

## **Influence of Depression and Loneliness on Suicidal Behaviour Among Public University Students in Malaysia**

**Nur Dini Kamilia Norazizi<sup>1</sup>, Muhammad Asyraf Che Amat<sup>1\*</sup>, Nor Hafizah Mohammad Hanafi<sup>1</sup>, Firman<sup>2</sup> and Syahrul Nizam Salam<sup>3</sup>**

<sup>1</sup>*Department of Counsellor Education and Counselling Psychology, Faculty of Educational Studies, Universiti Putra Malaysia, 43400 UPM, Selangor, Malaysia*

<sup>2</sup>*Department of Guidance and Counselling, Educational Knowledge Faculty, Universitas Negeri Padang, Sumatera Barat 25173, Indonesia*

<sup>3</sup>*The Centre of Promotion of Knowledge and Language Learning, Universiti Malaysia Sabah, 88400 UMS, Kota Kinabalu, Sabah, Malaysia*

### **ABSTRACT**

Suicide is a serious and curable public health issue that is alarming towards early adults like university students who are undergoing personal and social phase changes and pressures. This study investigates the influence of depression and loneliness on the suicidal behaviour of public university students in Malaysia. The quantitative study involved 406 public university students in Malaysia, including early teens aged 20 years and below and adults aged 40 years and above. Three instruments were used: *Suicide Behaviours Questionnaire-Revised (SBQ-R)*, *Beck Depression Inventory (BDI)*, and *UCLA Loneliness Scale Version 3*. Data analysis involves examining basic statistical information. For this study, a stratified and proportional random selection method was used. The results indicated that public university students in Malaysia generally exhibited minimal levels of depression, loneliness, and suicidal behaviour. Depression and loneliness emerged as significant positive

predictors influencing suicidal behaviour, accounting for 49.3% of the variance, while loneliness contributed to 0.3%. These non-significant findings suggest that overall, the mental well-being of the students is good. The study also highlights the role of cultural and societal factors unique to Malaysia in promoting positive mental health outcomes.

*Keywords:* Depression, loneliness, suicidal behaviour, university students

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*E-mail addresses:*

[dnkmla29@gmail.com](mailto:dnkmla29@gmail.com) (Nur Dini Kamilia binti Norazizi)

[mhdasyraf@upm.edu.my](mailto:mhdasyraf@upm.edu.my) (Muhammad Asyraf Che Amat)

[crhafizah@gmail.com](mailto:crhafizah@gmail.com) (Nor Hafizah Mohammad Hanafi)

[firman@konselor.org](mailto:firman@konselor.org) (Firman)

[syahrulnizam.salam@ums.edu.my](mailto:syahrulnizam.salam@ums.edu.my) (Syahrul Nizam Salam)

\*Corresponding author

## INTRODUCTION

Suicide has become a leading cause of fatalities worldwide. Approximately one million lives are claimed by suicide each year, equating to one death every forty seconds, on average. Notably, China, India, and Japan collectively account for over 40% of all suicides globally, with Asia, the largest continent, contributing to nearly 60% of these statistics (Wu et al., 2012). According to Lew et al. (2022), Malaysia recorded a suicide incidence of 5.8 per 100,000 individuals in 2019, resulting in an estimated 1,841 suicide deaths, or an average of 5 cases per day. Malaysia holds the second position among countries with a predominantly Muslim population. It is situated in the middle of ASEAN and has a suicide rate lower than that of all other G7 countries except Italy.

While most individuals who experience depression do not commit suicide, the Centre for Disease Control and Prevention (2022) discovered that depression can significantly increase one's risk of suicide compared to those without depression. The severity of depression may also play a crucial role in determining the likelihood of suicide. According to a recent study on depression, 2% of patients receiving outpatient care for their depression eventually die by suicide. This risk is twice as high, at 4%, for individuals who had received inpatient treatment for depression.

It is well-known that poor mental health, such as depression, is high among university students in both developed and developing nations (Pedrelli et al., 2015). A few studies

show that stress, anxiety and depression among university students are higher than in other general populations (Alshehri et al., 2023; Gilbert et al., 2014). The students entering the university are from different socioeconomic backgrounds, which can bring a variety of mental health risk factors (Mofatteh, 2021).

The Burrell (2023) research discovered that one in five college students, out of a sample of over 67,000 students from more than a hundred institutions, had suicidal thoughts, with 9% engaging in probation and nearly 20% admitting to self-harm. Additionally, one in four pupils reported having received a mental illness diagnosis. These alarming statistics underscore the significance of the issue, particularly considering that suicide is the second most prevalent cause of death among individuals aged 17 to 24 and ranks among the top 10 causes of death across the entire population (Fakorzi, 2021).

