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Gaining distance learning effectiveness through mental health improvement during the COVID-19 pandemic: The role of patience

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ABSTRACT

Nowadays, the COVID-19 pandemic has impacted communities' mental health worldwide. Therefore, studies on minimizing the pandemic's mental health impact are urgently needed. This study aimed to examine the role of patience on distance learners' mental health during the COVID-19 pandemic. A correlational study was conducted involving a total of 330 university students of distance learners, and they were selected using stratified random sampling. The Patience Scale (PS-11) was used to measure interpersonal patience, life hardships patience, and daily hassles patience. The Depression, Anxiety, and Stress Scale (DASS-21) were used to measure mental health from the aspects of depression, anxiety, and stress. The data were analyzed using descriptive analysis and multiple regression. The study showed that life hardships and patience were predictors of reducing depression and anxiety. Besides that, life hardships patience and interpersonal patience were predictors of reducing stress, and the main contributing factor was life hardships patience. This study contributes to humanistic therapy theories and their practical implications. It also contributes to developing the national mental health policy strategy, Ministry of Health Malaysia, and Sustainable Development Goals 2030.

1. Introduction

The Sustainable Development Goals 2030 (SDGs 2030) aim to transform the world. They aim to end poverty and inequality, protect the planet, enjoy peace and prosperity, and ensure people enjoy health. Thus, it is important to examine contributing factors to achieve the SDGs, and mental health is recognized as one of them. The World Health Organisation (WHO, 2019) has acknowledged the important role of mental health in achieving the SDGs. Thus, it is vital to preserve mental health, and it has become more important to address due to the COVID-19 pandemic. The World Health Organization (WHO, 2022) has reported that the COVID-19 pandemic has impacted communities' mental health worldwide and recommended that the issue be addressed immediately, including in the education sector. There were positive and negative outcomes of immediate changes in online and distance teaching and learning approaches due to the COVID-19 pandemic (Akbari, 2021; Alexa et al., 2022; Fauzi et al., 2021; Giannoulas et al., 2021; Grynyuk et al., 2022; Li, 2022; Lin and Nguyen, 2021; Nazilah, 2021), which directly or indirectly impacted students' mental health (Nazilah, 2021; Xiao, 2020). Therefore, studies on minimizing the pandemic's mental health impact are urgently needed. This study aimed to examine the influence of patience (interpersonal, life hardships, and daily hassles) on mental health among distance learners during the COVID-19 pandemic. This study also extended a study done by Aghababaei and Tabik (2015) to include cultural diversity in addressing the influence of patience on mental health, particularly during the pandemic.

On the basis of previous mental health statistics and the alarming mental health-related issues due to the COVID-19 pandemic, studies on mental health have become an urgent need. The National Health and Morbidity Survey conducted by Martadza et al.

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(2019) found that the prevalence of mental health problems in the community for those aged 16 years and above was 29.2%, estimated at 4.2 million. It means that 1 in 3 Malaysians suffers from mental health problems. The mental health issues have worsened with the COVID-19 pandemic, which has put the entire community in fear, anxiety, and worries about their lives. Students also experience mental stress due to study delays and drastic changes in fully online learning methods. Grubic et al. (2020) suggested that studies on mental health among students need to be urgently carried out, particularly during the COVID-19 pandemic. Eaton (2020) also supported the importance of mental health research among communities during the pandemic. Of these, the current study is written to examine the role of patience on distance learners' mental health during the COVID-19 pandemic.

2. Literature review

Past studies have shown that mental health problems are common among students, which involve low to severe levels (Bastaminia et al., 2016; Irfan and Akhtar, 2020; Islam et al., 2018; Pandey, 2017; Puthucheary et al., 2011; Samsudin and Hong, 2016; Yahya et al., 2017). As a result of the COVID-19 pandemic, mental health issues have also been increasing among students (Chang et al., 2020; Gao and Zheng, 2011; Lee, 2020; Liu et al., 2020). Thus, the circumstances require further studies to control and minimize mental health problems. On the other hand, studies have also found that patience is one of the factors that can predict the reduction of mental health problems (Aghababaei and Tabik, 2015; Bülbül and Arslan, 2017; Mahdiyar et al., 2017; Schnitker, 2012). In relation to this, the humanistic theory has supported the role of patience and explained that personal values could help reduce mental health problems (Hartono et al., 2018; Renger and Macaskill, 2021).

