



## **The Prevalence and Correlates of Suicidal Ideation among University Students: A Survey**

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### **ABSTRACT**

This study aims to determine the frequency and correlates of suicidal thoughts among students who are studying at a public university in Malaysia. A convenience sample strategy was used to recruit 371 undergraduate students for this survey research project. The respondents' information was analysed using descriptive and inferential statistics. According to the findings, a significant number of respondents scored positive for the emergence of suicidal ideation. The study also suggests that there is a strong link between suicidal thoughts, depression, and anxiety in this study. However, there is no notable link between suicidal ideation and substance use.

**Keywords:** suicidal ideation, depression, anxiety, substance use

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## 1 INTRODUCTION

Suicidal thoughts are believed to be a regular occurrence for individuals experiencing severe stress or depression. In most cases, the views are temporary and treatable; however, these thoughts can sometimes drive the individual to act and attempt or complete suicide. Based on Anderson and Smith (2014), Suicide is considered a major cause of death among individuals between 15 and 24 and is the subsequent driving reason for death among students in the United States (Schwartz, 2006).

The number of research on suicidal ideation has increased in recent years. The World Health Organization (WHO) statistics show that the number of people who committed Suicide in 2012 was estimated to be over 800,000 people. Most of the numbers are contributed by young people between 15 to 29 years of age. The suicide rate has shown a significant increase at 8.5% worldwide (World Health Organization, 2014).

Among these cases, suicide attempts or completed Suicide is the driving reason for death among university students. At the same time, the first cause is self-induced injury (Taliaferro, Rienzo, Pigg, Miller & Dodd, 2009). This research indicates a significant rate of suicidal ideation among university students, which eventually leads them to their death if left untreated. Suicide in Malaysia has become the second most elevated reason for death among individuals between the ages of 15 to 29, based on a report by Pillay (2017) in the *New Straits Times*. Based on a senior psychiatrist consultant at the hospital of the National University of Malaysia, the current figure for Suicide is 3 per 100 000 inhabitants. However, this might not be accurate as suicide cases in Malaysia are underly reported because of issues such as culture, religion, and other legal prohibitions (Khan, Sulaiman & Hassali, 2012). Based on a National Survey, as much as 11.4% of university students develop suicidal ideation, which is the thoughts of committing suicide. Of these numbers, 7.9% wanted to commit suicide, and 1.7% of students tried suicide (Barrios, Everett, Simon & Brenner, 2002).

This factor is concerning, as reported by The World Health Organisation (WHO). The suicidal magnitude has shifted over the past decades from western Europe to Asia and compared to the data from 2012. Past years show that Asian countries have a significantly higher average of suicide cases. These numbers report that 26% of the world's population living in 11 South-East Asian countries accounts for more than 39% of the global suicide numbers (World Health Organization, 2014). Many research and information on Suicide and self-harm have been carried out in the US and European countries. Still, this study's rates do not reflect suicide spread internationally, with Asia responsible for up to 60% of suicide cases (World Health Organization, 2014). Malaysia is located in South-East Asia and is known for various ethnicities, cultures, and religious backgrounds. There is a state located in East Malaysia called Sarawak, where it is most abundant with different people of different ethnic, social, and religious backgrounds. There is a lack of research on these populations' mental health and even less on specific groups of individuals such as university students. Therefore, a study on the prevalence and correlates of suicidal ideation in students from a selected public university would be timely.

Numerous studies have researched possible factors that correlate with suicidal ideation. The results have shown that depression is one of the critical factors that contribute to the development of

suicidal ideation (May & Klonsky, 2016), while social isolation or social phobia has also been researched as one of the playing roles in suicidal ideation (Durkheim, 1986), recent research shows that substance use such as alcohol and tobacco has shown a positive association towards suicidal ideation (Breet, Goldstone, & Bantjes, 2018). Therefore, this study aimed to identify the prevalence and correlates of suicidal ideation among university students enrolled for full-time study at a public university in Malaysia.