One of the primary ways that depression can lead to death is through a person's decision to commit suicide. Suicide may appear to be the only option for someone suffering from depression, as they often feel helpless and powerless (Schimelpfening, 2022). Social seclusion and loneliness have the same negative impacts on one's physical and mental health as obesity and smoking 15 cigarettes per day combined. Loneliness can have detrimental effects on the immune system, exacerbate depression, lead to sleep disturbances, and contribute to cognitive decline. As previously mentioned, social seclusion is a primary risk factor for suicide (Chen et al., 2023; Methodist, 2020).

According to the previous literature, there are still significant gaps in the study of suicidal behaviour. In the context of university students, the connection between depression and suicidal behaviour has not been widely studied (Kadir et al., 2018). Most studies (Azhar et al., 2021; Bahar, 2015; Chen et al., 2005; Hussin et al., 2021; Sulaiman, 2021) have concentrated on the prevalence of depression and suicide attempts among Malaysian adolescents. For instance, prior research indicated that from 2014 to 2019, the prevalence of depressive symptoms among adolescents in Malaysia grew from 17.7% to 33.1%. According to the study, the suicide rate rose from 4.90 in 2014 to 5.77 in 2019—a 17.8% rise (Lew et al., 2022). Mohamad et al. (2022) revealed that the prevalence of depression among adolescents is 21.5%, which is close to many previous prevalence studies in Malaysia.

A study by Mushtaq et al. (2014) identified a lack of research concerning the connection between depression and loneliness among university students, which is an important research gap. Therefore, it is crucial to identify depression and loneliness as significant factors in preventing suicide, particularly among college students.

This research examines the level of depression, loneliness, and suicidal behaviour among students in Malaysian public universities. It investigates the relationship and influence between depression, loneliness and suicidal behaviour among these students. Therefore, if a connection between these variables is established, this study can provide valuable

insights and direct guidance for authorities and counsellors to take immediate action in the fight against alarming suicidal behaviour among university students in Malaysia. Therefore, if a link between these variables is established, this study can directly guide authorities and counsellors to take immediate action in addressing suicidal behaviour among university students in Malaysia.

### **Depression and Loneliness**

According to Raypole (2020), depression is a complex mental health disorder that often results from the interplay of various factors. Loneliness can also arise from social seclusion or dissatisfaction with interpersonal connections. Some individuals who live alone and do not socialise frequently may not necessarily feel lonely. Conversely, those who interact with others daily may experience loneliness at times. When this loneliness is left unaddressed, it can eventually lead to depression (Franklin et al., 2017; Klonsky et al., 2021).

Ceyhan and Ceyhan (2008) investigated the levels of depression and loneliness among college students. The study involved 550 university students in Türkiye. According to the results, 25% of all pupils experienced severe loneliness. Male students reported higher levels of depression and loneliness compared to female students. Additionally, a weak but significant link between the student's level of loneliness and depression was discovered.

Rahman et al. (2012) conducted a study to investigate the connection between

loneliness and depression. When pupils' alpha levels were set at  $p < 0.01$ , a positive correlation ( $r = .29$ ) between loneliness and depression was observed. It suggests a marginally significant link between student depression levels and loneliness, indicating that loneliness and depression symptoms can coexist in students. A study on loneliness during the COVID-19 pandemic may provide insights into the relationship between social and interpersonal factors-related depression among college students (Alsubaie et al., 2019). Future melancholy and depression in college students have been linked to loneliness (Pervin & Ferdowshi, 2016; Richardson et al., 2017; Wei et al., 2005; Wright et al., 2014).

The connection between college students' experience of depression and loneliness was particularly notable during the COVID-19 pandemic (Elmer et al., 2020; Son et al., 2020). Studies examining the temporal relationship between loneliness and depression in four samples of college students have found that, while the effects of depression on future loneliness were either non-existent or much smaller, loneliness predicted future depression. (Rich & Scovel, 1987; Richardson et al., 2017; Vanhalst et al., 2012). Although one study suggests that the link between depression and loneliness in college students weakens over time, these studies collectively suggest that the relationship between depression and loneliness is stronger in one direction than the other (Ren et al., 2022).

