Research Article

RISK AND PROTECTIVE FACTORS OF SUICIDAL BEHAVIOR AMONG COLLEGE STUDENTS IN PAMPANGA, PHILIPPINES

Sherna G. Bangalan#, Marie Eugenie M. Otanes, Arsenio M. Escalona

College of Social Sciences and Philosophy, Don Honorio Ventura State University, Bacolor, Pampanga, Philippines

Abstract

Introduction: The world's fourth leading cause of death among young people is a suicide, a serious public health concern. In the Philippines, there are an increasing number of suicide deaths.

Objective: The present study aimed to investigate the prevalence of suicidal behavior among college students in a state university in Pampanga, Philippines, and examined the risk and protective factors most associated with suicidal behavior.

Methods: A cross-sectional study collected data from 443 college students through an online survey. A total of six instruments were used to measure the study variables.

Results: The results indicated that 24% of the participants have suicidal ideation, 14% have suicidal plans, and 9% would attempt to commit suicide. A multiple logistic regression analysis revealed that family support and spiritual well-being were protective factors against suicide attempts. On the contrary, depressive symptoms and adverse childhood experiences increased the likelihood of the participants committing suicide.

Discussion: Even though an association does not imply causation, suicide prevention programs and policies would benefit from understanding how family support, spiritual well-being, and suicidal behavior are interconnected. Moreover, treating depressive symptoms and adverse childhood experiences should be integrated into targeted mental health interventions to reduce suicidal behavior.

Keywords: Suicidal Behavior; Risk Factors; Family Support; Spiritual Well-being

Introduction

Suicide is a serious public health concern worldwide, ranking as the fourth leading cause of death among 15-29 year old and the third among girls 15-19 years old [1]. WHO reported that there would be an estimated 804,000 suicide deaths worldwide in 2021. The World Health Organization defined suicidal behavior as a range of behaviors that include thinking about suicide or ideation, planning for suicide, attempting suicide, and suicide itself [2]. In the Philippines, around 3.2 death relating to suicide were recorded per 100,00 inhabitants in 2011 [3]. The Philippine Statistical Authority (PSA) recorded 3,529 death cases due to intentional self-harm in 2020. Usually, those who commit suicide tend to be older, male, use more lethal methods, and die on the first attempt [4]. Moreover, official suicide rates were reported lower in the Philippines as compared with many other countries. Very likely that suicide cases were underreported due to cultural differences such as religious beliefs, stigma to the families, and lack of understanding on suicide. Currently, Department of Health of

the Philippines has no official data about individuals who committed suicide.

Moreover, the Philippines today according to the United Nations Population Fund (2020) has the largest generation of young people in our history. Thirty (30) million young people between ages of 10 to 24 account for 28 percent of Philippine population and about 19.8 million are adolescent. Said organization clearly emphasized that developing policies and investments for the future of these young people could lead the Philippines to reap the benefits of a demographic dividend -the economic growth potential that can result from shifts in a population's age structure, mainly when the share of the working-age population is larger than the non-working-age share of the population or the dependent population. Yet, these young people are also facing different challenges and even life-threatening risks such as suicidal behavior. The study conducted by Redaniel and colleagues through data review for suicide deaths between 1974 and 2005 obtained from Philippines Health Statistics reported that suicide rates were highest in 15-24 year old in females and surprising suicide rates were increasing every year. Further, the identified most commonly used method for suicide was hanging, shooting, and organophosphate ingestion [5].

Suicide has a devastating and long-lasting impact on families, friends, and communities; however, suicide has no known definite cause [6]. There is no single factor that would explain why the individuals take their own life or why they hurt themselves. According to World Health Organization, suicidal behavior is a complex phenomenon influenced by several interacting factors such as personal, social, psychological, cultural, biological, and environmental. There are many factors contributing to suicidal behavior in young adults [7].