Besides that, Al-Ghazali's (1939) theory of patience has explained the relationship between patience and well-being, which includes individuals who are free from mental health problems or disorders. Al-Ghazali (1939) has mentioned that there are four types of patience, namely: Patience for obedience; patience for immorality; patience related to efforts; and patience for misfortune. The basis of the concept of patience, and its connotation encompass patience for the entire life. It encourages people to be patient with any disaster they face because everything that happens must have its wisdom, including the COVID-19 pandemic that has impacted students worldwide.

3. Methodology

This study is designed using a quantitative approach through a survey questionnaire. The correlational analysis was conducted involving a total of 330 distance learners of university students using proportionate stratified random sampling based on different faculties. The faculties included business, economic and social development, maritime studies, marine science and environment, marine engineering technology and informatics, and fisheries and food science. The Patience Scale (PS-11) by Schnitker (2012) was used to measure patience, translated into a Bahasa Malaysia version. The PS-11 scale was translated back-to-back and was adapted to suit the study.

Table 1 shows 5 items for the interpersonal patience sub-scale, 3 for the life hardships patience sub-scale, and 3 for the daily hassles patience sub-scale. The scale consisted of three sub-scales, namely: Interpersonal patience [e.g., My friends would say I'm a very patient friend; I am patient with other people; I have trouble being patient with my close friends and family (R)], life hardships patience [e.g., I am able to wait-out tough times; I find it pretty easy to be patient with a difficult life problem or illness; I am patient during life hardships] and daily hassles patience [e.g. Although they're annoying, I don't get too upset when stuck in traffic jams. In general, waiting in lines does not bother me; I get very annoyed at red lights (R)]. The PS-11 used a 5-Likert scale; 1=Not like me at all, 2=Unlike me, 3=Neutral, 4=Like me, and 5=Very much like me. Overall, the PS-11 had eight positive items and three negative items.

Table 1: Items in the patience scale (PS-11)

Sub-scale	Item
Interpersonal patience	1, 4, 7(R), 9, 11
Life hardships patience	2, 5, 8
Daily hassles patience	3, 6, 10(R)

(R): Reverse score

The second instrument used in this study was the Depression, Anxiety, and Stress Scale (DASS-21) Malay language version by Musa and Maskat (2020) to measure mental health. The DASS-21 items, as seen in Table 2.

Table 2: Items in the depression, anxiety, and stress (DASS-21)

Sub-scale	Item
Depression	3, 5, 10, 13, 16, 17, 21
Anxiety	2, 4, 7, 9, 15, 19, 20
Stress	1, 6, 8, 11, 12, 14, 18

Table 2 displays that the DASS scale had 21 items, no negative items, and seven (7) items for each DASS-21 sub-scale. The scale consisted of three sub-scales, namely the depression sub-scale (e.g., I couldn't seem to experience any positive feelings at all, I found it difficult to work up the initiative to do things, I felt that I had nothing to look forward to), the anxiety sub-scale (e.g., I was aware of dryness in my mouth, I experienced breathing difficulty, I experienced trembling (e.g., in the hands) and the stress sub-scale (e.g., I tended to over-react to situations, I felt that I was using a lot of nervous energy, I found myself getting agitated). Also, In Table 3, DASS-21 used a 4-rating scale; 0=Did not apply to me at all, 1=Applied to me to some degree, or some of the time, 2=Applied to me to a

considerable degree, or a good part of the time, and 3=Applied to me very much, or most of the time. The scoring for each DASS-21 sub-scale ranged from normal to extremely severe levels.