### **Beck's Cognitive Triad Model of Depression (1967)**

According to Beck's Cognitive Triad Model of Depression (1967), negative self-referencing thoughts (helpless or critical) spontaneously occur in depressed individuals. They can be categorised into three groups: negative thoughts about oneself, negative thoughts about the outside world, and negative thoughts about the future. According to Beck's cognitive dimension, three major themes of dysfunctional beliefs are identified: (1) I am flawed or insufficient, (2) Every encounter I have ended in failure or defeat, and (3) There is no hope for the future. These three core beliefs, which encompass feelings of worthlessness and hopelessness, interact with cognitive processing, leading to impairment in memory, problem-solving, and perception while fuelling an "obsession" with negative thinking. When these ideas dominate a person's cognition, it significantly increases the likelihood of experiencing depression.

The inability to process information correctly could lead to a depressed state of mind. For instance, individuals who are depressed tend to focus on information that confirms their negative expectations. They often exaggerate the importance and significance of negative events while downplaying the importance and significance of positive events. Despite evidence suggesting that things will improve, these unnoticed cognitive biases enable depressed individuals to cling to their core negative beliefs and assumptions, even

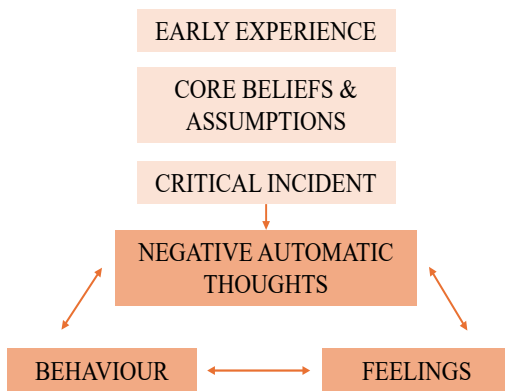


Figure 1. Cognitive triad model of depression (Adapted from Beck, 1967)

in the face of contradictory information. Consequently, they continue to harbour hopelessness about the future (Beck, 1967). Figure 1 provides a simplified overview of Beck's Cognitive Triad Model of Depression (1967).

Cognitive control enables flexible behaviour modification in response to the moment's needs, particularly in confusing, complicated, or changing environments (Marchetti & Pössel, 2023). Numerous studies have hypothesised that the increased likelihood of suicide among those who suffer from depression may be related to decreased cognitive control abilities (Paulus, 2015; Richard et al., 2015).

A previous study's findings revealed a strong connection between students' current depressive condition and the negative processing of their personal information (Jacob et al., 2019). These findings suggested that students' cognitive thinking has a significant impact, leading to the feeling of loneliness and the manifestation of depressive symptoms that can lead to

suicidal behaviour (Akram et al., 2023; Urme et al., 2022). Applying Beck's theory provides a fresh perspective on exploring university students' cognitive abilities.

## MATERIALS AND METHODS

### Research Design

This research employs a quantitative method in a descriptive study to investigate correlations and influences. This descriptive correlation research aims to establish the relationship between depression, loneliness, and suicidal behaviour among Malaysian university students in public institutions. Simple regression is used to analyse the influences of loneliness and depression towards suicidal behaviour. The population of the study is Malaysian public university students. The total sample of 406 Malaysian public university students who participated in the research was chosen using stratified and proportional random sampling methods. The Questionnaires are used as the primary data-gathering tool.

### Instruments

The Beck Depression Inventory (BDI), the UCLA Loneliness Scale Version 3, and the Suicide Behaviours study-Revised (SBQ-R) are the measurements used in the other section of the study. English and Bahasa Malaysia were employed for the questionnaires in this research. Language translation experts from the Faculty of Educational Studies, UPM, assisted in forward translating this instrument's English-language source.

A psychological self-report questionnaire known as the Suicide Behaviours Questionnaire-Revised (SBQ-R) is employed to assess the risk factors for suicide in both adults and children. The four-item survey inquiries about four aspects of suicidal behaviour: lifelong suicidal thoughts and attempts, the frequency of recent suicidal thoughts, suicide threats, and the likelihood of engaging in suicidal behaviour in the future. A total score between 3 and 18 is derived from evaluating these four items, rated on a Likert scale with varying lengths.

The Beck Depression Inventory (BDI) was developed through clinical studies of behaviours and symptoms commonly seen in both depressed and non-depressed psychiatric patients. These observations were condensed into 21 items, each rated on a severity scale from 0 to 3. The BDI-II consists of 21 items, scored on a 4-point scale ranging from 0 for no symptoms to 3 for severe symptoms. It encompasses affective, cognitive, somatic, and vegetative symptoms in line with the DSM-IV criteria for major depression, but it does not assess symptom-related anxiety.

