



TO STUDY THE PERSONAL, SOCIAL, AND PSYCHOLOGICAL RISK FACTORS ASSOCIATED WITH SUICIDAL BEHAVIOUR IN ADOLESCENTS OF 10-18 YEARS AGE GROUP

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ABSTRACT

Background: Considering the increased incidence of suicide in adolescence, the pediatrician plays a vital role in assessing the level of risk by clinical judgment, by reviewing the risk and protective factors and by a direct verification of thoughts and acts of suicide.

Objective: To study the correlation of sociodemographic and education level with the suicidal attempt in adolescents. To study the correlation between stressful life events and suicidal tendencies in adolescents.

Methods: At admission the complete family history, history of addiction, demographic details were noted, details regarding drug abuse drug usage and previous suicidal attempts were taken for all children.

Result: A total of 50 individuals were enrolled in the study, with the majority being female patients (n=31, 62%) and a median age of 15 years. Among the participants, 27 (54%) were from lower-middle-class backgrounds. The most commonly used substances in suicide attempts were cypermethrin (n=11, 22%) and herbicides (n=8, 16%). The key risk factors identified for suicide were poor academic performance (n=16, 32%), domestic violence (n=12, 24%), failed relationships (n=10, 20%), and parental separation (n=6, 12%).

Conclusion: In this cross-sectional study, various factors associated with the risk of suicidal behavior in Adolescents were evaluated. Gender differences were also seen as females were more than males. Poisoning and hanging were the main methods used to commit suicide in adolescents.

Late adolescent age group was more vulnerable to suicidal behaviour with female gender predominance. Poisoning was noted as main method of suicidal attempt.

Keywords: Personal, Social, Psychological Risk Factors, Suicidal Behaviour, Adolescents.

INTRODUCTION

Suicide is the one among the leading cause of death among adolescents in India and also worldwide. The interplay of personal, social, and psychological factors is crucial in understanding adolescent suicide behaviour. The study of these risk factors helps the early identification of vulnerable populations to prevent suicide and suicidal behaviour. Suicide is a multidimensional phenomenon that has different meanings among adolescents in different cultures and place. In recent studies, individual, family, psychosocial, and cultural factors contribute to adolescents attempting suicide. Also, suicide can be seen as a psychological phenomenon, social phenomenon, and as a phenomenon associated with psychiatric disorders, genetic and biological problems.

India is labelled as "Suicide Capital of SouthEast Asia" as it has recorded the highest number of suicides in South-East Asia in 2012, according to a WHO report. If the progress of the rate of suicide is observed, in 1967 the suicide rate in India was 7.8, but it has steadily increased to 11.0 in 2013, with a peak rate of 11.4 in 2010. Previous studies done in India also have found female gender, not attending school or college, independent decision making, premarital sex, physical or sexual abuse, even psychological distress were some of the factors associated for suicidal attempts in adolescents.

Need for the study

Prevention of suicide is an extremely challenging issue for the healthcare providers. Some literature data reports that, in adulthood, the victims of suicide had often visited their doctor before attempting suicide. Considering the increased incidence of suicide in adolescence, the paediatrician plays a vital role in assessing the level of risk by clinical judgment, by reviewing the risk and protective factors and by a direct verification of thoughts and acts of suicide. Moreover, the paediatrician plays a fundamental role in the field of education. Prevention of suicide is an extremely challenging issue for the healthcare providers. Considering the increased incidence of suicide in



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adolescence, the paediatrician plays a vital role in assessing the level of risk by clinical judgment, by reviewing the risk and protective factors and by a direct verification of thoughts and acts of suicide.

Objective

To study the correlation of sociodemographic and education level with the suicidal attempt in adolescents. To study the correlation between stressful life events and suicidal tendencies in adolescents.

MATERIAL AND METHODS

Sample Size:

Prevalence of the disease 3%

$S = Z^2 PQ/D^2$

S=sample size

Z=standard value @ 0.05 level =1.96

P=proportion of prevalence =3% becomes .03

$Q = 1 - P = 1 - 0.03 = .97$

D= Margin of error or confidence interval = 5% (to be expressed in decimals) =.05

$S = (1.96 \times 1.96 \times 0.03 \times .97) / .05 \times .05 = 45$ or 50 in total

Sampling- Purposive

Type of study: Cross-sectional

METHODOLOGY

At admission the complete family history, history of addiction, demographic details were noted, details regarding drug abuse, drug usage and previous suicidal attempts were taken for all children. Complete clinical and laboratory examinations as per the hospital policy the appropriate treatment started. After the patient

recovered the assessment was done using Beck's Suicide Risk Assessment Form. Suicide Risk Assessment Form (Beck's suicide intent scale) was used to assess the level of the intent. Beck's suicide intent scale contains 15 items each scoring from 0,1 and 2 points. The total score of 0-10 was recorded as low intent, score 11-20 was recorded as medium intent, and score 20-30 was recorded as high intent.

Inclusion criteria:

Adolescents admitted to wards and PICU of Cheluvamba Hospital, Mysuru after a suicide attempt. Adolescents aged between 10 to 18 years

Exclusion criteria:

Patients who were comatose or died wherever the scale could not be administered.

All the patients whose relatives did not consent to participate in the study

Data analysis:

Data entry was done using the Microsoft excel 2013 and All analysis will be done by using the SPSS version 20.0. Wherever, possible percentage, Chi-square test, and logistic regression were applied.