Table 3: DASS severity ratings (Lovibond and Lovibond, 1995)

Level	Depression	Anxiety	Stress
Normal	0–9	0–7	0–14
Mild	10–13	8–9	15–18
Moderate	14–20	10–14	19–25
Severe	21–27	15–19	26–33
Extremely severe	28+	20+	34+

3.1. Data analysis

The data collection was analyzed using descriptive analysis to describe the respondents' demography, level of patience, and mental health. The study's three hypotheses were tested using multiple regression: The influence of interpersonal patience, life hardships patience, and daily hassle patience on stress; the influence of interpersonal patience, life hardships patience, and daily hassle patience on anxiety; and the influence of interpersonal patience, life hardships patience, and daily hassle patience on depression.

4. Results

This section presents the results of the descriptive analysis (respondents' demographic profile) and the inferential statistics of multiple regression analysis.

4.1. Demographic profile of respondents

The respondents' profiles covered gender, age, religion, ethnicity, year of study, program, patience level, and mental health (depression, anxiety, and stress).

Table 4 shows that out of 330 respondents, the majority were female, 261 (79%), while 69 (21%) were male. Most respondents were Muslims, 310 (93.9%). Followed by Hindus 8 (2.4%), Buddhists 6 (1.8%), Christians 4 (1.2%), and the other 2 (0.6%). The majority were Malay 290 (88%), followed by 26 (8%), 8 (2.4%) Indian, and 6 (2%) Chinese. The respondents' age range from 19 to 20 years was 93 (28.1%), followed by the age range from 21 to 22, which was 149 (45.2%), 23 to 24 years was 79 (24%), and 25 years and above was 9 (3%). In terms of programs, the Bachelor of Counselling was 141 (42.6%), followed by the Bachelor of Applied Science (Biodiversity Conservation and Management) 68 (20.5%), Bachelor of Applied Science (Fisheries) 47 (14.2%), 46 (13.9%) Bachelor of Maritime Management and 28 (8.5%) Bachelor of Science (Financial Mathematics). Year 1 respondents were 132 (40%), followed by year 2 is, 66 (20%), year 3 students were 103 (31.1%), and year 4 were 29 (9%). Further, this study descriptively tests the level of patience, depression, anxiety and stress. The result of the patience level is reported in Table 5.

Table 4: Demographic profile of respondents

Demography	Category	Frequency	Percent
Gender	Male	69	21.0
	Female	261	79.0
Age	19-20	93	28.2
	21-22	149	45.2
	23-24	79	23.9
	≤25	9	2.7
Religion	Muslims	310	94.0
	Buddhists	6	1.8
	Hindus	8	2.4
	Christians	4	1.2
	Others	2	0.6
Ethnicity	Malay	290	87.9
	Chinese	6	1.8
	Indian	8	2.4
	Others	26	7.9
Program	Bachelor of counseling	141	42.8
	Bachelor of applied science (biodiversity conservation and management)	68	20.6
	Bachelor of applied science (fisheries)	47	14.2
	Bachelor of maritime management	46	13.9
	Bachelor of Science (financial mathematics)	28	8.5
Year of Study	Year 1	132	40.0
	Year 2	66	20.0
	Year 3	103	31.2
	Year 4	29	8.8

Table 5: Result of patience level

Category	Frequency	Percentage
Low	0	0.0
Moderate	129	39.1
High	201	60.9

Table 5 displays the result of patience level. The result showed that more than half of 201 respondents (61%) had a high level of patience, and 129 respondents (39%) had a moderate level of patience. Next, this study reports the result of depression, anxiety, and stress levels.

Table 6 shows the respondents' mental health status of depression. The result indicated that most 219 respondents (66.4%) had a normal level. 38

respondents (11.5%) had a mild level, and 36 (10.9%) had a moderate level. However, more than 10 percent of respondents had a severe to extremely severe depression level, with 27 respondents (8.2%) and 10 respondents (3.0%), respectively.

Table 7 shows the anxiety level. Regarding anxiety, a total of 152 respondents (46.0%) had a normal anxiety level. While anxiety levels for 66 respondents (20.0%) were mild, 56 respondents (17.0%) had a moderate level. A total of 28 respondents (8.5%) had a severe or extremely severe anxiety level, respectively.