## 2 LITERATURE REVIEW

The critical element in suicidal behaviour is known as suicidal ideation. The stimulation or drive that comes from the appearance of suicidal ideation acts as a trigger for the attempts and committing Suicide (Pereira & Cardoso, 2015). Based on the three-step theory of Suicide by Mars et al. (2019), ideation and attempts of Suicide are caused by the combination of both pain and hopelessness. An individual in pain but still has hope and drive to improve his current situation will continue to engage with his life. However, an individual exposed to pain and loses hope will develop suicidal ideation in their lifetime.

Suicidal ideation is characterised by an individual's means of thinking of Suicide or plans of future attempts (Brazier, 2018). Most suicidal ideation comes only as passing thoughts; however, these thoughts can lead individuals to commit to the behaviour. In 2017, it was estimated by the Centre for Disease Control and Prevention (CDC) in the United States of America, over 10 million individual was reported to experience suicidal ideation, while 1.4 million of the population made actual attempts of Suicide (Harmer, Lee, Duong, & Saadabadi, 2021).

Based on several epidemiological surveys worldwide, it has become clear that suicidal ideation has become a severe issue worldwide. Despite a large amount of literature focusing on Suicide, deliberate self-harm, and suicidal behaviour, a minuscule number of studies focus on the frequency of suicidal ideation in a general population. A study done on representatives of German students reported that suicidal ideation among them was 14.4% (Brunner et al., 2007). Another similar study on 17 European countries said the prevalence of "self-harming thoughts" found that the rate of such thoughts varies from 2.1 to 15.3% (Kokkevi et al., 2012). Based on a systematic review of the United States of America data on suicidal ideation among adolescents, the lifetime prevalence of ideation from adolescents was 15.0% and 29.0% for the 12-month prevalence (Nock et al., 2008). The substantial discrepancies among the rates may be explained due to different methodological approaches, cultural factors, instrumentations, and time grouping.

De Man, Leduc, and Labreche-Gauthier (1993) discovered that suicidal ideation among adolescents is positively associated with several factors such as depression, negative stress, substance abuse, negative self-esteem, and lack of social support (parental). It is evidence that suicidal ideation or suicidal behaviour factors are not as simple as a one-to-one interaction with depression.

Suicidal ideation should be a concerning factor for every university, as suicidal ideation has been considered an essential factor in detecting future attempts or even successful attempts (Brent et al.,

1993; Gili-Planas et al., 2001; Lewinsohn, Rohde, & Seeley, 1996). The students at the Federal University of Mato Grosso performed a cross-sectional analysis of the factors related to suicidal ideation. The result of the study showed that over 9.9% of the student had experienced suicidal ideation or thoughts over the past 30 days (Santos et al., 2017). Also, based on a similar study conducted on university students at a Portuguese University, the result from 366 students indicates that over 12.6% of the student developed suicidal ideation at one point in their lifetime, while 10.7% of the students experienced suicidal ideation in the previous year and 1.1% had the ideation during the past week (Pereira & Cardoso, 2015). These studies clearly show that there is an existence of suicidal ideation that occurs in a university setting.

Meanwhile, suicide cases among university students in Malaysia have gained media attention, becoming a worrying trend. On November 17 2019, a private higher learning institution medical student died after falling from the university library's third floor the night before his exam. The cases were labelled as "sudden death"; however, based on initial investigations, the victim was believed to be stressed due to the upcoming examination (Imran Hilmy, 2019). In addition, on May 15, 2019, Malaysia was shocked by two suicide cases coming from one of Malaysia's prestigious private universities in one week. The details regarding the Suicide were not published to the public to respect the family's privacy. The only information obtained was that the Suicide occurred on May 6 and 14, respectively (New Straight Times, 2019).

