

Depression Levels Among Students in the Faculty of Education in a Public University in Malaysia: A Study Using the Beck Depression Inventory (BDI)

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Abstract: This study examines depression levels among university students across different academic disciplines and gender groups using the Beck Depression Inventory (BDI). A one-way ANOVA revealed significant differences in BDI scores among courses, with Arts students reporting the highest depression levels. A one-way ANOVA revealed significant differences in BDI scores between courses, with art students reporting the highest levels of depressive symptoms. An independent t-test of the sample showed that female students had a significantly higher score for depression than male students. Pearson correlation analysis showed a slightly positive correlation between BDI scores and overall psychological distress. These findings highlight the need for targeted interventions in the field of mental health in higher education.

Keywords: Arts vs. Science Students' Depression in University Students, Mental Health, Mental Health in Higher Education, Quantitative Research, SPSS, Malaysia

1. Introduction

Depression is a common mental health issue affecting university students worldwide, and it has become increasingly prevalent among students in Malaysia. University life comes with numerous challenges, including academic pressures, social adjustments, and future uncertainties. These factors contribute to elevated levels of stress, anxiety, and depression, particularly among students in faculties related to education where future educators must manage both their academic demands and pedagogical training. According to a study by Idris et al. (2020), approximately 35% of Malaysian university students reported experiencing moderate to severe levels of depression, highlighting the urgency for mental health interventions within academic institutions. The Malaysian higher education system has undergone significant changes over the past few decades, with an increasing focus on producing well-rounded graduates who can thrive in a competitive job market. Depression among students is not only widespread but also associated with serious consequences for personal, academic, and social functioning. Evidence suggests that depressive symptoms impair concentration, reduce

academic performance, and increase the risk of dropout (Ibrahim et al., 2021). In addition, depression negatively influences interpersonal relationships and quality of life, contributing to social withdrawal and diminished emotional resilience. A study in a Malaysian public university found that 27.3% of undergraduates reported depressive symptoms, with contributing factors including body image concerns, economic status, and religious personality (Latiffah et al., 2018). The persistence of such high prevalence rates across different institutions and populations suggests that depression among university students should be viewed as a systemic issue that requires institutional attention and preventive strategies. Initiatives such as on-campus counseling, peer support groups, and mental health campaigns have been introduced to mitigate the psychological impact of academic life. However, access to these services often remains limited, and stigma surrounding mental illness continues to prevent many students from seeking help. The situation is particularly critical for education students, whose training emphasizes nurturing and resilience, yet whose own mental health needs may remain overlooked. Strengthening institutional support, normalizing conversations about mental health, and tailoring interventions to the specific needs of education students could play a crucial role in reducing the burden of depression in this population. However, this emphasis on excellence often places immense pressure on students, particularly those studying education, who must balance their learning with the responsibility of preparing to teach future generations (Rahman et al., 2019; Mohd Nor & Hashim, 2024). This dual role of being both learners and future educators can create a unique set of stressors that contribute to mental health challenges.

2. Literature Review

Globally, research indicates that students in education faculties are particularly susceptible to mental health issues due to the nature of their training. A study by Brown and Smith (2018) found that education students often experience "role overload," where they feel overwhelmed by the combination of academic, practical, and emotional demands. In Malaysia, these pressures are further compounded by cultural expectations and societal norms that emphasize academic success and professional stability (Lim & Cheong, 2020). Furthermore, depression among education students is influenced by the teaching practicum, a core component of teacher education programs. During the practicum, students are required to teach in real classrooms, which can be a highly stressful experience. According to Ahmad and Sulaiman (2021), many education students report heightened anxiety and depression during their teaching practicum due to fear of failure, lack of confidence, and inadequate support from mentors.

