

Suicidal Ideation among Nepalese Adolescents

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Abstract

Suicide has become a serious public health problem globally, contributing to around 800,000 deaths every year. It has become a major public health issue in low-income underdeveloped countries like Nepal. The present study was conducted with 325 school students, whose ages ranged from 13 to 17 years, from grade nine to class eleven, from Bhaktapur city using a purposive sampling technique. The Suicidal Ideation Scale developed by Dr. Devendra Singh Sisodia and Dr. Vibhuti Bhatnagar was employed for the study. The study showed that 52.6% (171) of the participants were male students and 47.4% (154) were female students, with a mean age of 14.92 0.85. Age 13, 14, 15, 16, and 17 were represented by 4%, 27.4%, 40.9%, 27.1%, and 0.6%, respectively. Participants from nine classes made up 37.8% (123) of the total, 28.0% (91) of the total, and 34.2% (111) of the total. There were no respondents to a high and very high level of suicidal ideation. The suicidal ideation of very low, low, and average percentages were 2.5%, 33.2%, and 64.3%. This study showed that average suicidal ideation is prevalent among Nepalese adolescents. The factors associated with suicidal ideation are age, education grade (class), and religion. A multidisciplinary approach may play a key role in preventing suicides among adolescents.

Key words: Suicide, Suicidal ideation, Nepalese, Adolescent

Introduction

Suicide is an irrational desire to die. Irrational here means that no matter how bad a person's life is, suicide is not a permanent solution to what is nearly always a temporary problem. Suicide has become a major public health issue in low-income underdeveloped countries like Nepal. According to the WHO, suicide has become a serious public health problem globally, contributing to around 800,000 deaths every year. Data shows that for each adult who died of suicide, there may have been more than 20 others attempting suicide. The World Health Organization's South-East Asia region had an age-standardised suicide rate of 13.27 per 100,000 population in 2015, more than the global average (11.0)

and higher than other WHO regions. (World Health Organization, 2017). Despite the huge burden of mental illness and treatment gap, delivery of mental health services in Nepal faces several barriers, including the government's low priority and funding for mental health; poor public awareness; high stigma and unfavourable psychosocial factors, which lead to limited treatment seeking by affected people; a limited number of mental health professionals, most of whom practise in the metropolis; and the availability of few trained community mental health workers.

A scoping review of literature on self-harm and suicide behaviour in Nepal found that the victims were predominantly females, belonging to younger age

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groups with a prominent role of mental illness and psychosocial stressors (Thapaliya et al., 2018). Amidst growing coverage in the media, suicide has been considered as a silent or hidden epidemic. However, Nepal still lacks national-level suicide surveillance and prevention programs. This has caused confusion about the actual rate of suicide and has limited efforts to develop feasible suicide prevention strategies. Nepal still lacks national-level suicide surveillance and prevention programs. This has led to confusion about the actual suicide rate and limited efforts to develop feasible suicide prevention strategies (Marahatta et al., 2017).

Age is also reported to be related to suicidal behavior. Suicide occurs in two age groups: adolescents and young adults, and those over the age of 70. College students who are 72 have a particularly high risk for suicide (Schwartz & Whitaker, 1990). According to an estimate, the rates of completed suicide among teenagers and even children seem to be increasing at an alarming pace (King, 1997).

Pinhas et al. (2002) have reported that there is a significant difference in the prevalence of suicide attempts made by young women (10.1%) compared with young men (3.8%), which indicates that female sex is a risk factor for suicide attempts. Even if suicide attempts are more frequent among adolescents and young adults, older men and women show the highest suicide rate in almost all countries (Conejero et al. 2018). In one study, it was found that the majority of older women had high anxiety and depression (70.4% and 62.8% respectively) and 32.4% of older women had high stress. This indicates high suicide risk (Thagunna et al. 2020). It is obvious that the factors behind suicidal ideation may be numerous in number, but this area of research in our context has not received the attention it deserves. In view of the above, the present study was planned and executed. It taps suicidal ideation as the dependent variable and family climate, SES, gender, culture, parental background, locale, and type of school (government v/s private) as the independent or causal variables.