Further, previous studies have reported several risk factors associated with suicidal behavior among young people. Some of the psychological risk factors were significantly related to suicidal behavior were depressive moods [7-10]; Symptoms of depression are one of the most

reliable predictors of suicidality. The feelings of hopelessness, sadness, and loneliness were significantly associated with suicidal behavior. In the systematic study conducted by Shorey et al., reported that 34% of adolescents globally are at risk of developing clinical depression and Asia was reported to have a higher prevalence of elevated depressive symptoms. Female youth were reported to have a higher prevalence of elevated depressive symptoms than male. Thus, female sex may also be a contributing factor of suicidal behavior among college students [11]. Likewise, in the trend analysis conducted by Pontes and colleagues found that females had positive linear trends for both suicidal ideation and attempt and depressive symptoms among high school students in USA during the year of 2009-2017.

Meanwhile, there are a number of factors that can be highly protective against youth suicide. Existing literature showed suicidal behavior was negatively associated with religious affiliation [12,13,14]. There was a lower level of religious involvement and lower perceived importance of religion among those at higher risk for suicide. Individuals who are considered religious usually follow a specific religion and practice it to the extent that their beliefs influence the way they live out their lives and treat others in society. However, religious involvement or religiosity does not necessarily protect individuals against suicidal behavior because it may depend on the culture-specific implications of affiliating with a particular religion. Similarly, in the Philippines were majority of the people believed in the teachings of Roman Catholicism where suicide was considered as grave offense. Yet, empirical evidence of the role of religion in suicidal behavior is inconsistent. It is important to take note, therefore, the role of spirituality on suicidal behavior instead on concentrating solely on the role religiosity among college student. People with higher levels of both spirituality and religiousness were more correlated with better mental health than having one of them or none of them [15]. Spirituality refers to the search for significance in life and about having relationship with the sacred or with a higher power. During the pandemic, Walsh suggests that spirituality

may provide meaning, purpose, harmony, and connection for individuals to cope with loss [16].

Moreover, social support was found to be significantly associated with suicidal behavior [17-21]. Research showed that youth who have high social support in the context of suicidal behavior buffer the development of depressive symptoms [22]. However, not all social relationships may have positive impact on suicidal behavior. Family support found to be a good protective factor from suicidal behavior, however, friends and at the school context relationships were revealed a weak source of social support among adolescents [23,13]. On the contrary, previous studies have conflicting results whether family support can trigger or protect college students from suicidal behavior. Consequently, Frey and colleagues recommended to further explore the role of family on suicidal behavior on youth or on older population.

Considering the importance of identification of risk factors in creation of intervention plan against suicide, likewise, this study had investigated the protective factors associated with suicidal behavior of college students. Because protective factors may act as essential factors to prevent the risk of suicide and may provide information in solving suicidal behavior in youth. This study aimed to investigate the prevalence of suicidal behavior among college students in a state university in Pampanga and examined the risk and protective factors most associated with suicidal behavior. This current study is essential to provide a picture of the size of the problem and facilitate better-informed decisions, and formulate potential etiologies and preventive actions in the state university [5,24].

Materials and Methods

Research design

A cross-sectional survey was utilized to determine the prevalence of suicidal behaviors and examined the association of risk and protective factors among college students in state university in Pampanga.

Study population and sample

Pampanga is located on the northwest of Manila, capital of Philippines. It has an estimate of 2.5M population and the age group with the highest population in this province is 15 to 19 years old. The survey was conducted on college students in a state university in Pampanga during the academic year of 2021-2022. This state university is recognized as the oldest vocational school in Far East Asia. It's student population increasing steadily over the years, with 40,119 students officially enrolled during the data collection. It is estimated that majority of the college students in the province attend this state university. A minimum of 385 college students is required to achieve a 95% level of confidence, precision of 5% given an estimated prevalence of suicidal behaviors of 50%. All colleges were included in the sample range using a cluster sampling. The study involved 522 students who volunteered to participate in the study. All of them were assessed as a class. Finally, 433 valid responses were collected, excluding 89 responses with incomplete information (Effective response rate=82.95%).