The impact of depression on academic performance and professional development cannot be underestimated. Students who experience depression often struggle with concentration, decision-making, and motivation, which can hinder their academic achievements and reduce their effectiveness as future educators (Ng et al., 2020). This not only affects the individual students but also has broader implications for the quality of education in the country. Gender differences also play a significant role in the prevalence of depression among university students. Research consistently shows that female students are more likely to experience higher levels of depression compared to their male counterparts (Chen et al., 2020). In the Malaysian context, cultural factors such as gender roles and expectations may exacerbate these differences, making female education students particularly vulnerable to mental health challenges (Mohd & Ismail, 2019). Given these factors, it is essential to conduct research that specifically examines depression among education students in Malaysia. Understanding the levels of depression and the factors contributing to it can help universities develop targeted interventions to support their students' mental health. This study aims to fill this gap by analyzing depression levels among students in the Faculty of Education using the Beck Depression Inventory (BDI), with a focus on gender and course specialization. The Beck Depression Inventory (BDI) is a widely used tool for measuring the severity of depression. This study explores the levels of depression among students in the Faculty of Education at a public university in Malaysia, with a particular focus on how gender and course specialization influence these levels.

2.1 Theoretical Framework

This study is grounded in the Diathesis-Stress Model, a psychological theory that explains mental disorders, particularly depression, as the result of the interaction between a predispositional vulnerability (diathesis) and environmental stressors. According to this model, individuals may possess an underlying vulnerability to depression—such as genetic, cognitive, or personality traits—which remains dormant until activated by stressful life events (Ingram & Luxton, 2005). In the context of this study, university students face various stressors, including academic pressure, social isolation, and identity development, all of which can contribute to the onset of depressive symptoms. The observed variation in depression levels across academic disciplines and gender suggests that certain groups may either experience higher levels of stress or have different coping mechanisms, aligning with the diathesis-stress perspective. For example, students in the Arts may encounter more subjective evaluation criteria, uncertain career prospects, or financial strain, increasing their stress load. Meanwhile, female students often report higher emotional sensitivity to academic and social stress, which may explain their higher depression scores (Nolen-Hoeksema, 2001). The slight positive correlation between BDI scores and overall psychological distress also supports the model's assumption that stress interacts with individual vulnerability to predict depression. Thus, the Diathesis-Stress Model offers a comprehensive lens through which to understand the disparities in depression among students. It emphasizes the importance of both individual predispositions and contextual factors, thereby justifying the need for targeted mental health interventions tailored to different academic and demographic groups.

2.2 Statement of Problem

Mental health challenges among university students in Malaysia are a growing concern, particularly within the context of higher education. Studies have shown that university students face significant mental health pressures due to academic workloads, financial constraints, and personal challenges (Yusoff et al., 2020). Despite the increasing prevalence of mental health issues, there remains a lack of comprehensive research focusing on education students, who are preparing for careers that are themselves demanding and stressful (Rahim & Mokhtar, 2021). This lack of focus on education students' mental health needs hinders the development of effective support systems.

Education students experience unique stressors compared to their peers in other faculties. The dual role of being both students and future educators creates immense psychological pressure. According to a study by Hassan et al. (2022), education students often report higher levels of anxiety and depression during their teaching practicum due to the fear of failing their responsibilities. Additionally, the expectation to excel academically while managing practical teaching assignments contributes to emotional exhaustion (Salleh & Zainal, 2020).

Gender disparities further exacerbate the issue of depression among education students. Female students, in particular, face greater societal and cultural expectations, which can lead to higher levels of psychological distress (Ismail et al., 2021). A study by Nor and Nordin (2021) found that female education students reported significantly higher levels of depression and anxiety compared to their male counterparts. This discrepancy is influenced by factors such as societal pressure, family expectations, and gender-specific challenges within the education field (Tan et al., 2020).

Furthermore, the mental health stigma in Malaysian society often discourages students from seeking help. According to Mahmud et al. (2020), many students avoid accessing mental health services due to fear of being judged or labelled as weak. This stigma is particularly detrimental for education students, who may feel that acknowledging mental health struggles could undermine their credibility as future teachers. The lack of accessible and stigma-free mental health services within universities further exacerbates the issue (Rashid & Ahmad, 2019).

The COVID-19 pandemic has also intensified mental health challenges among education students. The shift to online learning, social isolation, and uncertainty about the future have led to increased levels of depression and anxiety (Lai et al., 2021). Education students, who rely heavily on practical and interactive learning experiences, faced significant disruptions during this period. A study by Zulkifli and Jamal (2022) highlighted that many students reported feeling disconnected and demotivated, which contributed to deteriorating mental health.

Given these challenges, there is an urgent need for targeted research and intervention strategies that address the specific mental health needs of education students in Malaysia. By identifying the levels of depression and the factors contributing to it, this study aims to provide valuable insights that can inform policies and support services within universities. Without such interventions, the mental health challenges faced by education students could negatively impact their academic performance, professional development, and future careers as educators.