Professor Nor Zuraida Zainal, the President of the Malaysian Psychiatry Association (MPA), once mentioned that over 2000 Malaysians die of Suicide every year and young adults heavily contribute to these numbers. (Nur Shahirah Osman, 2017). While in 2013, over 200 suicide attempts and four deaths were reported among individuals between the ages of 20 and 24 in Malaysia based on a list of national suicide attempts and cases in Malaysia (Sobry, & Ramli, n.d.). It indicates that young Malaysian students are exposed to Suicide, and strategies of suicide preventive measures should be implemented to reduce the rate of these concerning matters.

Depression is a mood disorder characterised by depression and loss of interest in everyday activities. A person must experience five or more symptoms over two weeks for the diagnosis of depression, and at least one of the symptoms must be either a depressed mood or loss of interest (Truschel, 2019). University students usually face a vital transition from childhood to adulthood. This time may be one of the most challenging times in their lives. Maintaining grades while trying to socialise with new people and being away from home might cause some students to develop depression. Being diagnosed with depression is a concerning factor as experiencing depression can cause disability and even mortality if left untreated (Ashraful Islam, Yun Low, Ting Tong, Wan Yuen, & Abdullah, 2018).

Most of the cause of depression is related to stressful factors experienced during their studies. Based on a cross-sectional study of depression-related factors among Malaysian university students, approximately 30% of 1023 university students experienced depression, with 4.4% of the respondent experiencing severe Depression (Ashraful Islam et al., 2018). Furthermore, another similar study on the prevalence of depression, stress, and anxiety among university students in Malaysia was conducted and based on the findings; results showed similar patterns where 27.5% of the students experienced moderate depression and a higher rate of severe depression at 9.7% (Shamsuddin et al., 2013).

Based on research by Shamsuddin et al. (2013) on the prevalence of depression, anxiety and stress among Malaysian students resulted in 63.0% of 506 experiencing anxiety. However, what type of anxiety was not specified in this research. Based on another study on the prevalence of social anxiety among undergraduate health science students in Gondar, 32.1% of the students experienced social anxiety from mild to severe anxiety (Hakami et al., 2018). A similar study among Malaysian medical undergraduates showed that 56% of the medical student experienced social anxiety symptoms (Gill & Mohammad, 2010). Students with positive social anxiety usually face significant disabilities in conducting or maintaining their work, social life, and mental health. Thus, the result above is concerning as it indicates that the prevalence of social anxiety exists among university students.

Substance usage by students is not uncommon nowadays and has been an issue concerning our society for years. Transitioning from high school to university, students usually experience a different lifestyle to make their own choices. The freedom they receive has led to the risk of substance use such as smoking, alcohol, illegal drugs, and many more among university students (Bunch, 2002).

Research among college students in Kenya on the prevalence of substance use found that 69.8% of the population regularly uses mood-enhancing substances like alcohol, cigarettes, and even cannabis. The lifetime prevalence of individuals who used alcohol, cigarettes and cannabis was 51.9%, and 97.6% of that population had consumed alcohol the week before the study was conducted (Atwoli et al., 2011). A similar conducted among students in universities in Sudan found that the prevalence of substance use was much lower at 31% compared to students in Kenya. However, this result does not include tobacco use which may lower the prevalence rate compared to the previous study (Osman et al., 2016).

Either way, the result of previous research is concerning. Based on Wong, Zhou, Goebert and Hishinuma's (2013) research, substance abuse and suicidal ideation tend to co-exist with one another, where higher rates of suicidal ideation were shown to be present in substance users than non-users. However, based on another research done by Bagge and Sher (2008), suicidal ideation may increase the risk of substance due to methods of relieving or an escape rather than one of the leading causes of suicidal ideation. Thus, individuals who indulge themselves in substances such as alcohol and cigarettes might have lower rates of suicidal ideation than an individual who does not. Therefore, university students who face constant stress and challenges might be substance users, but having low suicidal ideation is possible.

These are the research questions that guided the inquiry:

1. What is the prevalence of suicidal ideation among students in a public university in Malaysia?
2. Is there any relationship between depression and suicidal ideation among these students?
3. Is there any relationship between social anxiety and suicidal ideation among these students?
4. Is there any relationship between substance use and suicidal ideation among these students?