Data collection procedure

An online survey was created using Jotform. Information about the study was placed at the beginning of the survey and was followed with an online informed consent form. The online survey included questions on demographic characteristics of the participants such as age, gender, year level, academic status, and the seven (7) self-report standardized questionnaires. The online survey's duration was approximately 20-25 minutes. The link to the study was distributed to the randomly selected classes. The link remained active for one month during the month of June 2022. Students signed online informed consent before participating in the study. Participants who failed to complete the questionnaire were excluded from the study.

The study complied with the ethical guidelines of the state university and national health research. After gathering data, the researchers provided a link about on how to avail care or counseling

services to all participants. Debriefing was also given to the participants.

Instruments

Suicidal behaviour: The Suicide Behaviors Questionnaire-Revised (SBQ-R) developed and was used to assess the suicidal behaviors of the participants. The scale consists of 4-itmes, each item tapping a different dimension of suicidality such as suicide ideation, plan, and attempt. SBQ-R is a useful measure of suicidal behavior based on empirical studies.

Symptoms of depression: Patient Health Questionnaire (PHQ-9) is a nine-item scale assessing the presence of depressive symptoms over the past two weeks.

Childhood trauma history: The Adverse Childhood Experiences (ACEs) Questionnaire is a 10-item measure used to measure childhood trauma. The questionnaire assesses 10 types of childhood trauma measured in the ACE Study. Five are personal: physical abuse, verbal abuse, sexual abuse, physical neglect, and emotional neglect. This scale has good internal validity (Cronbach's Alpha=0.854) and predictive validity ($R2=0.12$, p0.001 of the SHI total score). The items are rated on a 4-point Likert scale, except for seven items. Higher scores indicate greater exposure to childhood maltreatment.

Gender identity: Gender identity was determined by single question, "What is your current gender identity?"

Family and social connectedness: The Multidimensional Scale of Perceived Social Support (MSPS) is a 12-item measure of perceived adequacy of social support from three sources: family, friends, & significant other; using a 5-point Likert scale (0=strongly disagree, 5=strongly agree). MSPSS has been widely used in both clinical and non-clinical samples and easily administered using a five-point Likert-type scale. The internal consistency of the scale was good, with a Cronbach's alpha of 0.91 with students.

Positive affect: The Positive and Negative Affect Scale (PNAS) is one of the most widely used scales to measure mood or emotion. This brief scale is comprised of 20 items, with 10 items measuring positive affect (e.g., excited, inspired) and 10 items measuring negative affect (e.g., upset, afraid).

Spirituality: The Spiritual Well Being Scale (SWBS) is a 20 item scale that measures an individual's well-being and overall life satisfaction on two dimensions: (1) religious well-being, and (2) existential well-being. Items related to religious well-being contain the word "God" and measure the degree to which one perceives and reports the well-being of his or her spiritual life in relation to God. Items related to existential well-being contain general statements that ask about life direction and satisfaction and measure the degree to which one perceives and reports how well he or she is adjusted to self, community, and surroundings.

Data analysis

The data were analyzed using the Statistical Package for Social Science (SPSS v.26, IBM Corp, 2019). Frequency and percentage were used to describe the characteristics of the respondents. Multiple logistic regression was performed to assess how well the risk and protective factors predict or explain the college students' suicidal behavior. It also allows to test models to predict categorical outcomes withs two or more categories (non-suicide, suicide ideation, plan, and attempt). And the predictor variables can be either categorical (gender, with history and no history of adverse childhood experience) or continuous (depressive symptoms, support from significant others, support from family, support from friends, positive affect, negative affect, spiritual well-being, and age).

Results

Table 1 shows the study's descriptive results. A total of 443 included in the final analysis of the study. Majority of the participants were female (65%) and third year college students (41.5%).