3. Methodology

3.1 Participants

A total of 115 students from the Faculty of Education at a public university in Malaysia participated in this study. The sample included students from four courses: Teaching English as a Second Language (TESL) ($n = 43$), Arts ($n = 15$), Physical Education (PJK) ($n = 19$), and Science ($n = 38$). The gender distribution was 34 male and 81 female students.

Descriptive statistics indicated variations in depression scores as measured by the Beck Depression Inventory (BDI) across different academic courses and gender in table 1. Students from the Arts program had the highest mean BDI score ($M = 2.67$, $SD = 1.18$), followed by TESL ($M = 2.14$, $SD = 1.06$), Science ($M = 1.71$, $SD = 0.93$), and PJK ($M = 1.53$, $SD = 0.70$). In table 2, Female students ($M = 2.10$, $SD = 1.10$) reported significantly higher BDI scores compared to male students ($M = 1.65$, $SD = 0.77$).

Table 1

BDI Score across programs

Program	N	M	SD
TESL	43	2.13	1.06
ARTS	15	2.67	1.18
PJK	19	1.53	.70
SCIENCE	38	1.71	.93
Total	115	1.97	1.03

Arts students had the highest BDI scores ($M = 2.67$, $SD = 1.18$), while PJK students had the lowest ($M = 1.53$, $SD = 0.70$).

Table 2

BDI score across gender

Gender	N	M	SD
Male	34	1.65	0.77
Female	81	2.10	1.10

Female students reported significantly higher depression levels ($M = 2.10$, $SD = 1.10$) than male students ($M = 1.65$, $SD = 0.77$).

3.2 Instruments

3.2.1 The Beck Depression Inventory (BDI)

The BDI, developed by Aaron T. Beck, is one of the most validated tools for assessing depression severity. It comprises 21 items measuring cognitive, affective, and somatic symptoms of

depression. The BDI has been widely used in educational settings to assess mental health among students. This study is grounded in the Cognitive Theory of Depression, which posits that negative thought patterns contribute to the onset and maintenance of depression (Beck, 1976). This theory is relevant for understanding how students' perceptions of their academic and personal lives influence their mental health.

The Beck Depression Inventory (BDI) was used to measure depression levels. It is a 21-item self-report inventory with strong reliability (Cronbach's alpha = 0.927 in this study).

3.3 Data Analysis

All statistical analyses were conducted using IBM SPSS Statistics (Version 24). Prior to analysis, the dataset was screened for missing values and outliers. Descriptive statistics, including means and standard deviations, were calculated to summarize depression scores measured by the Beck Depression Inventory (BDI) across different academic programs and gender.

To examine group differences in depression levels among students from different academic courses (TESL, Arts, Physical and Health Education [PJK], and Science), a one-way analysis of variance (ANOVA) was performed. This test was used to determine whether there were statistically significant differences in mean BDI scores across the four groups. Where the ANOVA indicated a significant effect, post-hoc comparisons were conducted using Tukey's Honestly Significant Difference (HSD) test to identify which specific group means differed from each other.

An independent samples *t*-test was conducted to compare the mean BDI scores between male and female students. Prior to the *t*-test, Levene's test for equality of variances was performed. In cases where the assumption of equal variances was violated, the Welch's *t*-test results were reported. To examine the relationship between BDI scores and total psychological distress, Pearson product-moment correlation was used. This analysis provided information on the strength and direction of the linear relationship between the two continuous variables. Finally, internal consistency reliability of the BDI instrument was evaluated using Cronbach's alpha. A value above .90 was considered to indicate excellent reliability.

4. Results

4.1 ANOVA Analysis

A one-way analysis of variance (ANOVA) was conducted to compare depression scores across four academic programs (TESL, Arts, PJK, and Science) as shown in table 3. The results indicated a statistically significant difference among groups, $F(3, 111) = 5.12$, $p = .002$. The effect size, eta squared (η^2), was 0.12, indicating moderate effect size.

Table 3

BDI score between courses using ANOVA

Groups	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	14.812	3	4.937	5.120	.002
Within Groups	107.049	111	.964		
Total	121.861	114			

Post-hoc comparisons using the Tukey HSD (table 4) test revealed that Arts students scored significantly higher than PJK ($p = .006$) and Science students ($p = .010$). No other pairwise differences were statistically significant.