According to Nepal police, on average, 13 people commit suicide every day in Nepal. Nepal Police has published a comprehensive report on the number of deaths by suicide over the span of 10 years from 1961-62 to 1970-72. During this time span, 29,905 people committed suicide. This figure has secured Nepal's position as the 8th ranked country to have the highest

suicidal rate in the world according to suicide per capita population. The report has shed light on the fact that women are more likely to commit suicide than men. The 40–60 age groups had the highest number of suicidal rates, whereas the 15–19 age group had the lowest number.

The WHO estimates that there is a suicide every 40 seconds. According to WHO statistics from 2012, Nepal was ranked seventh in the world, with suicide rates of 25 per 100,000 people. In 2008/09, 20 people out of 100,000 were reported to have committed suicide. An estimated 6,840 people commit suicide in Nepal annually. Suicide is the leading cause of death in Nepal among women aged 15–49. As per WHO's World Health Statistics Data 2017, currently there are 7.2 suicides per 100,000 in Nepal, 8.2 for males and 6.2 for females. Nepal is currently ranked 126th in terms of suicide rate per 100,000 people per year. In 1987, the suicide rate per 100,000 people was reported to be 3.2 (Regmi & Ghimire, 2017).

Suicide ideation is considered to be an important precursor to later attempted and completed suicide (Brent, Johnson, Bartle et al., 1993; Gili-Planas, Roca-Bennasar, Ferrer-Perez et al., 2001; Lewinsohn, Rohde, & Seeley, 1996; Reinherz, Giaconia, Silverman et al., 1995) and is of major public health significance. Suicide ideation has been associated with poor psychosocial functioning (Reinherz, Tanner, Berger et al., 2006), future depressive disorders (Fergusson, [HYPERLINK “https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2709750/Horwood](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2709750/Horwood) [HYPERLINK “https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2709750/”](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2709750/”), [HYPERLINK “https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2709750/”](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2709750/”), [HYPERLINK “https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2709750/”](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2709750/”), [HYPERLINK “https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2709750/”](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2709750/”) et al., 2005; Steinhausen & Metzke, 2004), school dropout (Daniel, Walsh, [HYPERLINK “https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2709750/”](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2709750/”) [HYPERLINK “https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2709750/”](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2709750/”) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2709750/Burge>, Felts, Chenier et al., 1995), aggressive behavior, and adult substance use disorders (Fergusson et al., 2005). In most cases, substance users attempt suicide by overusing a substance that is an overdose or a combination of drugs, alcohol, and tablets, while in a few cases, the way the suicide is attempted is not directly related to drugs. Although there is a correlation between the disorder caused by using substances and suicidal behavior, many substance users may attempt suicide. As a result, it is critical to identify

individuals with substance-related disorders who may be at a higher risk of suicide (Schneider, 2014).

According to research (Waldvogel, 2008; Liu & Miller, 2014), risk factors for suicide can be attributed to individuals (heredity, bio-physiological aspects, mental health, abuse history, history of suicide attempts, and gender), families (family history, some type of family psychopathology, and difficulties in family relationships), environmental and demographic factors (factors associated with social and economic disadvantage, problems at school, and so on), and life stressors (facility, etc.).

Adolescence is a time in life that coexists with many crises of development (e.g., the onset of puberty or high school graduation). However, these memorial episodes do not define the transition between childhood and adulthood. This may be due to the fact that adolescence requires contemplation of various factors, including age and contextual influences.

A study by Mitchell, Mccauley, Burke, and Moss (1988) found that suicidal ideation is quite common in youngsters, occurring in about two-thirds of pre-adolescents and adolescents. In another study, Lewinsohn, Soloman, Seeley, and Zeiss (2000) reported that depression appears to be a strong factor related to suicide. As many as half of the suicide cases in the United States are committed by adolescents who are suffering from depression (Greenberg, 1982).

Souza et al. (2010) conducted a cross-sectional population-based study to find out the prevalence and associated factors of suicidal ideation among adolescents. The prevalence and associated factors of suicidal ideation were examined among 1197 adolescents aged 11 to 15 years. The prevalence of suicidal ideation was found to be 14.1%. Further, investigators found that suicidal ideation was associated with female gender, current alcohol consumption and use of drugs, conduct disorders, and a high score on depression.