According to Figure 1, most of the participants do not engage in suicidal behavior, 52.60% (95%, CI 47.94, 57.2). About 24% (95%, CI

20.61, 28.5) of the participants reported suicidal ideation and 14% (95%, CI 11.07, 17.54) indicated they had suicidal plans. Moreover, 9% (95%, CI 6.7, 12.06) of the college students confessed that they would attempt to commit suicide. Majority of these students who reported with suicidal behaviors were female and third year college students.

Multinomial Regression Analysis (MRA) was performed to assess the impact of a number of protective and risk factors on the likelihood that respondents would report that they had any suicidal behavior. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multi-

collinearity and homoscedasticity. The model contained ten independent variables (depressive symptoms, adverse childhood experience, support from significant others, support from family, support from friends, positive affect, negative affect, spiritual well-being, age, and gender). The whole model containing all predictors was statistically significant, $x2$ (33, N=443)=279.115, p<0.001, indicating that the model could distinguish between respondents who have suicidal behaviors and those who are not suicidal. The model explained 46.8% (Cox and Snell R square) and 51.8% (Nagelkerke R^2) of the variance in types of suicidal behaviors committed by college students.

Table 1: Demographic profile of the participants.

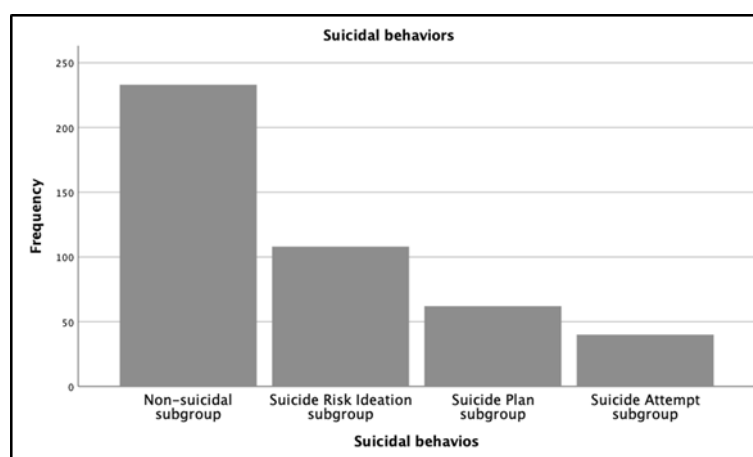| Variables		Non-suicidal (n=233)	Suicide Risk Ideation (n=108)	Suicide Plan (n=62)	Suicide Attempt (n=40)
Gender	Male	91 (39.1%)	22 (20.4%)	14 (22.6%)	11 (27.5%)
	Female	135 (57.9%)	82 (75%)	44 (71%)	27 (67.5%)
	LGBTQ+	7 (3%)	4 (3.7%)	4 (6.5%)	2 (5%)
Year Level	First	36 (15.5%)	30 (27.8%)	10 (16.1%)	10 (25%)
	Second	15 (11.6%)	15 (13.9%)	12 (19.4%)	8 (20%)
	Third	101 (43.3%)	42 (38.9%)	25 (40.3%)	16 (40%)
	Fourth	68 (29.2%)	21 (19.4%)	15 (24.2%)	6 (15%)
	Fifth	1 (0.4%)	0	0	0

Figure 1: Prevalence of suicidal behaviors among the college students.

As shown in Table 2, only four independent variables made a unique statistically significant contribution to the model (depressive symptoms,

adverse childhood, support from family, spiritual well-being). The strongest predictor of not committing suicide was having family support,

recording an odds ratio of 2.55. The results indicated that respondents who had good social support from their families were over 2.55 times more likely to prevent themselves from attempting to commit suicide. The odds ratio of 1.040 for spiritual well-being is also shown in the table, indicating that students with good spiritual well-being would likely not attempt suicide.