## 2 METHODS

The study's population is all fully registered students at the selected public university. Convenience sampling was selected to be the sampling method for this research due to the large population size. The formula by Krejcie and Morgan (1970) was used for this research to decide on the sampling size. Three hundred seventy-one undergraduates participated in the study.

The study was conducted using a quantitative research methodology. A set of questions was dispersed randomly to respondents all over the university to require input for further data analysis. A survey research design was utilised to accumulate the required information.

The questionnaire was divided into five sections. For section A, respondent was required to provide their demographic information. The suicidal ideation questionnaire (SIQ) developed by Reynolds (1987) was adapted into section B of the questionnaire. The Patient Health Questionnaire-9 (PHQ-9) was adapted for section C of the questionnaire. A Social Interaction Anxiety Scale (SIAS) developed by Mattick and Clarke (1998) to measure anxiety in social interactions was adapted into section D of the questionnaire. The CAGE questionnaire was adapted into section E of the questionnaire. Dr Ewing created the CAGE questionnaire in 1970 as a tool to detect alcoholism (O'Brien,2008). The questionnaire is further modified to fit substance usage.

All assessment questionnaire has been re-validated, modified, and pilot tested to fit the research target. In part A, respondent was required to provide their demographic information. The demographic information required was gender, age, faculty, and year of study. SIQ was adapted for Section B of the questionnaire. The suicidal ideation questionnaire (SIQ) developed by Reynolds (1987) contains elements to analyse the prevalence of suicidal ideation of an individual in the past 12 months Section B. The section consisted of 30 items with seven scales used to represent the degree of severity towards suicidal ideation (0 = never; 1 = almost never; 2 = rarely; 3 = sometimes; 4 = frequently; 5 = almost always; 6 = always). PHQ-9 was adapted in Section C of the questionnaire. The Patient Health Questionnaire (PHQ-9) is a common tool for screening and tracking depressive symptoms and disorders. The section consisted of 9 items with a 4-point Likert scale to indicate how often the samples were bothered by the symptoms (0 = Not at all; 1 = Several days; 2 = more than half of the days; 3 = Nearly every day). The SIAS was adapted in Section D of the questionnaire. Social Interaction Anxiety Scale (SIAS) is a tool developed by Mattick and Clark (1998) to measure anxiety in the situation of social interactions. The section consisted of 20 items with five scale to represent the degree of severity towards social anxiety (0 = Not at all; 1 = Slightly; 2 = Moderately; 3= Very; 4 = Extremely).

The CAGE questionnaire was adapted into the section for the last section, which is Section E. Dr John A Ewing developed the questionnaire in 1970 as a tool for detecting alcoholism (O'Brien, 2008). The section consisted of 5 items with two scales to represent the potential of substance usage problems (0 = No, 1 = Yes).

Sets of questionnaires were distributed to the respondents. All respondents were required to agree to participate in the study deliberately and were given an informed consent form to ensure their

information was protected and maintained confidentiality. After signing an informed consent form, the participants were asked to respond to the survey in 15 minutes.

The questionnaires were delivered through two main methods: face-to-face and online platforms such as Google forms. For the face-to-face data collection, the researchers went to each faculty and handed out the form physically to students on the premises and collected it back after an allocated time. Meanwhile, an online survey was developed using the same content for the online method. It was published and broadcasted through numerous social media platforms such as WhatsApp, Instagram, and Twitter. The data from both collection procedures were compiled and sorted. Invalid data was eliminated.

The data were analysed using the Statistical Package for Social Science application (SPSS) version 22 (IBM Corp, 2013). The analysis used is inferential data analysis (Pearson Correlation) and descriptive data analysis.