The UCLA Loneliness Scale Version 3 instrument, created by psychologist Daniel Russell, assessed loneliness (1996) (Russell et al., 1978). Participants responded to 20 questions, including items such as “How often do you feel sidelined?” and “How often do you feel part of a group of friends?” using a rating system of 1 to 4 Likert (1 = never; 4 = always). After reversing the coding of positive word items to ensure

that high scores indicate greater loneliness, the researcher calculated a score for each respondent based on their average ratings.

### **Sample**

A total of 406 Malaysian public university students participated in the research, representing a range of ages from early teens (20 years and younger) to adults (40 years and above). Individual respondents were selected for the study and willingly participated without compensation. Public universities in Selangor, including Universiti Putra Malaysia (UPM), Universiti Kebangsaan Malaysia (UKM), Universiti Teknologi Mara (UITM) and Universiti Islam Antrabangsa Malaysia (IIUM) in Kuala Lumpur were chosen using stratified and proportional random sampling methods. This sample size of 406 was determined based on the guidelines of Manion & Morrison (2001) and the Yamane sample calculation formula (1967), which recommend 400 samples for a population of 209,649 according to Cohen’s sample size table. The distribution of respondents was as follows: UiTM had 231 participants, accounting for 56.9% of the total; IIUM had 61 participants (15.0%); UKM had 59 participants (14.5%), and UPM had 55 participants (13.5%).

## **RESULTS AND DISCUSSION**

### **Analysis of Levels of Depression, Loneliness, and Suicidal Behaviour among Students**

The researchers utilised Nunnally and Bernstein's (1994) interpretation of the

minimum score as a reference when analysing the data about the study problem. As Nunnally and Bernstein (1994) proposed, the measurement framework of the min score stage is founded on four stages of min score measurement.

The study's findings revealed that public university students in Malaysia displayed low levels of depression, loneliness, and suicide behaviour, with a mean score of 1.04 (low) for depression, 2.72 (moderate low) for loneliness, and 1.18 (low) for suicidal behaviour. The study further concluded that public university students in Malaysia generally exhibited normal and positive levels of sadness, loneliness, and suicidal behaviour.

The interpretation of the mean score used in this study indicates that public university students in Malaysia have varying levels of depression: low levels of depression ( $n = 390$ , 96.1%), moderate levels (3.4%,  $n = 14$ ), and high levels ( $n = 2$ , 0.5%). This finding aligns with research by Shukor et al. (2019), which investigated the association between academic achievement and the levels of stress, anxiety, and depression among college students. It is also comparable to a study by Puerta et al. (2022), which identified mild to moderate levels of depression, anxiety, and stress among university students in Spain and Costa Rica.

According to this study, 297 students, or 73.2% of the total, reported feelings of loneliness, as opposed to 105 students, or 25.9%, and four students, or 1.0%. The high loneliness can be attributed to these students

feeling isolated and distant from their loved ones. However, based on Nunnally and Bernstein's (1994) interpretation of the mean score, the mean loneliness score is 2.72, indicating a moderately low level of loneliness.

A study by Dagne and Dagne (2019) revealed that first-year students at the University of Gondar experience a higher level of loneliness than their peers in other academic years. Loneliness is associated with lower family income, middle-income countries, and low levels of organised religious activities. Loneliness also manifests in various ways, with lonely students reporting lower subjective health statuses, sleep disturbances, inadequate rest, and a higher likelihood of engaging in smoking. It is crucial for educational institutions, government bodies, and all stakeholders in the education sector to address this prevalent issue, given its significance. The development of comprehensive policies aimed at preventing and mitigating loneliness is essential.

The outcomes of this study indicate that suicidal behaviour among Malaysian public university students can be categorised into three levels: low ( $n = 33$ , 82.3%), medium ( $n = 69$ , 17.0%), and high ( $n = 3$ , 0.7%). The relatively low rate of suicide behaviour among university students in Malaysia may be linked to the low prevalence of depression among this demographic. According to Lindberg et al. (2022), serious depression stands out as a significant risk factor for suicidal tendencies.

According to Santos et al. (2017), students at the Federal University of Mato Grosso reported low levels of suicidal ideation in the previous 30 days. The current study, which focused on students aged 15 and 19, found that young people with a friend with a history of suicide attempts were twice as likely to exhibit suicidal ideation compared to those without such associations.

