mental health literacy can contribute to this as well. Studies show that most mental health symptoms first manifest during adolescence [12] and delays in seeking treatment ultimately lead to poorer outcomes [13]. Therefore, identifying the condition and providing early intervention are crucial in combating mental health issues. Students typically face difficulties adapting to the increased academic load, as well as the increasingly heavy social responsibilities, when they have yet to acquire the skills to survive. First-time experiences such as working, committing to a relationship, staying away from home with strangers, and adapting to cultural and belief differences may further add pressure on young minds [14]. Gender discrimination and physiological differences have also been identified as risk factors, with females at a higher level of depression than males on average [15].

Socioeconomically, students with lower status and background are more susceptible to anxiety, depression, stress, and negative emotions due to a relatively higher financial vulnerability [17]. As such, students who come from rural areas typically have a higher prevalence of mental health issues compared to those from urban backgrounds [16]. In a similar manner, family functioning plays an important role in maintaining mental health in children, which is proven by associations between anxiety, psychological distress, and family conflicts [18]. Interestingly, studies suggest that satisfaction with

the living environment can be a protective barrier against poor mental health whereas dissatisfaction and unhappiness pose higher risks of deterioration [19,20].

As mental health disorders mostly affect adolescents and young to middle-aged adults which is approximately 10-20% of the cases, mental health resilience has become an important need for most young individuals. [21] This survey is preliminary to an interventional study using a mental health application to better deal with stress and improve mental health resilience.

MATERIALS AND METHODS

An assessment of mental health indexes was conducted among students at a private healthcare university as part of an interventional study using a text-based mental health coaching application. The study received approval from the University ethics committee on the 18th of March 2021. The inclusion criteria were students who consented to participate and were proficient in the language used. Three scales were used namely, sociodemographic details, a measurement for stress, anxiety, or depression using the self-administered DASS-21, life satisfaction using the Satisfaction with Life Scale, and a measurement of resilience using the Brief Resilience Scale questionnaire.

The exclusion criteria were students who have already or just graduated, who are not proficient in the English language, and who do not give written consent for participating in the study. Students who were found to score extremely severe stress, anxiety, or depression, were provided with the contacts to university-based support services and helplines as attached in the study information sheet.

The **Depression, Anxiety and Stress Scale - 21 Items (DASS-21) is** a set of three self-report scales used to measure the emotional states of depression, anxiety, and stress. Each of the three DASS-21 scales contains 7 items, divided into subscales with similar content. The depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia, and inertia. The anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The stress scale is sensitive to levels of chronic nonspecific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient. Scores for depression, anxiety, and stress are calculated by summing the scores for the relevant items. For the depression component of the scale, a cumulative score of 0-4 indicates no depression, whilst a score of 5 and above indicates that there is depression. For the anxiety component of the scale, a cumulative score of 0-3 indicates no anxiety, whilst a score of 4 and above indicates that there is anxiety. For the stress component of the scale, a cumulative score of 0-7 indicates no stress, whilst a score of 7 and above indicates that there is stress.

The **Satisfaction with Life** scale is a 7-point Likert style response scale. The possible range of scores is 5-35, with a score of 20 representing a neutral point on the scale. Scores between 5-9 indicate the respondent is extremely dissatisfied with life, whereas scores between 31-35 indicate the respondent is extremely satisfied.

The **Brief Resilience scale (BRS)** assesses the ability to bounce back or recover from stress. The tool asks individuals to decide how much they agree or disagree with six statements. Each answer is allocated a number. Once all six statements have been assessed, the individual can total up their numbers. This summing up will give them an overall resilience score of between 6 and 30 and a BRS score of 1.00 to 5.00. A BRS score of 2.99 and below indicates low resilience whilst a score of 4.31 and above indicates high resilience.

RESULTS

There was a total of 118 participants recruited. The majority were between 15-24 of age (93%). 66% of the participants were female while the rest were male. The races were categorized into Malay, Chinese, Indian, and others. 80% of the participants were Chinese, followed by Indian (13%), Malay (6%), and others (1%). 86% of them were studying medicine while 11%, 5%, and 1% of the participants were studying Dentistry, Chiropractic, and Pharmacy respectively. The family income of the participants was divided into B40 (bottom 40%), M40 (middle 40%), and T20 (top 20%) and "not disclosed". Almost half (49%) of the participants fall under M40, with 30% in T20, 15% in B40, and 5% did not disclose the information.

According to Table 1 below, more than a third (33.9%) of the sample scored moderate, severe, and extremely severe depression. 11.02% reported mild depression symptoms.