### 3 FINDINGS

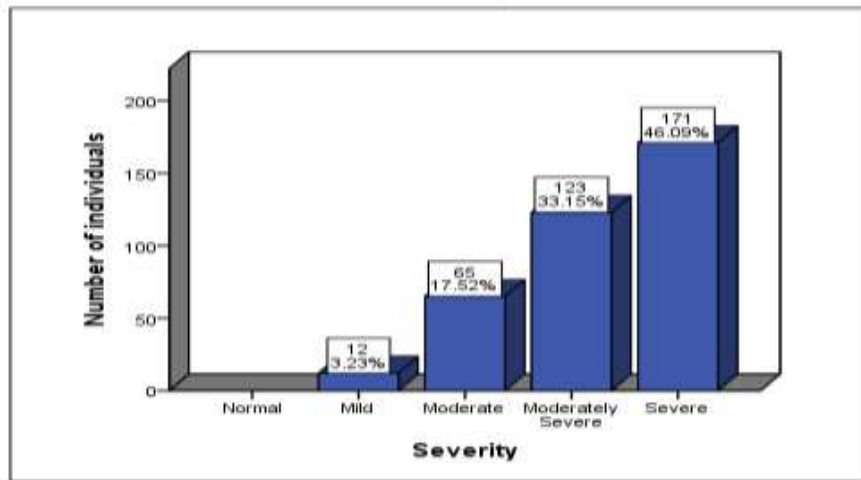
This section analyses and presents the findings of the data collected from the samples.

**Table 1.** Students' prevalence of non-suicidal and suicidal ideation is based on the Suicidal Ideation Questionnaire (SIQ).

Statistics	Suicidal Ideation Questionnaire (SIQ)	
	Non-Suicidal	Suicidal
Frequency (N)	195	176
Per cent	52.6%	47.4%
Total	371 (100%)	

One of the study's objectives was to identify the prevalence of suicidal ideation among the study participants. Therefore, the student's prevalence of suicidal ideation was collected using the Suicidal Ideation Questionnaire (SIQ) instrument. Participants were required to answer all items, which consisted of 30 questions. Each question was provided with a Likert scale set on 7 points ranging from Never (0), Almost Never (1), Rarely (2), Sometimes (3), Frequently (4), Almost always (5), Always (6). All the answers were summed to indicate the total scores ranging from 0 to 90. It determined in which categories of suicidal ideation an individual might fall. A greater disposition of suicidal ideation relates to those with a higher score in the SIQ.

The results in Table 1 show the prevalence of suicidal ideation among the study participants. It is grouped into two categories which are Suicidal Ideation Students (SIS) and Non-Suicidal Ideation Students (NSIS). Based on the data obtained, 176 (47.4%) of the sample students experienced suicidal ideation over the last 12 months, while 195 (52.6%) students showed non-suicidal ideation. The result indicates that over 47.4% of the respondents have experienced some suicidal ideations over the last 12 months.