From this study, most university students with a low level of depression, moderately low level of loneliness and low level of suicidal behaviour show a few factors, such as their awareness towards mental illness. Raising mental health awareness can help a person recognise their symptoms, get care from a professional, and end the stigma around mental illness that keeps many people from seeking help (Ajayi & Syed, 2021; Marthoenis et al., 2023).

### **The Relationship Between Depression and Loneliness on Student Suicidal Behaviour**

Pearson's correlation is used to examine the significant relationship between depression and efficacy towards suicide behaviour among Malaysian public university students. The analysis explores the relationship between depression, loneliness and suicide behaviour among Malaysian university students attending public institutions.

The results reveal a negative correlation (-0.50) between loneliness and suicidal behaviour and a positive correlation (0.699) between depression and suicidal behaviour. According to Cohen's assessments, these

emotional responses demonstrate strong associations.

Numerous studies have established a significant link between depression and suicidal behaviour ( $r = 0.699, p < 0.01$ ). There is a significant correlation between depression and suicidal behaviour characteristics. Consequently, Malaysian students attending public universities are more likely to exhibit suicidal tendencies when experiencing severe depression. However, when students' depression levels are low, the incidence of suicidal behaviour decreases. In her research, Sulaiman (2020) discovered that untreated and misdiagnosed depression can increase the likelihood of suicidal behaviour.

Suicidal behaviour is a pressing concern for colleges and universities, as highlighted by the Suicide Prevention Resource Centre (2020). Consequently, the university is taking proactive steps to reduce depression among students and increase awareness about mental health. These measures aim to effectively manage mental health conditions and reduce the risk of suicide.

Loneliness and suicidal behaviour did not exhibit a significant correlation ( $r = -0.50, p > 0.01$ ). Whether experiencing high or low levels of loneliness, Malaysian students attending public universities showed no significant impact on their suicidal behaviour.

This finding aligns with the study by Shaw et al. (2021), which suggested that living alone or not living with one's parents hurts men's suicidal behaviour. Additionally, a study conducted by Lamis



et al. (2014) found that loneliness among college students may lead to increased drug use, thereby raising the risk of having suicidal thoughts.

Future studies on suicidal behaviour in college students could explore family-related questions to examine further the significant relationship between loneliness and suicidal behaviour among Malaysian public university students. A study by Purcell et al. (2012) study discovered that stronger family ties were associated with a reduced likelihood of students reporting suicidal thoughts.

**The Effect Between Depression and Loneliness on Student Suicidal Behaviour**

Linear regression is used to estimate the relationship between two quantitative variables, depression and loneliness, about the suicidal behaviour of public university

students in Malaysia. These results indicate that depression has a strong influence, while loneliness has a weaker influence on suicidal behaviour.

Table 1 displays a study of the simple regression relationship between depression, loneliness, and suicidal behaviour among Malaysian university students. The results of the simple regression study indicate that depression is a significant predictor of suicide behaviour among Malaysian public university students ( $B = 1.22, t = 19.64, p < 0.05$ ). According to regression models with depressed associations ( $F = 385.72$  and a 0.05 significance level), 49% of the variation in suicide behaviour among Malaysian public university students can be significantly explained. Thus, this study suggests that the depression component influenced 49% of the suicide behaviour among Malaysian public university students in this study.

Table 1  
*Regression analysis summary for depression and loneliness towards suicidal behaviour among students*

Variable	B	SE	$\beta$	$t$	$p$
Depression	1.22	0.62	0.70	19.64	0.00
Loneliness	-0.22	0.22	-0.50	-1.02	0.31

Note: \* $p < 0.05$

This result aligns with the findings of Kielan et al. (2021), who identified several risk factors for suicidal behaviour in men with depression. These factors include unemployment, student status, the presence of mental illnesses in the family, and a desire for supportive assistance. The study by Ribeiro et al. (2018) also supported these findings, highlighting that

depression and hopelessness are risk factors for suicide behaviour, although the overall prediction was somewhat weaker than expected. Additionally, Melhem et al. (2019) discussed the specific predictions of suicide attempts that doctors make during regular psychiatric evaluations of individuals exhibiting depressive symptoms.

According to Table 1, loneliness is a significant predictor of suicidal behaviour among Malaysian students attending public universities ( $B = -0.22$ ,  $t = -1.02$ ,  $p > 0.05$ ). It suggests that, in this study, the impact of loneliness on Malaysian public university students' suicide behaviour was 0.3%. Loneliness can explain 0.3% of the variation in the range of suicidal behaviour among Malaysian public university students.