Table 6: Result of depression level

Category	Frequency	Percentage
Normal	219	66.4
Mild	38	11.5
Moderate	36	10.9
Severe	27	8.2
Extremely severe	10	3.0

Table 7: Result of anxiety level

Category	Frequency	Percentage
Normal	152	46.0
Mild	66	20.0
Moderate	56	17.0
Severe	28	8.5
Extremely severe	28	8.5

Table 8 captures the result of stress levels. A total of 217 respondents (65.8%) had a normal stress level. In contrast, stress levels for 54 respondents (16.4%) and 44 respondents (13.3%) were at mild and moderate levels, respectively. There was a total of 10 respondents (3.0%) with a severe stress level and 5 respondents (1.5%) with an extremely severe stress level.

Table 8: Result of stress level

Category	Frequency	Percentage
Normal	217	65.8
Mild	54	16.4
Moderate	44	13.3
Severe	10	3.0
Extremely severe	5	1.5

4.2. Inferential statistics analysis: Hypothesis testing

Using the multiple regression analysis, this study indicated that Interpersonal and Life hardships negatively and significantly affect student stress. Besides that, the Daily hassles dimension does not affect the student stress (Table 9).

Table 9: The effect of interpersonal, life hardships and daily hassles on stress

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. error	Beta		
(Constant)	2.199	0.289		7.611	0.000
Interpersonal	-0.159	0.079	-0.121	-2.004	0.046
Life hardships	-0.168	0.056	-0.178	-2.986	0.003
Daily hassles	0.027	0.064	-0.024	0.426	0.671

Table 9 displays the effect of interpersonal, life hardships, and daily hassles on stress. Results showed that there were significant influences of life hardship patience (β=-0.168, p<0.05) and interpersonal patience (β=-0.159, p<0.05) on stress. An increase of 1 percent in patience from the aspects of life hardship and interpersonal patience influenced the decrease of student stress by 16.8 and 15.9 percent, respectively. Also, Table 10 displays the result of the effect of interpersonal, life hardships, and daily hassles on anxiety. The result showed a significant influence of life hardship patience (β=-0.170, p<0.05) on anxiety. An increase of 1 unit of patience from life hardship influenced a decrease of 17 percent in student anxiety. Besides that, interpersonal and daily hassles do not significantly affect student anxiety.

Table 10: The effect of interpersonal, life hardships, and daily hassles on anxiety

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. error	Beta		
(Constant)	1.545	0.289		5.341	0.000
Interpersonal	-0.056	0.079	-0.043	-0.700	0.485
Life hardships	-0.170	0.056	-0.182	-3.004	0.003
Daily hassles	0.014	0.064	0.012	0.214	0.830

Table 11 shows the effect of interpersonal, life hardships, and daily hassles on depression. The results showed a significant influence of life hardship patience (β=-0.222, p<0.05) on depression. An increase of 1 unit of patience from life hardship influenced a decrease of 22.2 percent in student depression. Besides that, interpersonal and daily hassles do not significantly affect student depression.

Table 11: The effect of interpersonal, life hardships and daily hassles on depression

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. error	Beta		
(Constant)	1.912	0.321		5.955	0.000
Interpersonal	-0.147	0.088	-0.101	-1.665	0.097
Life hardships	-0.222	0.063	-0.211	-3.536	0.000
Daily hassles	0.034	0.071	0.027	0.479	0.632

5. Discussion

The findings showed that the level of patience ranged from moderate to high. More than half of 201 respondents (61%) had a high level of patience, and 129 respondents (39%) had a moderate level of patience. Thus, having such psychological strength would help an individual to adapt and counter all circumstances (Dagang et al., 2022), especially related to the COVID-19 pandemic, including changes in their learning platform, approach, and process. The findings also showed that most respondents had a normal to mild stress level, whereas a severe to extremely severe stress level was below 10 percent. The findings showed that many respondents had normal to mild anxiety and depression levels. However, severe to extremely severe anxiety and depression cases were more than 10 percent. Therefore, it is a sign that proactive action should be taken to control or reduce anxiety prevalence among students. These findings show that some students could not adapt to life during the COVID-19 pandemic and are more susceptible to mental health issues. Therefore, special attention, intervention, and programs should be designed for the targeted group.

