PSYCHOLOGICAL RISK FACTORS AND SUICIDAL IDEATION AMONG UNDERGRADUATE STUDENTS OF A MALAYSIAN PUBLIC UNIVERSITY

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Abstract

Suicide is the second leading cause of death for young people ranging from the age of 15 to 29 years old. To date, it has been little research that studied the psychological risk factors correlated with suicidal ideation among undergraduate students. Therefore, the purpose of this study was to identify the level of suicidal ideation and psychological risk factors (depression, anxiety, stress, academic stress and hopelessness), to examine the relationship between suicidal ideation and psychological risk factors and to determine whether these psychological risk factors predict suicidal ideation among undergraduate students. This quantitative study was conducted through correlational research design which involves 375 undergraduate students from a Malaysian public university in Johor, Malaysia and respondents were selected via proportional stratified random sampling method. Online questionnaire was distributed in getting the information from the samples. Descriptive statistics and inferential statistics (Pearson correlation and multiple regression) were applied to analyse the collected data using SPSS software. The findings showed that the level of depression, anxiety and suicidal ideation is low while the level of stress, academic stress and hopelessness is moderate. Findings revealed that there was significant relationship between suicidal ideation and psychological risk factors. Results also found that depression, stress, and hopelessness were found to be the significant predictors of suicidal ideation while anxiety and academic stress did not predict suicidal ideation. This study provides an implication to various parties especially to university students, parents, lecturers.

Keywords: Psychological Risk Factors, Suicidal Ideation, Undergraduate Students

■ 1.0 RESEARCH BACKGROUND

Suicide is originated from the two Latin words, "sui", which means oneself and "cidium", which means killing (Christal, & Suman, 2017). Suicide is defined as death caused by self-directed injurious behaviour with any intent to die as a result of the behaviour (Nock, 2014). Suicide is perceived as a serious mental health issue worldwide in recent years. Each year, there are around 800,000 people died due to committing suicides and suicide is the second leading cause of death among young people ranging from the age of 15 to 29 years old (World Health Organization, 2016). With the increasing number of young people affected, suicide is an issue that needs attention from researchers and examining the risk factors as predictors of suicidal ideation is important in reducing the suicide crisis among university students.

Suicidal ideation usually happens before a suicide attempt (Ibrahim, Amit, Din, & Ong, 2017) and it is described as suicidal thoughts with a range of severity from general thoughts about death to more specific thoughts such as ways to commit suicide (Gonçalves, Sequeira, Duarte, & Freitas, 2014). Latest evidence implied that suicidal ideation has raised in Asian nation among university students which showed that this group is at-risk population. For instance, in Taiwan, approximately 7.5% of university students have suicidal thoughts with the intention to commit suicide while in Korea, 3.3% of university students have attempted suicide (Abdollahi, Talib, Yaacob & Ismail, 2016). The situation of suicidal ideation among university students in Malaysia is identical with several other countries. According to the Malaysian National Health and Morbidity Survey (NHMS), individuals in the age group of 16 to 24 years old are most likely to have suicidal ideation, which may include a significant percentage of Malaysian university students (Institute for Public Health, 2011).

Risk factors are suicidal ideation aspects that can act as predictors of suicidal ideation (Whitaker, Shapiro, & Shields, 2016). There are several risk factors correlated with suicidal ideation among university students including individual risk factors and family risk factors. However, despite the mentioned factors, psychological factors have a significant role in understanding the individual psychological state and of those who will have the potential to be involved in suicide and suicidal ideation. It helps to determine the students' tendency to be involved in suicidal ideation (Ibrahim, Amit, & Suen, 2014). Psychological factors are thoughts, feelings, and attitudes that influenced human behaviour (Upton, 2013) and it could make an individual more likely to develop a mental health disorder. In this study, the five major psychological risk factors are depression, anxiety, stress, academic stress, and hopelessness.