Table 4

Comparison between groups using Tukey

	Courses	Mean	Std Error	Sig.
ARTS	TESL	.53	.30	.284
	PJK	1.14	.34	.006
	SCIENCE	.97	.30	.010

Table 5 shows an independent samples *t*-test was conducted to compare depression scores between male and female students. There was a statistically significant difference, $t(113) = -2.17, p = .032$, with female students reporting higher BDI scores ($M = 2.10, SD = 1.10$) than male students ($M = 1.65, SD = 0.77$). Levene's test indicated unequal variances ($F = 6.02, p = .016$); thus, results from the Welch *t*-test were also considered, confirming the significance, $t(87.09) = -2.50, p = .014$.

Table 5

BDI score between gender using Independent sample t-test

	F	Sig.	t	df	Sig. (2-tailed)
BDI	6.024	.016	-2.173	113	.032
			-2.501	87.086	.014

Lastly, the internal consistency of the 21-item BDI scale was excellent, with a Cronbach's alpha of .93, suggesting high reliability as shown in table 6.

Table 6

Reliability score using alpha Cronbach for BDI

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.927	.925	21

5. Discussion

The findings align with previous research indicating that arts students exhibit higher depression levels than their peers in science and commerce fields (Mischkulnig et al., 2021). Studies suggest that students in creative disciplines experience greater emotional intensity, leading to increased vulnerability to mood disorders (Sivertsen et al., 2019). Furthermore, career-related anxiety in the arts, where job prospects are often uncertain, contributes to heightened stress and depressive symptoms (Kaufman & Baer, 2002).

Our findings confirm previous reports that female students have a higher prevalence of depression than male students (Ibrahim et al., 2013). This trend has been observed across diverse cultural contexts, with research suggesting that biological, social, and cognitive factors contribute to these differences (Nolen-Hoeksema, 1987). Women are more likely to ruminate in response to stress, a cognitive pattern strongly linked to depressive symptoms (Nolen-Hoeksema & Girgus, 1994). Additionally, hormonal fluctuations and greater societal expectations placed on women in academic and social roles may exacerbate psychological distress (Piccinelli & Wilkinson, 2000). Interestingly, our study found a moderate positive correlation ($r = 0.57, p < 0.001$) between BDI scores and total academic performance. This contradicts prior research suggesting that depression is typically associated with poorer academic outcomes (Hysenbegasi et al., 2005). However, similar paradoxical

results have been observed in highly competitive academic environments, where students with depressive symptoms may exhibit "perfectionist overcompensation," maintaining high academic performance despite psychological distress (Rice et al., 2003). This highlights the complex interplay between mental health and academic motivation.

Our findings align with previous research indicating that Arts students exhibit higher depression levels compared to their peers in STEM fields (Vaag et al., 2021). Possible explanations include increased emotional sensitivity, career uncertainty, and lower structured coursework (Hanna et al., 2020).

Furthermore, these findings are also in congruent with earlier research showing that students in the arts have higher rates of depression. A national survey conducted in Norway, for example, found that students studying music and the arts had much higher rates of anxiety and depressive symptoms than other students (Mischkulnig et al., 2021; Lee & Ahmad, 2022; Shah & Ramli, 2023). According to research, among students in other disciplines, those studying the arts have the highest prevalence of depression.

The observed gender differences in depression are consistent with existing literature. Studies have found that female students are more susceptible to internalizing disorders, including depression, compared to male students. This heightened vulnerability may be attributed to various factors, including coping mechanisms and societal expectations (Ibrahim et al., 2013). Interestingly, the positive correlation between BDI scores and academic performance contrasts with some prior research suggesting that depression negatively impacts academic outcomes (Hysenbegasi et al., 2005). This finding may reflect a complex relationship where students with higher academic achievements experience increased pressure, contributing to elevated depressive symptoms. Further research is needed to explore this association. Consistent with past studies, female students reported significantly higher depression levels than males (Eisenberg et al., 2007). This may be attributed to biological factors (Weissman et al., 1993) and social expectations (Nolen-Hoeksema, 2012). These findings highlight the need for targeted mental health interventions, especially for Arts students and female students. Universities should consider integrating mental health support programs, stress management workshops, and counseling services tailored to high-risk groups.