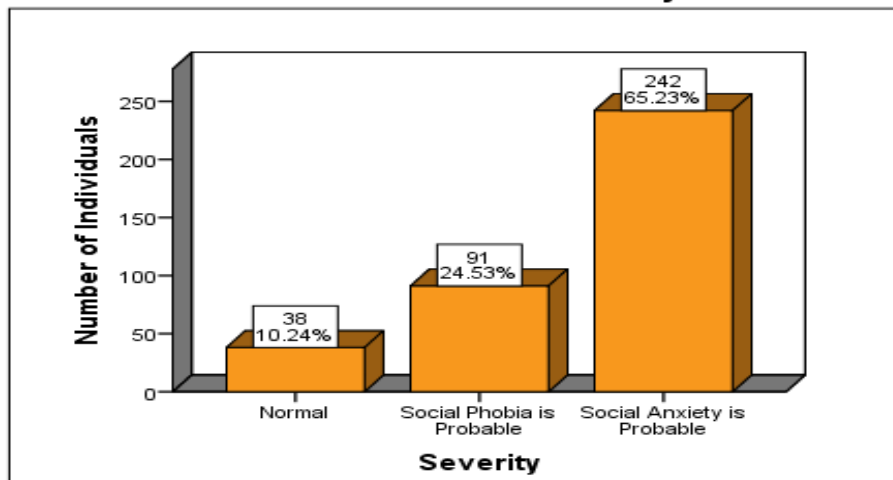


**Figure 1.** Bar graph of the prevalence of depression among study participants ( $N=371$ ).

Figure 1 illustrates that most participants experience severe depression with 171 students (46.1%). Similarly, 123 students (33.2%) showed moderately severe depression, and 65 students (17.5%) showed a moderate level of depression, respectively. The remaining 12 students (3.2%) showed a mild level of depression. The scoring was based on the PHQ-9 score. It was divided into increasing severity of 0-4, 5-9, 10-14, 15-19 and 20 or greater (Kroenke, Spitzer & William, 2001). Over 79.3% of the students experience moderately severe to severe depression. In comparison, the remaining 20.7% experience moderate to mild levels of depression, respectively.

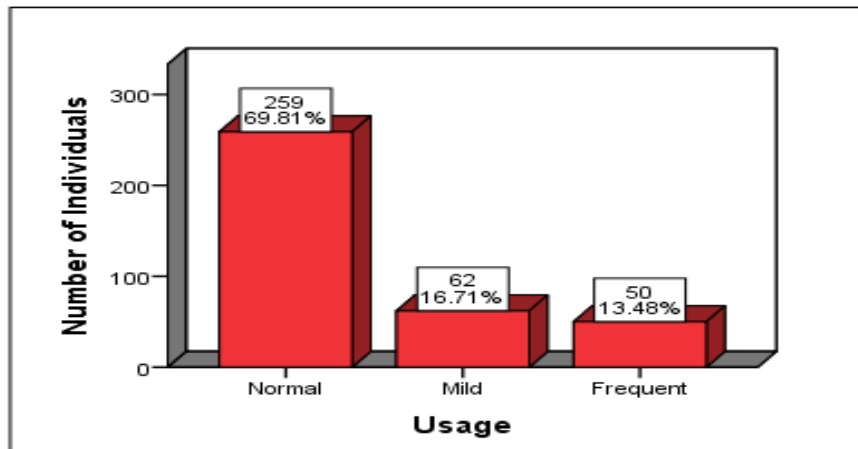
Figure 2 illustrates that most respondents reported being probable social anxiety, with 242 students (65.2%). Similarly, 91 students (24.5%) showed that they too have social anxiety. Only 38 students (10.2%) showed a normal level of anxiety based on the result obtained. The scoring was based on the Social Anxiety Scale score, which was divided into the following categories accordingly 0-33 (average level of anxiety), 34-42 (social phobia is probable) and 43 or greater (social anxiety is probable) (Mattick & Clarke, 1998). To conclude, over 89.7% of the students experience moderate to high levels of social anxiety, while the remaining 10.2% experienced normal levels of social anxiety.





**Figure 2.** Bar graph of the prevalence of social anxiety ( $N=371$ ).

Figure 3 illustrates that most respondents reported having an average level of substance usage with 241 students (48.8%). Similarly, 62 students (16.7%) showed a mild level of substance usage. Also, 50 students (13.5%) showed a frequent level of substance usage. The scoring was based on an adapted CAGE questionnaire score which was divided into the following categories accordingly 0-1 (Normal), 2-3 (mild), and 4-5 (Frequent). Over 30.2% of the students engage in mild to frequent substance usage. In comparison, 65% reported having none or normal substance usage levels.



**Figure 3.** Bar graph of the prevalence of substance usage ( $N=371$ ).

#### 4.1 Pearson's correlation table

**Table 2.** Pearson's correlation between suicidal ideation and *correlates* (Depression, Social Anxiety & Substance Usage)

	SIQ	Depression	Social Anxiety	Substance Usage
Suicidal Ideation	-	0.699**	0.427**	0.099

\*\* $p < 0.01$

The statistical result of Pearson's  $r$  correlation in Table 2 shows a strong positive relationship ( $p < 0.01$ ) between Suicidal ideation and depression with  $r = 0.699$ . Also, Suicidal Ideation and Social Anxiety showed a weak positive correlation ( $p < 0.01$ ) with  $r = 0.427$ . However, the statistical analysis of the relationship between Suicidal Ideation and Substance Usage showed no significant correlation ( $p > 0.01$ ) with  $r = 0.099$ .