Suicide is perceived as an important health problem among university students in Malaysia today and understanding the psychological risk factors of suicide ideation is significant to prevent suicide among university students in Malaysian setting. However, studies that have been conducted in Malaysian context on suicide among university students are still rare and very few studies have examined psychological risk factors as predictors of suicidal ideation among university students in Malaysia (Mustaffa, Aziz, Mahmood, &

Shuib, 2014; Yeong, Shuen, & Kim, 2017). Moreover, although researchers have studied different risk factors that can caused suicidal ideation, there were inconsistencies among researchers. Some researchers asserted that depression and anxiety are correlated with the increased suicidal ideation (Ibrahim, Amit, & Suen, 2014; Ahmad, Cheong, Ibrahim, & Rosman, 2014). Others suggested that other than depression and anxiety, academic stress and hopelessness were significantly associated with suicidal ideation (Khan, Mustaffa, Hamdan, & Ahmad, 2014) while Akhtar and Alam (2015) revealed an association between stress and suicidal ideation. Hence, it is vital to investigate the five major psychological risk factors (depression, anxiety, stress, academic stress & hopelessness) that associated with suicidal ideation.

Therefore, this study aims to investigate the relationship between psychological risk factors (depression, anxiety, stress, academic stress & hopelessness) and suicidal ideation and whether these psychological factors are predictors of suicidal ideation among undergraduate students in a Malaysian public university. With these findings, this study has the potential to provide a good understanding about psychological risk factors of suicidal ideation among undergraduate students in Malaysia and to provide psychological needs for people who are having suicidal ideation.

■ 2.0 PURPOSE OF THE STUDY

The objectives of this study are:
- To determine the level of psychological risk factors (depression, anxiety, stress, academic stress, and hopelessness) and the level of suicidal ideation among undergraduate students in a Malaysian public university.
- To determine the relationship between suicidal ideation and the five psychological risk factors among undergraduate students in a Malaysian public university.
- To determine the role of psychological factors as the predictor of suicidal ideation among undergraduate students in a Malaysian public university.

Can add on the literature

■ 3.0 LITERATURE REVIEW

Past studies have examined psychological risk factors associated with suicidal ideation among university students from different contexts (e.g., Malaysia and global). For example, Mustaffa, Aziz, Mahmood and Shuib (2014) found a significant correlation between suicidal ideation and depression among university students in Johor Bahru, Malaysia whereas Pervin and Ferdowshi (2016) study conducted with university students in Bangladesh showed that the risk factors associated with suicidal ideation include depression and hopelessness. In addition, a study was conducted among Malaysian and Indian students which showed that psychological factors associated with suicidal ideation include hopelessness, depression, and academic stress. It also revealed that Malaysian students were significantly higher on academic stress and hopelessness (Khan, Mustaffa, Hamdan, & Ahmad, 2014). Another research focused on depression, anxiety, and stress as predictors of suicidal ideation among Malaysian students has also found a significant correlation between depression, anxiety, and stress with suicidal ideation (Ibrahim, Amit, & Suen, 2014).

■ 4.0 METHODOLOGY

This is a quantitative study that was carried out by using correlational research design with proportional stratified random sampling method and it involved 375 respondents comprising of undergraduate students in a public university in Johor, Malaysia. There are 7 faculties in this public university but only 4 faculties are included in this study as the other 3 faculties are in Kuala Lumpur campus. Since this study was conducted in Johor, Malaysia, only Johor undergraduate students were included which comprised of four faculties: Faculty of Engineering, Faculty of Science, Faculty of Social Sciences and Humanities, and Faculty of Built Environment and Surveying.

The instruments used in this study were Suicidal Ideation Scale (SIS) developed by Rudd (1989), Academic Expectations Stress Inventory (AESI) constructed by Ang and Huan (2006a), 21-Item Depression Anxiety Stress Scale (DASS-21) established by Antony, Bieling, Cox, Enns and Swinson (1998) and Beck Hopelessness Scale (BHS) developed by Beck, Weissman, Lester and Trexler (1974). In order to ensure the reliability of the questionnaire in this study, internal consistency reliability is one of the best strategies to be used as it does not need to run the test twice like the other test-retest reliability technique. Cronbach's alpha is used by the researcher in measuring the reliability of the questionnaire. The internal consistency for the four scales and subscales of these instruments are shown below.