Table 1: Prevalence of Depression Among IMU students

	Depression			
	Normal (0-4)	Mild (5-6)	Moderate to severe (7-13)	Extremely severe- (14+)
	65	13	31	9
Percentage	55.08	11.02	26.27	7.63

Table 2 below shows that more than half of the sample reported mild, moderate to severe, and extremely severe anxiety symptoms (55.1%)

Table 2: Prevalence of Anxiety Among IMU Students

	Anxiety			
	Normal (0-3)	Mild (4-5)	Moderate to severe (6-9)	Extremely severe- (10+)
	53	29	25	11
Percentage	44.92	24.58	21.19	9.32

Table 3 below shows mild, moderate, severe, and extremely severe stress was seen among 36.49% of the sample as in the graph below.

Table 3: Prevalence of Stress Among IMU Students

	Stress			
	Normal (0-7)	**Mild (8-9)**	**Moderate to severe (10-16)**	**Extremely severe- (17+)**
	75	20	21	2
Percentage	63.56	16.95	17.80	1.69

If we look at the Satisfaction with Life Scale of the participants, most of them were slightly satisfied and satisfied (33.9% and 26.3%). The rest were slightly dissatisfied (22.0%), dissatisfied (6.8%) and extremely dissatisfied (1.7%)

As for the Brief Resilience Score of the participants, almost a third or 29.7% reported low resilience, as stated in Table 4 below.

Table 4: Prevalence of Brief Resilience Scale Scores Among IMU Students

	BRS rating		
	Low resilience (1.00-2.99)	**normal resilience (3.00-4.30)**	**High resilience (4.31-5.00)**
	35	82	1
Percentage	29.7	69.5	0.8

We found that there was no statistically significant association of depression scores with age, sex, race, the course they are taking, their family income, and relationship status (p-values >0.05). Similarly, anxiety scores also showed no significant association with sociodemographic details (p-values >0.05). As for scores on stress experienced by the participants, there was a significant correlation between their age group and the level of stress they experienced with a p-value <0.05. The p-values for each correlation tests are stated in Table 5 below.

Table 5: Comparison of Stress Scores with Demographics

Stress								
		Normal (0-7)	Mild (8-9)	Moderate to severe (10-16)	Extremely severe-excluded (17+)	Value	df	*p*
Age group	15-24 years	71	19	20	0	11.291	3	0.010
	25-34 years	4	1	1	2			
Sex	Male	28	4	8	0	4.092	3	0.252
	Female	47	16	13	2			
Race	Malay	4	1	2	0	5.333	9	0.804
	Chinese	56	16	13	1			
	Indian	8	1	4	0			
	Others	7	2	2	1			
Course	medicine	66	13	20	2	10.562	9	0.307
	Dentistry	5	5	1	0			
	chiropractic	3	2	0	0			
	pharmacy	1	0	0	0			
Family Income	B40	13	2	3	0	8.654	9	0.470
	M40	32	11	13	2			
	T20	25	7	4	0			
	Not Disclosed	5	0	1	0			
Relationship Status	Single	73	19	18	2	7.647	6	0.265
	In a relationship	2	1	1	0			
	Others	0	0	2	0			

There was no significant association between participants' SWL rating and their age group, sex, race, the course undertaken, and their family income. Similarly, the results of this study found no significant association between the participants' BRS and their demographics with all the p-values >0.05.

DISCUSSION

Our study was conducted during a time when the Malaysian Ministry of Education had restricted most teaching & learning activities to an online setting due to the pandemic. However, practical sessions which required in-person attendance albeit limited were still conducted. The impact of these restrictions was further compounded by the prohibition of inter-district and interstate travel for students where the out-of-state students were unable to travel back to their families and were instead subject to social

isolation, a common precipitant of mental health issues [22]. According to a cross-sectional online survey conducted by Sheela et. al during the initial months of the COVID-19 pandemic in April and May 2020, 20.4%, 6.6%, and 2.8% of a total of 983 university students in Malaysia had experienced minimal to moderate, marked to severe, and most extreme anxiety levels, respectively. Based on the selected relevant narrative feedback given by the students in the said survey, the most prevalent stressors included financial constraints and a feeling of uncertainty about their futures. [23]

Ever since the implementation of the MCO, online teaching and learning became the main mode of delivery in higher education institutes in Malaysia. In fact, during the second week of MCO, Universiti Sains Malaysia released an appreciation note that they conducted a total of 1421 online sessions across all their programmes which included more than 16,000 students. [24]