Thus, based on the data analysis, there is a significant relationship between Suicidal Ideation and Depression. Similarly, the result also indicates a significant relationship between Suicidal Ideation and Social Anxiety. Meanwhile, the result indicates no significant correlation between the two factors for the relationship between Suicidal ideation and Substance Usage among university students.

To conclude, the result of the study displayed that student from University Sarawak shows a significant correlation towards suicidal ideation when they experience a certain level of depression and anxiety. Meanwhile, substance usage does not have any critical correlating factor that contributes.

## 5 DISCUSSION

Based on the scoring method adapted from Mazza and Reynolds (2001), over 176 (47.4%) of the participants experienced suicidal ideation over 12 months. However, the severity of suicidal ideation may differ from one student to another. The scores are based on the minimum requirement to be labelled as having suicidal ideation. These numbers have drastically increased compared to past research, such as a study on the students at the Federal University of Mato Grosso, where only 9.9% of the students experience suicidal ideation (Santos et al., 2017). This significant difference might be due to location disparity and culture, and religion.

Similarly, the prevalence of suicidal ideation differs drastically compared to past research done by Pereira and Cardoso (2015) on students at a university in Portugal, whereby the percentage increased up to 36.7%. These numbers are very concerning as it shows that students from the university are at risk of developing suicidal ideation. The stimulation or drive from the appearance of suicidal ideation can be the trigger for future attempts and Suicide (Pereira & Cardoso, 2015).

Thus, higher education institutions should formulate academic policies and preventive actions to reduce the number of suicidal ideations on the university campus.

Also, based on the data obtained and Pearson's correlation between depression and suicidal ideation among participants, the results show a significant correlation between the two variables. The data obtained through this study is parallel to several research which had reported that depression could be the concerning factor that leads to the development of suicidal ideation among students (Cheung & Dewa (2006); Garlow et al. (2007); Arria et al. (2009)). Similarly, research on depression and suicidal ideation among students from Universiti Teknologi Malaysia (UTM); discovered that depression and suicidal ideation were substantially correlated (Shamsuddin et al., 2013). Further research from different countries, such as Tehran University, showed that depression had the highest correlation in predicting suicidal ideation (Wang, Shi, & Luo, 2017; Izadinia, Amiri, Jahromi, & Hamidi, 2010). Thus, the data from the previous studies showed similarities in which depression and suicidal ideation have a positive correlation among university students, even with location disparity.

In determining the relationship between social anxiety and suicidal ideation, the results showed a statistically significant correlation between social anxiety and suicidal ideation in this study. The results are similar to previous research by Gould et al. (1998). They found that social anxiety among youth individuals showed a positive correlation to suicidal ideation and attempts. The results are also aligned with several other past research studies done by Cox, Dorenfeld, Swinson and Norton (2005) have discovered that over 12 months, 34.0% of patients with a social phobia have reported having suicidal ideation, and one of the patients even made real attempts. Among these patients, over 12.0% of the total population attempted Suicide at one point in their lives. In sum, findings from the current study are aligned with those reported in previous studies. There is a positive correlation between social anxiety and suicidal ideation among the study participants.