Table 1: Cronbach's Alpha for SIS

Scale	Cronbach's Alpha (n=20)	No. of Item
SIS	0.701	9

Table 1 above showed the Cronbach's Alpha for SIS among undergraduate students. The SIS reported good reliability in this study with the Cronbach's Alpha is 0.701 among 9 items instead of the original 10 items SIS scale. The item "I have made attempts to kill myself" is removed as the item has zero variance and it reduced the reliability of the overall SIS scale. Therefore, the researcher will continue to use these 9 items as a research items in the questionnaire for main study.

Table 2: Cronbach's Alpha for AESI

Sub-scale	Cronbach's Alpha (n=20)	No. of Item

Expectations of Self	0.940	4
Expectations of Parents/Lecturers	0.933	5
Total	**0.956**	**9**

Table 2 above showed the Cronbach's Alpha for AESI among undergraduate students. The AESI reported high reliability in this study (Cronbach alpha for the Expectations of Self subscale = 0.940, for the Expectations of Parents/Lecturers subscale = 0.933 and for the total scale = 0.956). Therefore, these items will be continued to be use as a research items by the researcher in the questionnaire for main study.

Table 3: Cronbach's Alpha for DASS-21

Sub-scale	Cronbach's Alpha (n=20)	No. of Item
Depression	0.749	7
Anxiety	0.839	7
Stress	0.835	6
Total	**0.917**	**20**

Table 3 above showed the Cronbach's Alpha for DASS-21 among undergraduate students. The DASS-21 reported good reliability in this study (Cronbach's alpha for Depression scale = 0.749, Anxiety scale = 0.839, Stress scale = 0.835 and total scale = 0.917). However, the Cronbach's alpha for Stress scale is 0.395 when it tested among the original 7 stress items which is not reliable. Hence, to make the stress scale reliable, the researcher modified the scale by removing the item "I felt that I was using a lot of nervous energy" from the stress scale because the researcher found out that this item will reduce the reliability of the instrument. Therefore, only 20 items instead of 21 items of DASS-21 scale will be used in the questionnaire for main study.

Table 4: Cronbach's Alpha for BHS

Sub-scale	Cronbach's Alpha (n=20)	No. of Item
Positive-expectation	0.838	9
Negative-expectation	0.845	10
Total	0.732	19

Table 4 above showed the Cronbach's Alpha for BHS among undergraduate students. The BHS reported high reliability in this study (Cronbach alpha for positive-expectation subscale = 0.838, for negative-expectation subscale = 0.845 and for the total scale = 0.732). Therefore, these items will be continued to be use as a research items by the researcher in the questionnaire for main study. After the researcher has conducted the pilot study and tested the reliability and validity of instruments, the researcher has made some refinements, such as deleting one item in SIS (9 items), DASS-21 (20 items) and BHS (19 items). For AESI (9 items), the researcher has made some changes in wording to fulfil the objectives of this study (tested in university contexts).

Next, the analysis of descriptive statistics, Pearson correlation and multiple regression were done using Statistical Package for Social Science (SPSS) software version 24.0. Descriptive statistics were used to determine each of the psychological risk factors level and suicidal ideation level among undergraduate students. Pearson correlation was used to answer the hypotheses to determine the relationship between suicidal ideation and psychological risk factors among undergraduate students.

Table 5: Mean Score Interpretation

Mean Score	Level
1.00 – 2.33	Low
2.34 – 3.67	Moderate
3.68 – 5.00	High

Multiple regression was utilized to predict the influence of psychological risk factors on suicidal ideation among undergraduate students. According to Landell (1997) and Ghafar (2003), the mean score interpretation consists of low, moderate, and high level. The correlation coefficient interpretation consists of no relationship, very weak, weak moderate, strong, and very strong relationship (Elmes, Kantowitz, & Roediger III, 2011). Table 5 shows the level of students' suicidal ideation and the level of each of the psychological risk factors based on the mean score analysis. Table 6 shows the correlation coefficient interpretation.

Table 6: Correlation Coefficient Interpretation

Correlation Coefficient	Interpretation Correlation
± 0.01 to 0.10	No relationship
± 0.11 to 0.30	Very weak
± 0.31 to 0.50	Weak

± 0.51 to 0.70	Moderate
± 0.71 to 0.90	Strong
± 0.91 to 1.00	Very Strong

■ 5.0 RESEARCH FINDINGS

For the findings, a descriptive analysis was used to analyse the respondents' suicidal ideation level and each of their psychological risk factors level. Based on Table 7, the findings from DASS-21 showed that the mean for depression is 2.26 and mean for anxiety is 2.33 which were classified as low level while the mean for stress is 2.39 which was on a moderate level.