Parimananda and Keliat (2019) conducted a study with the aim of determining the relationship between the risk and protective factors of suicidal ideation among 207 senior high school adolescents. These participants filled out the questionnaire related to risk factors and protective factors for suicidal ideation. The outcome measures used in this study were the Depression, Anxiety, and Stress Scale (DASS-21), Rosen Self-Esteem Scale, Beck's Scale of Suicidal Ideation,

Beck's Hopelessness Scale, and Multidimensional Scale of Social Support and Coping Mechanism Questionnaire. The result of this study found that the risk factors for suicidal ideation were stress, anxiety, depression, and hopelessness. The protective factors for suicidal ideation were found to be social support, coping, and self-esteem.

The Global School-based Students' Health Survey was conducted to estimate the prevalence of suicidal ideation and attempts among adolescent students and identify the factors associated with them (Pandey et al., 2019). This cross-sectional study was conducted among 6,531 students from grades 7 to 11 from 74 different schools. A standardised self-administrated questionnaire was used to identify the prevalence of suicidal ideation and multivariable logistic regression was conducted to identify the factors associated with suicidal ideation. The result of their study revealed that the prevalence rate of suicidal ideation among adolescents in Nepal was 10.33%. The factors associated with suicidal ideation were loneliness, food insecurity, truancy, and gender.

A cross-sectional study on 443 Nepalese adolescents found that the prevalence of suicidal ideation to be 8.7% among adolescents aged 13–17 years. (Srijana Bhattarai, 2020). Another study on 6531 students from grade 7–11 in Nepal revealed that nearly 13.59% had considered suicide while 10.33% had attempted it, and food insecurity, anxiety, loneliness, and gender were identified as risk factors of suicidal ideation, whereas anxiety, loneliness, truancy, cigarette use, and gender were identified as risk factors of suicidal attempt. 2019 (Achyut Raj Pandey).

Suicidal attempts and ideation are found to be high in the adolescent age group. Hence, this study was planned with the following objectives:

- To know the level of suicidal ideation among adolescents in Bhaktapur, Nepal
- To identify the level of suicidal ideation among male and female adolescents.
- To investigate the factors associated with suicidal ideation among adolescents.

Method

The study was a descriptive, correlation, and causal comparative research design carried out among adolescents in Bhaktapur city using a purposive sampling method. The 325 samples of 171 males and

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154 samples of females were taken from different schools in Bhaktapur city, with grades ranging from class nine to eleven. The participants belonged to both public and private sector schools located in Bhaktapur city and its neighbouring areas. In this study, the respondents were chosen to be representative of independent variables such as age, education, religious affiliation, income level, family history and family relationship, and stereotypical behavior.

Inclusion and exclusion criteria

The students aged 13–17, from grade nine to eleven, from Bhaktapur city were included in the study. The consent of all the participants was sought to participate in the testing, and the participants unwilling to be administered the psychological tools were not included in the study.

Data collection tools

The Suicidal Ideation Scale was used for the study designed by Dr. Devendra Singh Sisodia and Dr. Vibhuti Bhatnagar, published by the National Psychological Corporation, Agra. It consists of 25 items with a 5 point rating scale. Each item has five options for responses, which are strongly agree, agree, uncertain, disagree, and strongly disagree. The scale consists of 21 positive statements and 4 negative statements. The serial numbers of the negative statements are 11, 13, 18, and 24. The reliability of the scale was determined by (a) test-retest methods and (b) the internal consistency method. The test-retest reliability was 0.78, and the consistency value for the scale was 0.81. Besides face validity, as all the items of the scale are concerned with the variable under focus, the scale has high content validity. The scale was validated against the external criteria and the coefficient obtained was 0.74.

Data analysis

The obtained data were statistically analysed using SPSS software (version 22) to compute descriptive statistics such as percentage, mean, and standard deviation. and one-way ANOVA were computed to understand the relationship between suicidal ideation and demographic variables in this study.

Result

The demographic characteristics of participants showed that among 325 participants, 171 (52.6%) were male and 154 (47.45%) female. 13 (4%), 89 (27.4%), 133 (40.9%), 88 (27.1%) and 2 (0.6%) participants

were of age 13, 14, 15, 16, and 17 respectively. The participants from grades nine, ten, and eleven were 123 (37.8%), 91 (28%), and 111 (34.2%) respectively. The majority of the participants were Hindu (205) by religion, and others were Buddhist (55), Christian (42) and Muslim (23).