Based on the data collected, there was no significant correlation between substance usage and suicidal ideation among university students who participated in this study, which shows that the increase in substance usage does not cause any changes in the rate of suicidal ideation. However, these results opposed findings from previous research, such as Hemenway, Solnick and Colditz (1993), where they found that using substances such as cigarettes and illicit drugs had strong links to suicidal thinking and behaviour. Similarly, results from several previous researchers found that individuals who abuse or are dependent on the usage of alcohol have shown a high association with suicide attempts or behaviours (Beck & Steer, 1989., Kessler, Borges, & Walter, 2013). This result might be due to the effects of the substance as a mood-enhancing substance. Based on research done by Bagge and Sher (2008), substance usage may affect the results of suicidal ideation as it can be used as a method of relieving or an escape that would reduce the rate of suicidal ideation. Other possibilities that cause a disparity in results in comparison to previous research are cultural or religious aspects where the usage of substance is forbidden by cultural and religious law. At the same time, some use psychoactive substances prescribed by the religion as physical and spiritual healing substances by the Navajo Indians (Halpern et al., 2005). Thus, the result may differ when comparing students with different cultures and religions.

## **6 IMPLICATIONS OF THE STUDY**

Most university students are exposed to an educational syllabus that differs depending on their courses or programs. The primary education provided is related to future job scopes that they want to pursue. The knowledge regarding a mental health or mental disorders is limited to individuals taking associated programs. Thus, this could contribute to the inadequacy to solve their problem and inability to cope with stressful events. Lack of mental health knowledge prevents individuals from having early detection and intervention. Thus, causing some of them to be at risk of culminating their stress and emotion into something unwanted such as Suicide. Therefore, this study would contribute to the availability of local data in Malaysia on the prevalence and correlates of suicidal ideation among students. Similarly, this study can be a source of awareness for higher education institutions to formulate policies and preventive activities or actions to stand up to this issue on their university campus. Lastly, the people in the university students' circle, such as their friends, parents, and teachers, could also benefit from this study as an education on early detection of suicidal ideation or depressive symptoms to aid in early treatment and prevention.

## **7 LIMITATION AND RECOMMENDATIONS**

There are several limitations in conducting this study, such as the validity of the information. The validity of this study is considered a limitation because all the information obtained is based on a self-rated questionnaire that the students did. Therefore, because the questionnaire is self-rated, some students might avoid answering truthfully about their situation even when confidentiality is guaranteed. Thus, the inaccurate reporting/answering of the questionnaire can lead to a decrease in the validity and accuracy of the findings, which later would jeopardise the result of the study.

Also, the generalisation of the population where data collected for this study focused only on undergraduate students enrolled in one public university in Malaysia. Thus, the results of the findings are not suitable for generalising other universities' populations as other corresponding factors may cause a disparity in the results.

Furthermore, there is a lack of a literature review regarding suicidal ideation among university students in Asian countries. Most of the literature review is based on western research as a reference. The numerous western research and reference might cause in-congruence when comparing data of past studies as western and Asian countries have numerous differences that can affect the survey's result, such as culture, norms, and lifestyle.

Based on the limitations, individuals could motivate or encourage the sample to answer with complete honesty by providing incentives for future research. Other than that, future research could implement quantitative and qualitative methods to collect data so that the data obtained would be more accurate and non-aligned items could be detected and discarded as it affects the overall result.

Data collection from several universities throughout Malaysia should be considered for future research. The data collection should cover a broader population of university students so the result could be generalised to the population of all university students in Malaysia. Similarly, depending

on the development of the study, it could be significant enough to raise awareness, leading the government to take significant actions.

Furthermore, the future researcher could also further improve the study by looking at other possible correlating factors of suicidal ideation so that suicidal ideation such as relationships, age, and faculty. A larger pool of possible correlating factors can be beneficial so that information regarding the development of suicidal ideation would be more precise and accurate so that proper implementation could be made.

## 8 CONCLUSION

Based on the analysis result, it is found that depression and social anxiety possess a high correlation with suicidal ideation among participants of the study. Meanwhile, substance usage had no significant correlation with suicidal ideation. Therefore, it can be concluded that social anxiety and depression could increase the probability of the development of suicidal ideation among university students. This research is hoped to help future researchers further understand the prevalence and correlates of suicidal ideation and contribute to the availability of local data in Malaysia.

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