Table 7: Mean and Level of Depression, Anxiety and Stress

Dimension	Mean	Level
Depression	2.26	Low
Anxiety	2.33	Low
Stress	2.39	Moderate

Based on Table 8, the findings from AESI showed that the mean and level of academic expectation stress of students were on a moderate level which were 3.10 from dimension of expectation from self, 3.01 from dimension of expectation from parents/lecturers and 3.05 from dimension of academic stress.

Table 8: Mean and Level of Academic Expectation Stress

Dimension	Mean	Level
Expectation from Self	3.10	Moderate
Expectation from Parents/Lecturers	3.01	Moderate
Academic Stress	3.05	Moderate

Based on Table 9, the findings from BHS showed that the mean and level of hopelessness of students were on a moderate level which were 2.35 from positive, 2.66 from negative hopelessness and 2.51 from neutral hopelessness.

Table 9: Mean and Level of Hopelessness

Dimension	Mean	Level
Hopelessness (P)	2.35	Moderate
Hopelessness (N)	2.66	Moderate
Hopelessness	2.51	Moderate

Table 10 showed the findings of suicidal ideation among students based on SIS scale where the level of suicidal ideation among students is low with mean of 1.70.

Table 10: Mean and Level of Suicidal Ideation

Dimension	Mean	Level
Suicidal Ideation	1.70	Low

Based on table 11, Pearson correlation analysis was used to examine the relationship between suicidal ideation and psychological risk factors (depression, anxiety, stress, academic stress, and hopelessness). The findings show that the correlation coefficient (r) between suicidal ideation and depression is 0.605 while between suicidal ideation and stress is 0.539. Based on Elmes et al. (2011) Rule of Thumb, this suggests a significantly positive and moderate relationship between depression and suicidal ideation, and between stress and suicidal ideation among undergraduate students.

Table 11: Relationship between Suicidal Ideation and Psychological Risk Factors

Variables	Suicidal Ideation	
	Correlation (r)	Significant (p)
Depression	0.605	0.000
Anxiety	0.458	0.000
Stress	0.539	0.000
Academic Stress	0.321	0.000
Hopelessness	0.347	0.000

**Correlation is significant at the 0.01 level (2-tailed)

Other than that, the results show that the correlation coefficient (r) between suicidal ideation and anxiety is 0.458, suicidal ideation and academic stress is 0.321, and suicidal ideation and hopelessness is 0.347. Based on Elmes et al. (2011) Rule of Thumb, this indicates a positive and weak relationship between anxiety and suicidal ideation, academic stress and suicidal ideation, and hopelessness and suicidal ideation among undergraduate students. The positive relationship reveals that an increase in psychological risk factors (depression, anxiety, stress, academic stress, and hopelessness) would lead to an increase in suicidal ideation among undergraduate students. The results show a significant p-value (p=0.000) which was less than alpha at 0.01 level of significance. Hence, there is a positive significant relationship between suicidal ideation and psychological risk factors among undergraduate students.

Table 12: Multiple Regression Analysis of Psychological Risk Factors on Suicidal Ideation

Psychological Risk Factors	β	t	Sig.
Depression	0.405	6.073	0.00*
Anxiety	0.036	0.589	0.556
Stress	0.160	2.257	0.025*
Academic Stress	0.025	0.524	0.601
Hopelessness	0.104	2.304	0.022*
R	0.626		
R^2	0.392		
F	47.580		

Note:*p-value<0.05

Multiple regression analysis was utilized to predict the influence of psychological risk factors on suicidal ideation among undergraduate students. The results in Table 12 indicate that there are three predictors, which were depression, stress and hopelessness, explained a 39.20% of the variance [R2 = 0.392, F = 47.580, $p < 0.05$]. It was revealed that depression ($\beta = 0.405$, $p < 0.05$), stress ($\beta = 0.160$, $p < 0.05$) and hopelessness ($\beta = 0.104$, $p < 0.05$) were significantly predicted suicidal ideation. However, anxiety ($\beta = 0.036$, $p > 0.05$) and academic stress ($\beta = 0.025$, $p > 0.05$) were not significant predictors of suicidal ideation. Therefore, the study found that depression, stress and hopelessness were found to be the significant predictors for suicidal ideation among undergraduate students in the present study