As predicted, the study results show that patience significantly influences mental health among distance learners. It could improve mental health by reducing stress, anxiety, and depression. Patience is the propensity of a person to wait calmly in the face of frustration, adversity, or suffering (Schnitker, 2012). There are three types of patience: Interpersonal, life hardship, and daily hassle. Interpersonal patience refers to patients with others, their failings, or their demands. Life hardship patience refers to patience in the face of a serious setback in life or illness. Daily hassles and patience refer to dealing with circumstances beyond our control in our daily life. Patience is also associated with people's ability to control their emotions in painful situations or experiences. High self-control helps a person be more positive and healthier (Ibrahim et al., 2021). Individuals with low self-control are more vulnerable and need psychological help to maintain mental health (Ibrahim et al., 2022), especially in the face of the COVID-19 epidemic (Lee, 2020). Good self-control is also very important in coping with various aspects of life, including better and healthier mental health (De Ridder et al., 2012). The attribute of patience, specifically the life hardship of patience, helps distance learners cope better during the pandemic. Thus, it enables them to control stress, anxiety, and depression.

6. Conclusion

In conclusion, this study acknowledges that patience is one attribute that can reduce mental health problems among distance learners. Therefore, it is vital to educate and equip them with patience to face any obstacles in life, including distance learning problems. This approach should be integrated into the National Education Policy and Malaysian Mental Health Policy and could contribute to the achievement of SDG 2030.

6.1. Policy implications

This study impacts the National Education Policy, particularly the distance learning policy. Application, development, and enforcement of distance learning should consider psychological capital readiness, such as patience among users. The psychological capital differences of patience among users might impact users' mental health. Distance learners with a low level of patience would cause negative mental health. Therefore, the differences between distance learners should be wisely approached.

6.2. Limitations and future research

The results also support the theory of the humanistic approach and Al-Ghazali's (1939) theory of patience and its positive role in mental health. This research contributes to a new approach to preventing and treating mental health problems among distance learners. This study also reveals that patience in times of hardship plays a greater role than other aspects of patience. Thus, exploring and examining the nature of life's hardships with patience should be given priority. The researchers suggest further exploring the diversity of patience as it could predict mental health status differently. Another limitation is extending to other populations and cultural diversity to increase generalisability. Another drawback is conducting experiments to determine cause and effect, as this study is limited to relationship determination.

Compliance with ethical standards

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

References

Aghababaei N and Tabik MT (2015). Patience and mental health in Iranian students. Iranian Journal of Psychiatry and Behavioral Sciences, 9(3): e1252. https://doi.org/10.17795/ijpbs-1252 **PMid:26576165 PMCid:PMC4644612**

Akbari E (2021). Challenges and effectiveness of using the SHAD social network during COVID-19 according to teachers, parents and students. Electronic Journal of E-Learning, 19(4): 296-304. https://doi.org/10.34190/ejel.19.4.2449

Alexa L, Avasilcai S, Pislaru M, Bujor A, Avram E, and Lucescu L (2022). Exploring Romanian engineering students' perceptions of COVID-19 emergency e-learning situation: A mixed-method case study. Electronic Journal of E-Learning, 20(1): 19-35. https://doi.org/10.34190/ejel.20.1.2190

Al-Ghazali AH (1939). Ihya'Ulum al-Din. Dar al-Nadwah, Beirut, Lebanon.

Bastaminia A, Hashemi FB, Alizadeh M, and Dastoorpoor M (2016). Resilience and mental health: A study among students at the State University of Yasuj City. British Journal of Education, Society and Behavioural Science, 18(2): 1-9. https://doi.org/10.9734/BJESBS/2016/28885 **PMid:27374764**

Bülbül AE and Arslan C (2017). Investigation of patience tendency levels in terms of self-determination, self-compassion and personality features. Universal Journal of Educational Research, 5(9): 1632-1645. https://doi.org/10.13189/ujer.2017.050921

Chang J, Yuan Y, and Wang D (2020). Mental health status and its influencing factors among college students during the epidemic of COVID-19. Nan Fang Yi Ke Da Xue Xue Bao, 40(2): 171-176.