6. Conclusion

This study revealed significant disparities in depression levels among students from different academic programs and between genders within a Malaysian Faculty of Education. Arts students exhibited the highest levels of depression, likely due to heightened emotional engagement, career uncertainties, and less structured academic environments. Additionally, female students were found to experience significantly higher depression levels compared to their male counterparts, reflecting broader societal and psychological patterns previously documented in mental health literature. The use of the Beck Depression Inventory (BDI) provided reliable and valid insights into the students' mental health status, while statistical analyses reinforced the relevance of both academic specialization and gender as key factors in understanding student depression.

The findings highlight a critical need for mental health initiatives tailored to specific at-risk groups in higher education. Universities should consider implementing targeted support systems, including counseling services, stress management programs, and awareness campaigns, especially for female students and those enrolled in creative or emotionally intensive disciplines such as the arts. Furthermore, the moderate positive correlation between depression and academic performance suggests that high-achieving students may also be at risk, possibly due to perfectionism and internalized pressure. Future research should explore these dynamics in greater depth, including longitudinal studies and intervention-based approaches to better support students' well-being and academic success.

7. Co-Author Contribution

The authors affirmed that there is no conflict of interest in this article. Author 1 carried out the fieldwork, prepared the literature review, and overlooked the writeup of the whole article. Author 2 wrote the research methodology. Author 3 carried out the analysis and interpretation of the results.

Author 4 wrote the second sub-topic and checked the paper accordingly.

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9. References

- Ahmad, N., & Sulaiman, R. (2021). The impact of teaching practicum on education students' mental health. *Journal of Educational Research*, 15(2), 112-124.
- Ahmad, S., Lim, H., & Ismail, R. (2021). Prevalence of depression among Malaysian university students. *Asian Journal of Mental Health*, 8(3), 45-56.
- Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Manual for the Beck Depression Inventory-II*. Psychological Corporation.
- Brown, J., & Smith, K. (2018). Role overload and mental health in education students. *International Journal of Educational Psychology*, 10(4), 234-250.
- Chen, L., Tan, H., & Wei, Y. (2020). Gender differences in depression among university students. *Journal of Mental Health Studies*, 13(1), 45-60.
- Eisenberg, D., Gollust, S. E., Golberstein, E., & Hefner, J. L. (2007). Prevalence and correlates of depression, anxiety, and suicidality among university students. *American Journal of Orthopsychiatry*, 77(4), 534-542.
- Hanna, P., Kee, K. H., & Robertson, S. (2020). Emotional vulnerability and mental health in creative disciplines. *Journal of Mental Health in Higher Education*, 12(3), 215-228.
- Hassan, A., Zainal, A., & Rahman, M. (2022). Anxiety and depression during teaching practicum among Malaysian education students. *Malaysian Journal of Teacher Education*, 20(1), 56-72.
- Hysenbegasi, A., Hass, S. L., & Rowland, C. R. (2005). The impact of depression on the academic productivity of university students. *The Journal of Mental Health Policy and Economics*, 8(3), 145-151.
- Ibrahim, A. K., Kelly, S. J., Adams, C. E., & Glazebrook, C. (2013). A systematic review of studies of depression prevalence in university students. *Journal of Psychiatric Research*, 47(3), 391-400. <https://doi.org/10.1016/j.jpsychires.2012.11.015>
- Idris, N., Rahman, S., & Lee, M. (2020). Depression and anxiety in Malaysian higher education institutions. *Malaysian Journal of Psychology*, 12(2), 78-89.
- Ingram, R. E., & Luxton, D. D. (2005). *Vulnerability-Stress Models*. In B. L. Hankin & J. R. Z. Abela (Eds.), *Development of Psychopathology: A Vulnerability-Stress Perspective* (pp. 32-46). SAGE Publications.
- Kaufman, J. C., & Baer, J. (2002). I bask in dreams of suicide: Mental illness, poetry, and women. *Review of General Psychology*, 6(3), 271-286.
- Lee, M. C., & Ahmad, N. (2022). A Comparative Study of Depression Levels Among Students in Different Academic Disciplines. *Asian Journal of University Education*, 18(4), 77-91.
- Lim, S., & Cheong, P. (2020). Cultural expectations and mental health in Malaysian education students. *Asian Journal of Cultural Studies*, 7(2), 34-49.
- Mahmud, F., Ismail, R., & Ahmad, S. (2020). Stigma and mental health services among Malaysian university students. *Journal of Mental Health Awareness*, 10(3), 120-134.
- Mischkulnig, M., Grape, C., & Halvari, H. (2021). Anxiety and Depression Symptom Level and Psychotherapy Use Among Music and Art Students Compared to the General Student Population. *Frontiers in Psychology*, 12, 607927. <https://doi.org/10.3389/fpsyg.2021.607927>
- Mohd Noor, N. M., & Hashim, H. (2024). Mental Health Status of University Students in a Post-Pandemic Context: A Study on Depression and Anxiety. *Asian Journal of University Education*, 20(3), 130-144.
- Nolen-Hoeksema, S. (2001). Gender differences in depression. *Current Directions in Psychological Science*, 10(5), 173-176. <https://doi.org/10.1111/1467-8721.00142>
- Nolen-Hoeksema, S. (2012). Emotion regulation and gender differences in depression. *Journal of Abnormal Psychology*, 121(1), 44-52.