Prevalence of Suicidal Ideation

Table 1 presents the very low, low, and average suicidal ideation of participants in the study. There were no respondents to a high and very high level of suicidal ideation. This result demonstrated that average suicidal ideation was highest among participants of our study, followed by low suicidal ideation. The very low suicidal ideation was the lowest in our study.

Table 1
showing frequency and percentage of suicidal ideation of total participants

Total suicidal ideation				
	Frequency	Perce- nt	Valid Percent	Cumulati- ve percen
Very low	8	2.5	2.5	2.5
Low	108	33.2	33.2	35.7
Average	209	64.3	64.3	100.0
Total	325	100.0	100.0	

The difference in suicidal ideation for demographic variables

Table 2 shows the prevalence of suicidal ideation in form of very low, low, and average levels. There were no respondents for the high and very high levels of suicidal ideation. Prevalence of average level of suicidal ideation was highest in all independent demographic variables ranges from 54.4 to 100%. The low level of suicidal ideation according to demographic variables ranges between 0% to 41.5%. Similarly, the very low level of the suicidal level was found to range between 0 to 7.7% which is the lowest level of suicidal ideation among the participants in our study.

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Table 2
Suicidal ideation prevalence according to demographic variable of Gender

Independent variables		Number	Suicide ideation mean	Standard variation	Suicidal Ideation	No	Percent	Statistics
<i>Gender</i>	Male	171	5.25	12.71	Very low	7	4.1%	t=0.79, p=0.42 (Student t-test)
					Low	71	41.5%	
					Average	93	54.4%	
	Female	154	3.08	12.44	Very low	1	0.6	
					Low	137	24	
					Average	116	75.3	

The result of one-way ANOVA showed a significant difference ($F = 27.80$, $p = 0.01$) among groups due to age, with a significance level of 0.05. This difference in suicidal ideation is because of different ages. This study's second hypothesis, i.e., that there would be no significant difference in suicidal ideation among adolescents of different ages, was rejected. The result of this study demonstrated that suicidal ideation among study participants tends to increase with age. The

suicidal ideation was found to be highest at age 16, with a mean suicidal ideation of 62.41, followed by age 17, with a mean suicidal ideation of 15. Likewise, at age 13, suicidal ideation was found to be lowest with a mean suicidal ideation of 44.38, followed by age 14 with a mean suicidal ideation of 47.96. Suicidal ideation prevalence according to demographic variable age is shown below in table 3.

Table 3
Suicidal ideation prevalence according to demographic variable of Age

Independent variables		Number	Suicide Ideation mean	Standard variation	Suicidal Ideation	No	Percent	Statistics
<i>Age</i>	13	13	44.38	8.71	Very low	1	7.7	F=27.801, p=0.00 (One-way ANOVA)
					Low	5	38.5	
					Average	7	53.8	
	14	89	47.96	9.36	Very low	1	1.1	
					Low	36	40.4	
					Average	52	58.4	
	15	133	49.65	10.14	Very low	4	3	
					Low	50	37.6	
					Average	79	59.4	
	16	88	62.41	12.61	Very low	2	2.3	
					Low	17	19.3	
					Average	69	78.4	
	17	2	59	8.48	Very low	0	0	
					Low	0	0	
					Average	2	100	

The result of one-way ANOVA showed there was a significant difference ($F=82.48$, $p<0.01$) in suicidal ideation due to the level of their grade with a

significance level at 0.05. Suicidal ideation prevalence according to demographic variables of Grade is demonstrated in table 4 below:

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Table 4
Suicidal ideation prevalence according to demographic variables of Grade

Independent variables		Number	Suicide ideation mean	Standard variation	Suicidal Ideation	No	Percent	Statistics
Grade	Nine	123	47.4	8.27	Very low	2	1.6	F=82.485, p=0.00 (One way ANOVA)
					Low	48	39	
					Average	73	59.3	
	Ten	91	47.23	9.33	Very low	5	5.5	
					Low	35	38.5	
					Average	51	56	
	Eleven	111	62.43	12.12	Very low	1	0.9	
					Low	25	22.5	
					Average	85	76.6	

There is a significant difference ($t=-4.812, p<0.01$) in the suicidal ideation due to religion between two groups. The Suicidal ideation prevalence according to demographic variable of Religion is given in table 5 below:

Table 5
Suicidal ideation prevalence according to demographic variable of Religion