Dagang MM, Ibrahim RZAR, Saputra J, Husain Z, Talib JA, and Ramley F (2022). An investigation of psychological well-being among single mothers in Terengganu, Malaysia. In: Haque AU (Ed.), Handbook of research on the complexities and strategies of occupational stress: 404-422. IGI Global, Hershey, USA. https://doi.org/10.4018/978-1-6684-3937-1.ch023

De Ridder DT, Lensvelt-Mulders G, Finkenauer C, Stok FM, and Baumeister RF (2012). Taking stock of self-control: A meta-analysis of how trait self-control relates to a wide range of behaviors. Personality and Social Psychology Review, 16(1): 76-99. https://doi.org/10.1177/1088868311418749 **PMid:21878607**

Eaton J (2020). Wellbeing and mental health during the COVID-19 outbreak. Community Eye Health, 33(109): 12-13.

Fauzi A, Wandira R, Sepri D, and Hafid A (2021). Exploring students' acceptance of google classroom during the covid-19 pandemic by using the technology acceptance model in West Sumatera Universities. Electronic Journal of e-Learning, 19(4): 233-240. https://doi.org/10.34190/ejel.19.4.2348

Gao S, Jia X, Yang S, Li Z, and Jiang K (2011). Hierarchical Ag/ZnO micro/nanostructure: Green synthesis and enhanced photocatalytic performance. Journal of Solid State Chemistry, 184(4): 764-769. https://doi.org/10.1016/j.jssc.2011.01.025

Giannoulas A, Stampoltzis A, Kounenou K, and Kalamatianos A (2021). How Greek students experienced online education during COVID-19 pandemic in order to adjust to a post-lockdown period. Electronic Journal of e-Learning, 19(4): 222-232. https://doi.org/10.34190/ejel.19.4.2347

Grubic N, Badovinac S, and Johri AM (2020). Student mental health in the midst of the COVID-19 pandemic: A call for further research and immediate solutions. International Journal of Social Psychiatry, 66(5): 517-518. https://doi.org/10.1177/0020764020925108 **PMid:32364039 PMCid:PMC7405631**

Grynyuk S, Kovtun O, Sultanova L, Zheludenko M, Zasluzhena A, and Zaytseva I (2022). Distance learning during the COVID-19 pandemic: The experience of Ukraine's higher education system. Electronic Journal of e-Learning, 20(3): 242-256. https://doi.org/10.34190/ejel.20.3.2198

Hartono Y, Haryanto S, and Asrowi A (2018). Character education in the perspective of humanistic theory: A case study in Indonesia. Educare, 10(2): 95-108.

Ibrahim RZAR, Saputra J, Ali SNM, Bratu IA, Dagang MM, and Johar SS (2022). Determinants of female employee wellbeing from the perspective of work-family conflict. Polish Journal of Management Studies, 25(2): 174-190. https://doi.org/10.17512/pjms.2022.25.2.11

Ibrahim RZAR, Zalam WZM, Foster B, Afrizal T, Johansyah MD, Saputra J, and Ali SNM (2021). Psychosocial work environment and teachers' psychological well-being: The moderating role of job control and social support. International Journal of Environmental Research and Public Health, 18(14): 7308. https://doi.org/10.3390/ijerph18147308 **PMid:34299757 PMCid:PMC8305638**

Irfan M and Akhtar M (2020). Evaluation of English language teaching and linguistics program: A case study of Punjab University. Journal of Arts and Social Sciences, 7(2): 162-172.