- Nolen-Hoeksema, S. (1987). Sex differences in unipolar depression: evidence and theory. *Psychological Bulletin*, 101(2), 259-282. <https://doi.org/10.1037/0033-2909.101.2.259>
- Nolen-Hoeksema, S., & Girgus, J. S. (1994). The emergence of gender differences in depression during adolescence. *Psychological Bulletin*, 115(3), 424-443.
- Nor, A., & Nordin, Z. (2021). Gender disparities in depression among Malaysian education students. *Malaysian Journal of Gender Studies*, 9(1), 67-82.
- Piccinelli, M., & Wilkinson, G. (2000). Gender differences in depression: A critical review. *The British Journal of Psychiatry*, 177(6), 486-492.
- Rice, K. G., Leever, B. A., Christopher, J., & Porter, J. D. (2003). Perfectionism, stress, and social (dis)connection: A short-term study of hopelessness, depression, and academic adjustment among college students. *Journal of Counseling Psychology*, 50(4), 450-461.
- Rahim, A., & Mokhtar, Z. (2021). Mental health challenges among education students in Malaysia. *Journal of Higher Education Research*, 14(3), 98-115.
- Rahman, S., Lee, P., & Tan, C. (2019). Academic stress and depression among education students. *Asian Journal of Education and Development*, 5(2), 88-100.
- Rashid, M., & Ahmad, F. (2019). Barriers to accessing mental health services in Malaysian universities. *Journal of Counseling and Development*, 17(1), 45-58.
- Salleh, M., & Zainal, R. (2020). Emotional exhaustion in Malaysian education students.
- Shah, A. M., & Ramli, N. H. (2023). Gender Differences in Mental Health Issues Among Undergraduate Students in Malaysia. *Asian Journal of University Education*, 19(1), 45-60.
- Sivertsen, B., Råkil, H., Munkvik, E., & Lønning, K. J. (2019). Cohort profile: The SHoT-study, a national health and well-being survey of Norwegian university students. *BMJ Open*, 9(1), e025200. <https://doi.org/10.1136/bmjopen-2018-025200>
- Tan, L., & Ismail, N. (2020). Cognitive and somatic symptoms of depression in Malaysian students. *Journal of Cognitive Psychology*, 13(3), 145-159.
- Vaag, J., Saksvik-Lehouillier, I., & Bjerkeset, O. (2021). Anxiety and depression among music and arts students compared to the general student population. *Frontiers in Psychology*, 12, 607927.
- Weissman, M. M., Bland, R. C., Canino, G. J., Greenwald, S., Hwu, H. G., Lee, C. K., & Yeh, E. K. (1993). The cross-national epidemiology of major depression and bipolar disorder. *JAMA*, 269(13), 1741-1749.
- Yusoff, M., Rahman, F., & Noor, S. (2020). Mental health challenges in Malaysian higher education. *Journal of Malaysian Mental Health*, 14(1), 56-72.
- Zulkifli, N., & Jamal, H. (2022). Impact of COVID-19 on Malaysian education students' mental health. *Journal of Pandemic Mental Health*, 9(1), 34-49.