Independent variables		Number	Suicide ideation mean	Standard variation	Suicidal Ideation	No	Percent	Statistics
Religion	Hindus	204	49.97	11.07	Very low	6	2.94	t=-4.812, p=0.00
					Low	65	31.86	
					Average	133	65.19	
	Others	121	56.80	13.08	Very low	2	1.65	
					Low	43	35.54	
					Average	76	62.81	

Discussion

This study aimed to identify the level of suicidal ideation and factors associated with it among adolescents. The study revealed the prevalence of suicidal ideation in the forms of very low, low, and average percentages of 2.5%, 33.2%, and 64.3%. The study revealed that the incidence of suicidal ideation is higher among those aged 16–19 years, class eleven. There was no significant gender difference in the incidence of suicidal ideation. This was in contrast with a study from the western region of Nepal, where suicide attempts were found to be more common in young females, and stress reaction was the most common risk factor (Halder et al. 2010). This could be because of the difference in the study site. This study was conducted in an urban metropolitan city, i.e.,

Bhaktapur, where there is a high literacy rate and low gender discrimination. No significant difference in suicide ideation according to gender could be explained by the gender role given by society in Nepalese society, which usually becomes prominent after the adolescent period, specifically after marriage.

This study showed a significant difference in the incidence of suicidal ideation based on age, religion, and education level. Researchers found that with increasing age, the level of suicidal ideation also increases. A similar finding was observed in the population-based study of 82 countries (Biswas et al., 2020). In their study, greater risks of suicidal ideation were found to be associated with older age among adolescents. The incidence among different ethnicities and religions corresponds to the population distribution

of different ethnicities in Nepal. This study revealed that religion is significantly associated with suicidal ideation. Suicidal ideation was significantly higher in Muslim adolescents than in other religions. Adolescent Hindus were found to have the least suicidal ideation. This is because Nepal is a country where 80% of the population are Hindus, and the Muslim religion is outnumbered in Nepalese society, where they have to face a significant number of challenges (Letizia, 2011). The second-lowest prevalence of suicidal ideation was found in the Buddhist religion. This is because human lives are so precious in the eyes of Buddhists, so they train themselves to avoid destroying life (Peltzer & Pengpid, 2012).

In this study, it was found that suicidal ideation increases with an increasing education level. The participants from grade 11 in the study seemed to experience more suicidal thoughts than the lower education grades of grade nine and ten. This is because with increasing education grade, the level of difficulty and responsibility also increases, which can lead to stress, anger, frustration, and fear, among other negative emotions. If they cannot handle this kind of chaos in life, then this failure can lead to suicidal thoughts.

One of the most significant strengths of this study was that it tried to speak to the embedded negative thoughts of the adolescents, which can be a significant life-threatening behaviour in the later period of life. Another strength of this study was the adequate number of diverse populations in the study.

Limitation

There were several limitations to this study. It has not been determined whether parenting style, social circle, and socioeconomic status play a role in suicidal ideation. Moreover, this study has not assessed mental health disorders like stress, anxiety, and depression and

their effects on suicidal ideation among adolescents. Also, as this study has included the study population from only one district of Nepal among 77 districts, the findings from this study cannot be generalised to the whole population of Nepalese adolescents. The questionnaire method was used to collect primary data, which would not be free from respondents' biases, and the purposive sampling may result in sampling bias.

Future research directions

Future studies with an extensive search of biopsychosocial factors that contribute to the development of suicidal ideation among Nepalese adolescents can be conducted, and the sample size can also be included so that the study can be generalized. Also, studies focusing on intervention to prevent suicidal thoughts in adolescents can be included.

Conclusions

The findings from this study showed suicidal ideation was prevalent among Nepalese adolescents, although moderate ideation was present. The factors associated with suicidal ideation were age, education grade (class), and religion. A multispectral approach involving school-based age-and gender-specific intervention, a healthy education system, better domestic environments, and timely treatment of mental illness may play a key role in preventing suicides among adolescents. Future studies with an extensive search of the bio-psychosocial factors that contribute to the development of suicidal ideation among Nepalese adolescents are recommended, incorporating the mental health issues. Also, studies focusing on intervention to prevent suicidal thoughts in adolescents are recommended, and the study can be carried out with a greater number of participants so that the result can be generalized and the result can be used for the formulation of proper intervention and its implementation.

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