A study done in 2020 showed that problems arising from open and distance online learning were issues with internet connectivity, network signal, and speed of the internet. From the study, almost half of the participants faced connectivity issues more than a few times a week. Around 20% had problems with internet connection almost every day and less than 10% had difficulty with severe problems with internet access and network coverage every day. On top of that, even though online learning was implemented during the pandemic, the absence of real-time sharing of ideas, knowledge, and information could also create a void in online classroom interaction, which made it difficult for the students to gauge and understand during the class. [25]

Our study has almost similar results as another by Khadijah et al., whereby 27.5% had moderate and 9.7% had severe or extremely severe depression; 34% had moderate and 29% had severe or extremely severe anxiety, and 18.6% had moderate and 5.1% had severe or extremely severe stress scores [26]. In our study, we found out that 30.5% of the population reported slightly to extreme dissatisfaction. According to a study by Joshanloo M, an individual's satisfaction with life is under the strong influence of one's emotional experiences, which varies over time and context [27]. Therefore, we can theorise that the participants in our study who reported lower scores for satisfaction with life might be more affected by the pandemic and its effects.

Our results showed that 29.7% of the participants reported low resilience. According to Carver, resilience is defined as a state of returning to the previous level of functioning or moving to a superior level of functioning following a stressful event [28]. Resilience is important as human perseverance during difficult times will bring about many well-being benefits and academic achievements. In a study conducted by Sallehudin et al. among medical students in a Malaysian public university, the level of resilience was highly associated with their sense of belonging in the medical environment [28]. During the COVID-19 pandemic, the need to meet the requirements of the University SOPs and program, and the expectations and challenges in the family, affected the resilience of the student population.

There are several limitations in this study including its small sample size, uneven distribution of the participants' race, course taken, and relationship status. Furthermore, the questionnaires administered did not have diagnostic value as they were designed as screening tools. A formal psychiatric assessment conducted by physicians with reference to diagnostic criteria from the DSM-V was required to ascertain the presence or absence of mental health illnesses in the participants.

CONCLUSION

This study has demonstrated a high prevalence of mental health symptoms, reduced resilience, and low satisfaction in life scores among university students. Institutions of higher learning need to be cognizant of the challenges of the pandemic including changes in teaching, learning, and lifestyle that can impose on a student population. More needs to be done to improve the mental health resilience of the student population as well as to provide for timely and appropriate interventions by mental health professionals.

CONFLICT OF INTEREST

No potential conflicts of interest were reported.

REFERENCES

1. Abdul Latif, L., 2020. [online] Depression and its associated factors among secondary school students in Malaysia. Available at: <http://www.thaiscience.info/journals/Article/TMPH/10983699.pdf>
2. Adlina, S et al. "Pilot study on depression among secondary school students in Selangor." *The Medical journal of Malaysia* vol. 62,3 (2007): 218-22.
3. Amir Hamzah, N., Nik Farid, N., Yahya, A., Chin, C., Su, T., Rampal, S. and Dahlui, M., 2019. The Prevalence and Associated Factors of Depression, Anxiety and Stress of First Year Undergraduate Students in a Public Higher Learning Institution in Malaysia. *Journal of Child and Family Studies*, 28(12), pp.3545-3557.
4. Khadijah Shamsuddin, et al. Correlates of depression, anxiety and stress among Malaysian university students, Asian Journal of Psychiatry, Volume 6, Issue 4, 2013, Pages 318-323, ISSN 1876-2018
5. Macaskill, A. (2013). The mental health of university students in the United Kingdom. British Journal of Guidance & Counselling, 41(4), 426–441. doi:10.1080/03069885.2012.743110
6. Abdulghani, H. M., AlKanhal, A. A., Mahmoud, E. S., Ponnamperuma, G. G., & Alfaris, E. A. (2011). Stress and its effects on medical students: a cross-sectional study at a college of medicine in Saudi Arabia. Journal of health, population, and nutrition, 29(5), 516–522. https://doi.org/10.3329/jhpn.v29i5.8906

7. Dahlin, M., Joneborg, N., & Runeson, B. (2005). Stress and depression among medical students: a cross-sectional study. Medical Education, 39(6), 594–604. doi:10.1111/j.1365-2929.2005.02176.x

8. Melaku, L., Mossie, A., & Negash, A. (2015). Stress among Medical Students and Its Association with Substance Use and Academic Performance. Journal of Biomedical Education, 2015, 1–9. doi:10.1155/2015/149509

9. Hardeman, R.R., Przedworski, J.M., Burke, S.E. et al. Mental Well-Being in First Year Medical Students: A Comparison by Race and Gender . J. Racial and Ethnic Health Disparities 2, 403–413 (2015). https://doi.org/10.1007/s40615-015-0087-x

10. Eleftheriades, R., Fiala, C., & Pasic, M. D. (2020). The challenges and mental health issues of academic trainees. F1000Research, 9, 104. https://doi.org/10.12688/f1000research.21066.1

11. Jafari, N., Loghmani, A., & Montazeri, A. (2012). Mental health of Medical Students in Different Levels of Training. International journal of preventive medicine, 3(Suppl 1), S107–S112.