On the contrary, the odds ratio of .83 for depressive symptoms and the odds ratio of .42 for adverse childhood experiences were less than 1, indicating that for every one-point increase in the scores of symptoms of depression and

adverse childhood experiences were .83 and .42 times more likely to have a suicide attempt. Further, the results show an odds ratio of 1.84 for social support from the family, indicating that those students who received support from the family will less likely to include suicide attempt than to have suicide ideation.

Discussion

The present study investigated the prevalence of suicidal behavior among college students in Pampanga and determined the risk and protective factors. There were 443 college students included in the final analysis, most of whom were female and in their third year.

Table 2: Demographic profiles, protective and risk factors as predicting factors of suicidal behaviors with suicidal attempt as reference group.

Reference: Suicide attempt	Non-suicidal OR (Std. Err)	Suicide risk ideation OR (Std. Err)	Suicide plan OR (Std. Err)
Depressive symptoms	0.83 (0.0)***	0.91 (0.05)	0.96 (0.05)
Adverse childhood experiences	0.42 (0.17)***	0.79 (0.13)	0.93 (0.14)
Support from significant other	0.70 (0.23)	0.75 (0.21)	0.80 (0.22)
Support from family	2.55 (0.29)***	1.84 (0.26)*	0.88 (0.27)
Support from friends	0.93 (0.27)	0.90 (0.24)	0.70 (0.25)
Positive affect	1.04 (0.04)	1.02 (0.03)	0.95 (0.04)
Negative affect	0.95 (0.04)	1.00 (0.04)	0.91 (0.04)
Spiritual well-being	1.04 (0.02)*	1.02 (0.02)	0.98 (0.02)
Age	1.37 (0.17)	1.22 (0.16)	0.87 (1.28)
Male	0.93 (1.10)	0.751 (1.04)	0.07 (1.03)
Female	2.03 (1.05)	2.31 (0.97)	0.20 (0.95)
LGBTQ+	--	--	--
Note: P-value. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$			

Approximately 24% of participants reported suicidal ideation and 14% reported suicide plans. 9% of them had attempted suicide. An analysis of the model revealed statistically significant contributions from four independent variables. Family support was found to be a strong protective factor against suicide attempts. In addition, spiritual well-being prevents suicide attempts. Symptoms of depression and adverse childhood experiences, however, were both found to be risk factors for suicide attempts

among college students. Age and gender preferences were not found associated with suicidal behaviors.

In a recent meta-analysis by Crispim et al, the prevalence in suicidal intention was 9.7% to 58.3% and in suicide attempts was 0.7% to 14.7% among university students. Suprisingly, suicidal ideation was relatively stable before and during the pandemic, as a previous study reported that the national rate of Sta. Maria and her colleagues accounted for 24% of Filipino

college student before the pandemic, and as shown in this study. However, suicidal attempts in the present study was relatively higher than with the National Survey of Philippine Youth in 2021, amid the COVID-19 pandemic, it was reported that 7.5% young people have attempted ending their life [25]. In the midst of the pandemic, prolonged stay at home, attendance of online classes and difficulty obtaining mental health services may increase the suicidal attempts among college students. Thus, a careful consideration of this should be given by universities when planning for future disasters that might allow students to seek assistance.

Moreover, family support may play important role in preventing suicide attempts and ideation, which led to a very high likelihood of not committing suicide. Individuals who perceived that their families supported and provided care to them during the pandemic were less likely to contemplate or attempt suicide. As previously shown in the literature, parental care was considered as protective factor for suicide among adolescents and young adults [26,27]. In fact, family problems including parental separation and conflict among the members can contribute to suicidal behavior in young people [28]. Research shows that college students are better able to cope in times of crisis if their families are providing them with appropriate assistance, especially if they remain at home for a longer period of time. However, young adults may fear being discriminated against and rejected by their families if they reveal their suicidal intentions and intentions. While the decision to attempt suicide is highly personal, receiving care from their family is important to them, since they are aware of the consequences of their actions.