■ 6.0 DISCUSSIONS

Based on the descriptive analysis to determine the level of psychological risk factors and the level of suicidal ideation, the results showed that depression, anxiety, and suicidal ideation were at a low level, while stress, academic stress, and hopelessness were at a moderate level. Previous studies have revealed that university students with a lack of social support when they faced problem in their life and have a negative relationship with peers could cause them to have depression symptoms (Ibrahim, Amit & Suen, 2014; Mustaffa, Aziz, Mahmood & Shuib, 2014). This means that individual with satisfying social life will tend to have good social support, adapt easily into new stages of their life and thus, minimizes the risk of developing depression. Therefore, this could explain the low depression level found among undergraduate students in this study due to their satisfying social life and their ability to adapt to new environment swiftly during their university life transition.

Furthermore, the findings of this study also revealed that the level of anxiety among undergraduate students is low. According to Vitasari, Wahab, Othman and Awang (2010), students with self-control skills may help them to be more relaxed and reduce their anxiety such as breath therapy. Therefore, the low level of anxiety among undergraduate students signified that most of them have self-control skills that can help them to relax and reduce their anxiety level. Moreover, the Escape Theory of Suicide by Baumeister (1990) claimed that suicide happens when the person thinks that is the only possible escape. Based on the findings, majority of them do not consider taking their own life even though they feel there is no solution to their problems. This indicates that most of them do not think of taking their own life even when they feel that is the only option to escape. Hence, it may explain why the respondents in the present study showed low level of suicidal ideation.

Meanwhile, stress, academic stress, and hopelessness were at a moderate level. Undergraduate students have moderate level of stress may be due to their inability to adapt to the new environment swiftly during their university life transition. For instance, undergraduate students would experience several difficulties such as different education system, lifestyle, social environment, financial concerns, and they must attain a certain level of academic success in order to graduate (Gall, Evans & Bellerose, 2000). These difficulties are the stressors among students. Moreover, the findings of this study revealed that there was a moderate level of academic stress resulting from self-expectation among undergraduate students. According to Krieg (2013), undergraduate students experienced academic stress because they do not know what to expect or the expectation was not met as they have insufficient information about the university life which led to unrealistic expectation. Hence, undergraduate students have moderate level of academic stress may be due to their inability to meet their own academic expectation. In addition, the findings of this study reported that there was a moderate level of academic stress resulting from expectation from parents/lecturers among undergraduate students. Based on Ang and Huan (2006a, 2006b) study, children displayed academic stress because of their parents' demand to achieve excellent result. Similarly, according to Ang, Huan and Braman (2007), parents often anticipate their children to perform well in academic which could cause their children to develop high expectation on themselves in order to meet the expectation set by parents. Therefore, undergraduate students displayed moderate level of academic stress

could be due to the high expectation of academic success from the parents. Moreover, the findings also showed that majority of the undergraduate students felt lousy when they could not meet their lecturer's academic expectation. Hence, this suggests that lecturer's academic expectation could also impact students' academic stress as indicated by Rubie-Davies (2014). In addition, Khan, Mustaffa, Hamdan and Ahmad (2014) study stated that when the expectation set by the lecturers towards students are not met, a conflict would occur between students and lecturers, and the conflict would bring high academic stress to the students. Therefore, the moderate level of academic stress among undergraduate students might be related their inability to meet their lecturer's academic expectation.