12. Patel V, Flisher A, Hetrik S, *et al*. Mental health of young people: a global public-health challenge. *The Lancet.* 2007;369:1302-13.

13. Boyd C, Hayes L, Nurse S, *et al*. Preferences and intention of rural adolescents toward seeking help for mental health problems. *The International Electronic Journal of Rural and Remote Health.* 2011;11:1582.

14. Arnett JJ. Emerging adulthood. A theory of development from the late teens through the twenties. *Am Psychol*. 2000;55(5):469-80.

15. Bangasser DA, Curtis A, Reyes BA, *et al*. Sex differences in corticotrophin-releasing factor receptor signalling and trafficking: potential role in female vulnerability to stress-related psychopathology. *Molecular Psychiatry.* 2010;15:896-904.

16. Bayram N, Bilgel N. The prevalence and socio-demographic correlations of depression, anxiety and stress among a group of university students. *Soc Psychiatry Psychiatr Epidemiol.* 2008;43:667-72.

17. Andrews B, Wilding, JM. The relation of depression and anxiety to life-stress and achievement in students. *Br J Psychol.* 2004;95:509-21.

18. Wadsworth ME, Berger, L. Adolescents coping with poverty-related family stress: prospective predictors of coping and psychological symptoms. *J Youth Adolesc.* 2006;35:57-70.

19. Christie H, Munro M, Rettig H. Accommodating students. *J Youth Stud.* 2002;5:209-35.

20. Chow HPH. Life satisfaction among university students in a Canadian Prairie City: a multivariate analysis. *Soc Indic Res.* 2005;70:139-50.

21. Kajitani, K., Higashijima, I., Kaneko, K., Matsushita, T., Fukumori, H., & Kim, D. (2020). Short-term effect of a smartphone application on the mental health of university students: A pilot study using a user-centered design self-monitoring application for mental health. *PloS one*, *15*(9), e0239592. https://doi.org/10.1371/journal.pone.0239592

22. Zack J. PM: Whole country under MCO from May 12-June 7 [Internet]. The Star. 2021 [cited 2021Dec11]. Available from: https://www.thestar.com.my/news/nation/2021/05/10/pm-whole-country-under-mco-from-may-12-june-7

23. Sundarasen, S., Chinna, K., Kamaludin, K., et al. (2020). Psychological Impact of COVID-19 and Lockdown among University Students in Malaysia: Implications and Policy Recommendations. *International journal of environmental research and public health*, 17(17), 6206.

24. Yusoff, M. S. B., Hadie, S. N. H., Mohamad, I., Draman, N., Muhd Al-Aarifin, I., Wan Abdul Rahman, W. F., Mat Pa, M. N., & Yaacob, N. A. (2020, May). *Sustainable medical teaching and learning during the COVID-19 pandemic: Surviving the new normal*. Sustainable Medical Teaching and Learning During the COVID-19 Pandemic: Surviving the New Normal. Retrieved December 11, 2021, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7337950/.

25. Ag-Ahmad N. (2020). Open and Distance Learning (ODL): Preferences, Issues and Challenges amidst Covid-19 Pandemic. *Journal of Creative Practice in Language Learning and Teaching*. 2020;8(2):1-12.

26. Shamsuddin K, Fadzil F, Ismail WS, Shah SA, Omar K, Muhammad NA, Jaffar A, Ismail A, Mahadevan R. Correlates of depression, anxiety and stress among Malaysian university students. Asian J Psychiatr. 2013 Aug;6(4):318-23.

27. Joshanloo, M. (2019). Investigating the relationships between subjective well-being and psychological well-being over two decades. *Emotion, 19*(1), 183–187.

28. Ali, S. & Amat, Salleh & Mayalagu, Ganesan & Zainal Abidin, Mohd & Subhan, Mhd & Abu Bakar, Abu Yazid. (2018). Resilience and sense of belonging among medical students in a Malaysian public university. International Journal of Engineering and Technology(UAE). 7. 70-73.