Islam MA, Low WY, Tong WT, Yuen CW, and Abdullah A (2018). Factors associated with depression among university students in Malaysia: A cross-sectional study. KnE Life Sciences, 4(4): 415-427. https://doi.org/10.18502/kls.v4i4.2302

Lee J (2020). Mental health effects of school closures during COVID-19. The Lancet Child and Adolescent Health, 4(6): 421. https://doi.org/10.1016/S2352-4642(20)30109-7 **PMid:32302537**

Li D (2022). The shift to online classes during the COVID-19 pandemic: Benefits, challenges, and required improvements from the students' perspective. Electronic Journal of E-Learning, 20(1): 1-18. https://doi.org/10.34190/ejel.20.1.2106

Lin Y and Nguyen H (2021). International students' perspectives on e-learning during covid-19 in higher education in Australia: A study of an Asian student. Electronic Journal of E-Learning, 19(4): 241-251. https://doi.org/10.34190/ejel.19.4.2349

Liu S, Liu Y, and Liu Y (2020). Somatic symptoms and concern regarding COVID-19 among Chinese college and primary school students: A cross-sectional survey. Psychiatry Research, 289: 113070. https://doi.org/10.1016/j.psychres.2020.113070 **PMid:32422501 PMCid:PMC7227526**

Lovibond PF and Lovibond SH (1995). The structure of negative emotional states: Comparison of the depression anxiety stress scales (DASS) with the Beck depression and anxiety inventories. Behaviour Research and Therapy, 33(3): 335-343. https://doi.org/10.1016/0005-7967(94)00075-U **PMid:7726811**

Mahdiyar M, Taghavi SM, and Goodarzi M (2017). Predicting patience based on the worldly and divine attachments among the students. Journal of Religion and Health, 4(2): 29-38. https://doi.org/10.21315/mjms2019.26.6.11 **PMid:31908592 PMCid:PMC6939733**

Martadza M, Saedon UI, Darus N, Badli TSZT, Ghazalan SA, and Yunus WMAWM (2019). Patterns of referral to clinical psychology services in the Ministry of Health Malaysia. The Malaysian Journal of Medical Sciences, 26(6): 111-119.

Musa R and Maskat R (2020). Psychometric properties of depression anxiety stress scale 21-item (DASS-21) Malay version among a big sample population. Mediterranean Journal of Clinical Psychology, 8: 1-11.

Nazilah A (2021). Counselling students' perception of online learning during COVID-19 in Malaysia. Electronic Journal of E-Learning, 19(4): 282-295. https://doi.org/10.34190/ejel.19.4.2445

Pandey V (2017). Comparison of depression among freshmen and last year college students. International Journal of Indian Psychology, 5(1): 33-38. https://doi.org/10.25215/0501.084

Puthucheary Z, Skipworth JR, Rawal J, Loosemore M, Van Someren K, and Montgomery HE (2011). Genetic influences in sport and physical performance. Sports Medicine, 41(10): 845-859. https://doi.org/10.2165/11593200-000000000-00000 **PMid:21923202**

Renger S and Macaskill A (2021). Developing the foundations for a learning-based humanistic therapy. Journal of Humanistic Psychology. https://doi.org/10.1177/00221678211007668

Samsudin S and Hong KTC (2016). Hubungan antara tahap kesihatan mental dan prestasi pelajar sarjana muda: Satu kajian di Universiti Utara Malaysia [The relationship between mental health and undergraduate student achievement: A study at Universiti Utara Malaysia]. Jurnal Sains Kesihatan

Malaysia, 14(1): 11-16.
https://doi.org/10.17576/jskm-2016-1401-03

Schnitker SA (2012). An examination of patience and well-being. The Journal of Positive Psychology, 7(4): 263-280.
https://doi.org/10.1080/17439760.2012.697185

WHO (2019). The WHO special initiative for mental health (2019-2023): Universal health coverage for mental health. No. WHO/MSD/19.1, World Health Organization, Geneva, Switzerland.

WHO (2022). Pandemic triggers 25% increase in prevalence of anxiety and depression worldwide. World Health Organization, Geneva, Switzerland.

Xiao C (2020). A novel approach of consultation on 2019 novel coronavirus (COVID-19)-related psychological and mental problems: Structured letter therapy. Psychiatry Investigation, 17(2): 175-176.
https://doi.org/10.30773/pi.2020.0047
PMid:32093461 PMCid:PMC7047000

Yahya Y, Mohd M, Nazaruddin N, and Sanusi SN (2017). Predictive factors of depression among university students: A study on University Kuala Lumpur Malaysian Institute of Information Technology (Unikl Miit) students. Science International (Lahore), 29(3): 561-564.