This result is consistent with the research conducted by McClelland et al. (2020), which found that depression acted as a mediator between loneliness and suicide ideation and behaviour. To anticipate suicidal ideation, Kim and Lee (2022) also discovered that machine learning techniques can be valuable in addressing social isolation and depression to prevent suicidal ideation.

Even though the study showed that loneliness had a relatively small impact, increasing suicide behaviour by 0.3%, it remains a concerning factor among Malaysian public university students. Therefore, institutions must identify signs of loneliness displayed by students as part of their efforts to prevent suicidal behaviour.

Depression and loneliness, two mental health issues that, if left untreated, can lead to suicidal behaviour, are closely associated with the mental well-being of students. An investigation into how feelings of sadness and loneliness affect suicidal behaviour among students at public colleges in Malaysia was conducted to contribute to the early prevention of mental health issues among students. The findings indicate that the levels of suicidal ideation

and depression were both relatively low. Currently, loneliness levels range from low to moderate. It suggests that the mental health of Malaysian students enrolled in public universities is generally good and typical.

The analysis concluded using Pearson Correlation and Cohen's value of collaboration to assess the relationship between depression, loneliness and suicidal behaviour among Malaysian students enrolled in public institutions. These findings demonstrated a strong connection between these emotions, as indicated by Cohen's assessment. It suggests that loneliness and depression can indeed influence suicidal behaviour among Malaysian public university students.

To explore how depression and loneliness affect suicidal behaviour among students in Malaysian public institutions, researchers relied on the findings from a simple regression analysis. The research indicates that loneliness and sadness may indeed have an impact on an individual's suicidal behaviour.

According to research, Malaysian University Students show good mental health overall. This positive result can be built upon to further improve their well-being. To continue supporting the mental health of university students, counselling and support services could implement specific strategies, particularly in the area of higher education counselling services in Malaysia.

While current mental health levels are on the positive side, it is crucial to

maintain and reinforce them. Counselling services should concentrate on tackling existing mental health concerns and on preventive counselling and educational programs. It can involve stress management, resilience-building, and life skills training to equip students with the tools to navigate challenges effectively.

Emphasise a comprehensive approach to student well-being, encompassing physical health, social connections, and personal growth. Offering seminars, workshops, or wellness programs on nutrition, physical fitness, and work-life balance can complement mental health support.

The research indicates that university students in Malaysia, immersed in their rich cultural and religious traditions, tend to have good mental health. This positive outcome highlights the significant impact of Malaysian cultures and religious practices on students' well-being. Counselling services should implement culturally and religiously informed strategies to maintain and improve this positive mental health state.

Acknowledging and appreciating the cultural and religious diversity among university students in Malaysia is important. To ensure effective counselling, counsellors must be culturally competent and sensitive to different cultural and religious groups' values, beliefs, and practices. Therefore, providing training to counsellors to help them understand and respect these differences is essential.

Counselling should involve and engage the family and community support networks to strengthen the student's sense

of belonging. The Malaysian culture is family-oriented and places great importance on the social structure. It can strengthen the student's sense of belonging and support and help them feel less lonely.

It is crucial to recognise and respect the positive influence of Malaysian cultures and religion on the mental health of university students. By implementing culturally and religiously informed strategies, universities can better foster good mental health and support their students' unique well-being needs. It is also important to conduct ongoing research into the intersection of culture, religion, and mental health to refine counselling approaches and ensure their relevance.

This study has two limitations. First, it involved students from public universities and did not consider students at private universities. Therefore, it is crucial to consider this aspect in future studies.

Future research should not limit itself to only a subset of the variables examined in the current study; instead, it should incorporate the additional variables. Bullying, physical abuse, and sexual abuse are examples of variables that would be valuable subjects of study.

## CONCLUSION

Suicidal behaviour among university students is a matter of concern, particularly due to its association between depression and loneliness, both of which could contribute to such behaviour. The study's results on depression and suicidal behaviour among Malaysian university students did not show

any significant findings. However, these findings gave us valuable insight into the mental health status of the population; most students in this study are currently experiencing good mental health. It is important to note that while the prevalence might be low, some individuals still require support. Malaysia's positive cultural and societal influences should be utilised to promote well-being further. At the same time, accessible mental health services should be maintained and expanded to help those in need. Moving forward, the research community should continue exploring the complexities of mental health among Malaysian university students. It will help them better understand the unique factors contributing to their well-being. The research will also help develop targeted interventions and support systems to ensure the holistic health of this student population.

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