Furthermore, the findings of this study also found that undergraduate students were in moderate level of hopelessness due to their consistent experience of negative life event in their university life. The negative life events that university students could experience include getting low grades, failed in examination, dissatisfaction with their own expectations and expectations from others such as parents and lecturers. Negative life events that consistently occur to the students would bring negative idea of life and make them feel hopeless (Pervin & Ferdowshi, 2016; Li et al., 2014). In addition, a prior study conducted by Karakus (2018) found that university students consider not finding a job during graduation period leads to a significant effect on their depression and hopelessness levels. Therefore, undergraduate students' moderate level of hopelessness may be due their inability to secure a job right after graduation, especially for those who are in their final year of study. Young individuals without economic independence will have to live with their families if they could not find a job during graduation period and this will lead to pessimism or hopelessness about their future (Karakus, 2018).

Based on the Pearson correlation analysis to determine the relationship between suicidal ideation and psychological risk factors, results showed that there was a moderate positive significant relationship between suicidal ideation and depression (r=0.605), and stress (r=0.539) among undergraduate students. The results suggest that respondents with high level of depression tend have high level of suicidal ideation. This finding is in line with previous studies which reported that depression has a positive significant correlation with suicidal ideation (Ibrahim, Amit & Suen, 2014; Mustaffa, Aziz, Mahmood & Shuib, 2014; Pervin & Ferdowshi, 2016; Khan, Mustaffa, Hamdan & Ahmad, 2014). In addition, the findings also suggest that stress has positive significant association with suicidal ideation. This indicated that students with high level of stress are more likely to have high level of suicidal ideation. This finding is consistent with previous research studies (Ibrahim, Amit & Suen, 2014; Akhtar & Alam, 2015) concerning the positive significant relationship between stress and suicidal ideation. Besides that, the results also revealed that there was a weak positive significant relationship between anxiety and suicidal ideation (r=0.458), academic stress and suicidal ideation (r=0.321), and hopelessness and suicidal ideation (r=0.347) among undergraduate students. This suggests that those with high level of anxiety are inclined to also have high level of suicidal ideation. This finding agrees with other prior studies concerning the positive significant relationship between anxiety and suicidal ideation (Ibrahim, Amit & Suen, 2014; Yen et al., 2014).

Moreover, the results also revealed that academic stress is positively associated with suicidal ideation. This means that students who reported high level of academic stress tend to report high level of suicidal ideation. The results of the current study support other prior studies concerning the positive significant relationship between academic stress and suicidal ideation (Khan, Mustaffa, Hamdan & Ahmad, 2014; Ang & Huan, 2006b). The correlation analysis also indicates that hopelessness has a positive significant correlation with suicidal ideation. It seems that those with high level of hopelessness are more likely to also have high level of suicidal ideation. This finding is in line with other research concerning the positive relationship between hopelessness and suicidal ideation (Ibrahim, Amit, Din & Ong, 2017; Pervin & Ferdowshi, 2016; Khan, Mustaffa, Hamdan & Ahmad, 2014). Based on these findings, depression, anxiety, stress, academic stress, and hopelessness can be considered as the risk factors for suicidal ideation among undergraduate students in this study.

Based on the multiple regression analysis to determine whether these psychological risk factors predict suicidal ideation among undergraduate students, the results showed that depression, stress, and hopelessness significantly predicted suicidal ideation among undergraduate students. This finding is consistent with past study which revealed that depression significantly predicted suicidal ideation among university students (Pervin & Ferdowshi, 2016). The results of this study indicated that depression predicts suicidal ideation whichsuggests that depression could be regarded as one of the potential predictors for suicidal ideation among undergraduate students. This results further support the idea that individuals who feel depressed may viewed themselves as lacking control over situation and insistently feeling defeated. Moreover, they have negative perception towards their current situation and they tend to be engaged with a sense of guilt and worthlessness (Ibrahim, Amit & Suen, 2014). Hence, depression can be a significant predictor of suicidal ideation among undergraduate students in this study.

In addition, stress was found to be a significant predictor of suicidal ideation in this study. Nevertheless, this finding is inconsistent with the study conducted by Ibrahim, Amit and Suen (2014), as the research reported that stress was not a significant predictor of suicidal ideation. The finding of the current study suggests that stress could be regarded as one of the potential predictors for suicidal ideation among undergraduate students. Generally, stress is found to be connected to various life stressors such as stressful life events, loss, unemployment which is associated with suicidal ideation (Singh & Joshi, 2008). The interaction of these life stressors can make individuals' stress management hard to manage and thus, caused them to have suicidal ideation. Evidence found by Wilburn and Smith (2005) supported the finding of the present study that stressful life events significantly predicted suicidal ideation. Therefore, stress can be one of the significant predictors of suicidal ideation among undergraduate students in this study.