In addition to the aforementioned family support associated with suicidal behaviors as protective factor, spiritual well-being has found as another significant protective factor against suicidal behavior. Students who have a subjective sense of spiritual satisfaction have a lower risk of suicidal behavior. Research conducted by Ibrahim et al., has found that spiritual wellbeing negatively correlated with suicidal ideation [29]. In alignment with this study, a meta analaysis

revealed that spiritual activities was negatively associated with suicide behaviors [30]. University students may benefit from spiritual wellbeing in managing negative emotions during difficult times [31]. There are many aspects of spirituality, including belief in a higher power, transcendence, prayer, hope, unity with nature, and connection to others. Particularly, existential spirituality appears to be the aspect of spirituality most strongly associated with suicidality [32].

Furthermore, in terms of risk factors, suicide attempts were significantly associated with depressive symptoms and adverse childhood experiences. The results showed that students who suffered from depressive symptoms were more likely to commit suicide. Depression was a common concern among college students even before the pandemic. In the midst of the pandemic, depression becomes more severe and affects the lives of many college students around the world, causing them to consider suicide [33]. The results of this study indicated that students with symptoms of depression were more likely to commit suicide. The results are consistent with the meta-analysis conducted in China in 2019, reported that depressive symptoms were significantly associated with suicidal behavior among Chinese college students [34].

Lastly, the present study extends existing knowledge by demonstrating the association of adverse childhood experiences increased the risk of suicidal behavior among college students. Adverse childhood experiences such as abuse increased the risk for suicidal behavior. A previous study conducted among Chinese college students has shown that adverse childhood experiences were associated with suicidal ideation [35].

Despite the significant findings of this present study, several limitations should be considered for clinical interventions in suicidal behaviors among college students in Pampanga, Philippines. First, cross-sectional data were collected at a single point in time, thus restricting the ability to monitor changes in the relationship between variables over time. The relationship between these variables must be confirmed

through a longitudinal study [36]. Also, mixed methods research is recommended to explore the in-depth the factors influencing suicidal behavior among college students. Secondly, self-reported questionnaires can lead to recall bias when data is collected [37]. Thirdly, the study was limited to young adults in school settings and at one state university, so its findings do not represent all young adults. Using findings from this study to apply to the entire Pampanga young adult population should be done with caution.

Conclusion

An investigation was conducted to determine whether college students in Pampanga engaged in suicidal behavior, such as suicide ideation and attempted suicide. In addition, an investigation was conducted to determine the factors that benefit or hinder these behaviors. A total of 443 college students, primarily females and in their third year of studies, volunteered to participate in the study. Approximately 24% of participants reported suicidal thoughts, and 14% reported plans for suicide. Among them, 9% attempted suicide. Four independent variables, family support, spiritual well-being, depressive symptoms, and adverse childhood experiences, were statistically significant. The strength of family support was found to be a significant protective factor against suicide attempts. Moreover, spiritual well-being helps prevent suicide attempts. However, depression and adverse childhood experiences were both found to be risk factors for suicide attempts among college students. And neither gender preference nor age was significantly correlated with suicidal behavior.

Based on the findings of the present study, some recommendations are suggested: support from family and spiritual well-being can help save the lives of young people at risk of suicide, according to the findings. An intervention that integrates family support and spirituality may be more effective for young adults at risk of suicidal attempts. And intervention strategies in improving the coping skills of college students may be considered to address depressive symptoms and negative impact of adverse childhood experiences.

Ethical Statement

The studies involving participants were reviewed and approved by the Ethics Committee of Don Honorio Ventura State University. The participants provided their online written informed consent to participate in this study.

Author Contributions

MO was responsible for the distribution on the online survey. SG completed the statistical analyses and completed the first draft of this manuscript and submitted the article. AE provided guidance and reviewed the draft. All authors have read and agreed with the final manuscript.