Furthermore, the finding of this study also found that hopelessness significantly predicted suicidal ideation among undergraduate students. This finding agrees with other prior studies concerning hopelessness as a significant predictor for suicidal ideation. For instance, Pervin and Ferdowshi (2016), stated that hopelessness significantly predicted suicidal ideation among university students, while Ibrahim, Amit, Din and Ong (2017) stated that hopelessness was the predictor of suicidal ideation among females. Hopelessness is found to be linked to negative life events and is associated with suicidal ideation. University students who are consistently experiencing negative life events will feel hopeless thus, lead to suicidal ideation to develop (Li et al., 2014). Individuals with high level of hopelessness can isolate themselves and show a less help-seeking behaviour (Perczel Forintos, Sallai, & Rózsa, 2010). Consequently, hopelessness can be a significant predictor of suicidal ideation among undergraduate students in this study.

However, the findings found that anxiety was not a significant predictor of suicidal ideation among undergraduate students. This finding is in line with Ibrahim, Amit, Din and Ong (2017) and Ibrahim, Amit and Suen (2014) which stated that anxiety did not predict suicidal ideation. Although the present study used DASS-21 to measure the anxiety scale, most of the items only reflected anxiety symptoms such as dryness of mouth and trembling in hands whereas only one item measured the reason for their anxiety. This could explain why anxiety did not predict suicidal ideation in the current study. Another reason that may explain why anxiety did not predict

suicidal ideation in the present study is due to the measurement that lack worry construct which is the key to suicidal ideation among anxious individuals. Carter, Silverman, Allen and Ham (2008) indicated that anxiety primarily reflected on worry and worry is an important indicator in anxiety disorders. Additionally, it also showed that worry construct is crucial to the suicidal ideation among anxious individuals. Therefore, the results of the current study found that anxiety was not a significant predictor of suicidal ideation which could be due to the sensitivity measures of anxiety scale used in this study.

Aside from anxiety, this study also revealed that academic stress was not a significant predictor of suicidal ideation. This finding contradicted with the results reported by Stewart, Lam, Betson & Chung (1999) which stated that academic stress predicted suicidal ideation. The insignificant predicting role of academic stress could be mediated by depression. As reported by Ang and Huan (2006b), the relationship between academic stress and suicidal ideation could partially be mediated by depression. This means that academic stress has an unclear direct effect on depression even towards suicidal ideation. Hence, this could explain why academic stress could not significantly predicted suicidal ideation. In fact, academic stress is often mediated by other factors such as poor social support, depression, anxiety, stress, and hopelessness in relation to suicidal ideation. Academic stress may lead to depression, anxiety, stress, and hopelessness but not towards suicidal ideation.

■ 7.0 CONCLUSION

Early   identification of university students who are at risk of suicidal ideation is very important to prevent young individuals from committing suicide. The results of this study found that that the level of depression, anxiety, and suicidal ideation is low while, the level of stress, academic stress, and hopelessness is moderate among undergraduate students. In addition, the findings of this study also discovered that the five psychological risk factors (depression, anxiety, stress, academic stress and hopelessness) have positively significant association with suicidal ideation among undergraduate students. The present findings have provided important evidence on psychological risk factors associated with suicidal ideation among Malaysian undergraduate students and thus, it has important implications for the development of university students' mental health programs in universities. Cooperation among parents, lecturers, university, government, and non-government organization would help in the early identification of students who are at risk of suicidal ideation hence, reducing the suicide rate among university students. Although this study has identified psychological risk factors (depression, stress, hopelessness) as significant suicidal predictors and significantly associated with suicidal ideation, there are other potential risk factors which are beyond the focus of this study. Hence, other risk and protective factors related to suicidal ideation such as family factor (family history of suicide), individual factor (smoking, drinking alcohol & substance use), social support, coping and problem-solving skills, cultural and religious factors, should be taken into consideration in studying suicidal ideation among undergraduate students in future research.

■ 8.0 ACKNOWLEDGEMENTS

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