Data Availability

The data that supports the findings of this study are available from the corresponding author upon reasonable request.

References

1. Houser J, Oman KS. Evidence-based practice: An implementation guide for healthcare organizations. Jones & Bartlett Publishers; 2010.
2. World Health Organization. Preventing suicide Preventing suicide. WHO Library Cataloguing-in-Publication Data, 89. 2014.
3. World Health Organization, Philippines. 2017: 2449.
4. Paris J. Can we predict or prevent suicide?: An update. Preventive Medicine. 2021;152:106353.
5. Redaniel MT, Lebanan-Dalida MA, Gunnell D. Suicide in the Philippines: Time trend analysis (1974-2005) and literature review. BMC public health. 2011;11:536.
6. Kim AM, Jeon SW, Cho SJ, Shin YC, Park JH. Comparison of the factors for suicidal ideation and suicide attempt: A comprehensive examination of stress, view

of life, mental health, and alcohol use. Asian Journal of Psychiatry. 2021;65:102844.

7. Jiang T, Nagy D, Rosellini AJ, Horváth-Puhó E, Keyes KM, et al. Suicide prediction among men and women with depression: A population-based study. Journal of Psychiatric Research. 2021;142:275-282.

8. Page RM, West JH, Hall PC. Psychosocial distress and suicide ideation in Chinese and Philippine adolescents. Asia Pacific Journal of Public Health. 2011;23(5):774-791.

9. Park S, Jang H. Correlations between suicide rates and the prevalence of suicide risk factors among Korean adolescents. Psychiatry Research. 2018;261:143-147.

10. Smith L, Shin JI, Carmichael C, Oh H, Jacob L, et al. Prevalence and correlates of multiple suicide attempts among adolescents aged 12–15 years from 61 countries in Africa, Asia, and the Americas. Journal of Psychiatric Research. 2021;144:45-53.

11. Ballester PL, Cardoso TD, Moreira FP, da Silva RA, Mondin TC, et al. 5-year incidence of suicide-risk in youth: A gradient tree boosting and SHAP study. Journal of Affective Disorders. 2021;295:1049-1056.

12. Fitzpatrick KM, Spialek ML. Suicide ideation and a post-disaster assessment of risk and protective factors among Hurricane Harvey survivors. Journal of Affective Disorders. 2020;277:681-687.

13. Kim YJ, Moon SS, Kim YK, Boyas J. Protective factors of suicide: Religiosity and parental monitoring. Children and Youth Services Review. 2020;114:105073.

14. Kim AM. Factors associated with the suicide rates in Korea. Psychiatry Research. 2020;284:112745.

15. Chen YY, Yang CT, Pinkney E, Yip PS. The Age-Period-Cohort trends of suicide in Hong Kong and Taiwan, 1979-2018. Journal of Affective Disorders. 2021;295:587-593.

16. Walsh F. Loss and resilience in the time of COVID-19: Meaning making, hope, and transcendence. Family Process. 2020;59(3):898-911.

17. Kia H, MacKinnon KR, Abramovich A, Bonato S. Peer support as a protective factor against suicide in trans populations: A scoping review. Social Science & Medicine. 2021;279:114026.

18. Kleiman EM, Liu RT. Social support as a protective factor in suicide: Findings from two nationally representative samples. Journal of Affective Disorders. 2013;150(2):540-445.

19. Stack S. Contributing factors to suicide: Political, social, cultural and economic. Preventive Medicine. 2021;152:106498.

20. Whitaker K, Shapiro VB, Shields JP. School-based protective factors related to suicide for lesbian, gay, and bisexual adolescents. Journal of Adolescent Health. 2016;58(1):63-68.

21. Šedivy NZ, Podlogar T, Kerr DC, De Leo D. Community social support as a protective factor against suicide: A gender-specific ecological study of 75 regions of 23 European countries. Health & Place. 2017;48:40-46.

22. Rahman ME, Al Zubayer A, Bhuiyan MR, Jobe MC, Khan MK. Suicidal behaviors and suicide risk among Bangladeshi people during the COVID-19 pandemic: An online cross-sectional survey. Heliyon. 2021;7(2):e05937.

23. Horwitz AG, Grupp-Phelan J, Brent D, Barney BJ, Casper TC, et al. Risk and protective factors for suicide among sexual minority youth seeking emergency medical services. Journal of Affective Disorders. 2021;279:274-281.

24. Chen Y, Zhu LJ, Fang ZM, Wu N, Du MX, et al. The association of suicidal ideation with family characteristics and social support of the first batch of students returning to a college during the COVID-19 epidemic period: A cross sectional study in China. Frontiers in Psychiatry. 2021;12:653245.

25. Midea M, Kabamalan M. Percent of youth who, in the past week, "often" felt the depressive symptoms from the Center for Epidemiological Studies-Depression (CES-D) Scale: 2013 and 2021. 2022.

26. Alvarez-Subiela X, Castellano-Tejedor C, Villar-Cabeza F, Vila-Grifoll M, Palao-Vidal D. Family factors related to suicidal behavior in adolescents. International Journal of Environmental Research and Public Health. 2022;19(16):9892.

27. Boyd DT, Quinn CR, Jones KV, Beer OW. Suicidal ideations and attempts within the family context: The role of parent support, bonding, and peer experiences with suicidal behaviors. Journal of Racial and Ethnic Health Disparities. 2022;9(5):1740-1749.

28. Mathew A, Saradamma R, Krishnapillai V, Muthubeevi SB. Exploring the family factors associated with suicide attempts among adolescents and young adults: A qualitative study. Indian Journal of

Psychological Medicine. 2021;43(2):113-118.

29. Ibrahim N, Che Din N, Ahmad M, Amit N, Ghazali SE, et al.. The role of social support and spiritual wellbeing in predicting suicidal ideation among marginalized adolescents in Malaysia. BMC Public Health. 2019;19(Suppl 4):553.

30. Poorolajal J, Goudarzi M, Gohari-Ensaf F, Darvishi N. Relationship of religion with suicidal ideation, suicide plan, suicide attempt, and suicide death: A meta-analysis. Journal of Research in Health Sciences. 2022;22(1):e00537.

31. Leung CH, Pong HK. Cross-sectional study of the relationship between the spiritual wellbeing and psychological health among university students. PLoS One. 2021;16(4):e0249702.

32. Taliaferro LA, Rienzo BA, Pigg RM, Miller MD, Dodd VJ. Spiritual well-being and suicidal ideation among college students. Journal of American College Health. 2009;58(1):83-90.

33. Zhou SJ, Wang LL, Qi M, Yang XJ, Gao L, et al. Depression, anxiety, and suicidal ideation in Chinese university students during the COVID-19 pandemic. Frontiers in Psychology. 2021;12:669833.

34. Wang YH, Shi ZT, Luo QY. Association of depressive symptoms and suicidal ideation among university students in China: A systematic review and meta-analysis. Medicine. 2017; 96(13):e6476.

35. Choi KH, Wang SM, Yeon B, Suh SY, Oh Y, et al. Risk and protective factors predicting multiple suicide attempts. Psychiatry Research. 2013;210(3):957-961.

36. Siu AM. Self-Harm and suicide among children and adolescents in Hong Kong: A review of prevalence, risk factors, and prevention strategies. Journal of Adolescent Health. 2019;64(6):S59-S64.

37. Wang Y, Feng Y, Han M, Duan Z, Wilson A, et al. Methods of attempted suicide and risk factors in LGBTQ+ youth. Child Abuse & Neglect. 2021;122:105352.

Corresponding author: Sherna G. Bangalan, College of Social Sciences and Philosophy, Don Honorio Ventura State University, Bacolor, Pampanga, Philippines

Email: sgbangalan@dhvsu.edu.ph