Ethical issues:

Informed consent was taken from guardians of all the study participants and ethical issues were considered.

RESULTS

A total of 50 individuals were enrolled in the study, with the majority being female patients (n=31, 62%) and a median age of 15 years. Among the participants, 27 (54%) were from lower-middle-class backgrounds.

Table 1. Demographic

Variable	Frequency	Percent
Age	15(14-16)	
Gender		
Male	19	38
Female	31	62
Education		
High school	30	60
Higher secondary	20	40
Socioeconomic status		
Lower middle	27	54
Middle class	20	40
Upper class	3	6
Method of suicide		
Cypermethrin poisoning	11	22
Herbicide poisoning	8	16
Mosquito repellent	5	10
Multiple tablet	7	14
OP poisoning	4	8
Paracetamol poisoning	4	8
Partial hanging	3	6
Phenol poisoning	2	4
Phenyl poisoning	1	2

Rat killer poisoning	3	6
Unknown compound	2	4
History		
Mental disorder	1	2
Substance abuse		
Dysfunction in family	5	10
Parents separation	6	12
Domestic violence	12	24
Poor academics	16	32
Failed relationships	10	20
Previous suicidal attempts		

The most commonly used substances in suicide attempts were cypermethrin (n=11, 22%) and herbicides (n=8, 16%). The key risk factors identified for suicide were poor academic

performance (n=16, 32%), domestic violence (n=12, 24%), failed relationships (n=10, 20%), and parental separation (n=6, 12%).

Table 2. Factors Affected With Becks Score

Variables	Beck Score			p value
	Low risk (%)	Medium risk (%)	High risk (%)	
Age	15(14-16)	15(14.5-17)	15(113-17)	0.710
Gender				0.183
Male	11(57.9)	6(31.6)	2(10.5)	
Female	20(64.5)	11(35.5)	0(0)	
Education				0.705
High school	20(66.7)	9(30)	1(3.3)	
Higher secondary	11(55)	8(40)	1(5.0)	
Socio economic status				0.180
Lower middle class	15(55.6)	12(44.4)	0(0)	
Middle class	13(65)	5(25)	2(10)	
Upper class	2(100)	0(0)	0(0)	
History				0.443
Mental disorder	1(100)	0(0)	0(0)	
Substance abuse				
Dysfunction in family	2(40)	2(40)	1(20)	
Parents separation	5(83.3)	1(16.7)	0(0)	
Domestic violence	9(75)	3(25)	0(0)	
Poor academics	10(62.5)	5(31.3)	1(6.3)	
Failed relationships	4(40)	6(60)	0(0)	
Previous attempts				

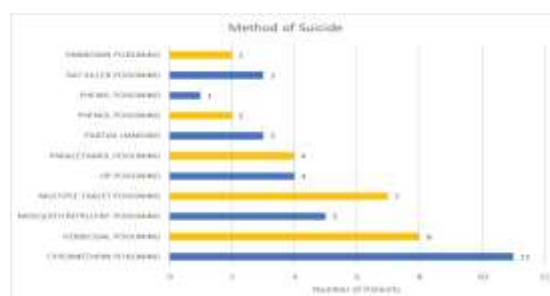


Fig 1. Method of suicide

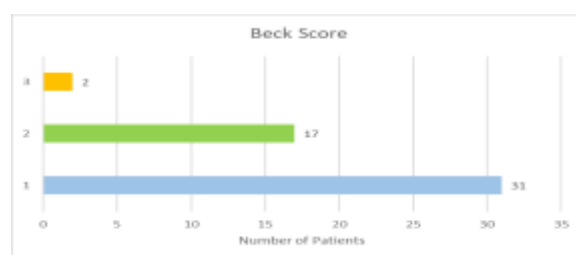


Fig 2 Becks score

1. Low risk 2. Medium risk 3. High risk

DISCUSSION

In this cross-sectional study out of 50 adolescents who attempted suicide of that (62%) 31 were females and 19 were male (38%). Age distribution data showed that the mean age of adolescents who were committed suicide was 15 years. Suicidal ideation is rare before the age of 10 and its prevalence rapidly increases between 13 and 17 years of age. Uddin R et al analyzed data of adolescents in 59 low-income and middle-income countries. Adolescents aged 15-17 years had a higher prevalence than those aged 13-14 years of suicide attempts (17.6%, vs 16.2) [3].

Sex presents a now well-established paradox in which adolescent girls are more likely to have experienced suicidal ideation and suicide attempt than boys, but adolescent boys are more likely to die by suicide (Brent et al 1999; Fergusson et al 2000; Kokkevi et al., 2012; Lewinsohn et al 2001) [9]. Kar N. reported that the male-to-female ratio was closer to one in adults and around 1:3 in adolescents.

In the present study 16 reported to have poor academic performance, (24%) 12 reported a history of domestic violence and (20%) 10 reported with failed relationships.

In the present study (54%) 27 belonged to the lower middle class and (40%) 20 belongs to the middle class. Also (60%) 30 were high school students, (40%) 20 were higher secondary students. Begum A et al (2018) revealed that suicidal ideation is more common among adolescents of low-income group parents 104 (5.5%). The parental socioeconomic position was associated with suicidal ideation [6].

In the present study, only 1 (2%) adolescents had a mental disorder. Gabrielle A et al (1982) found that 63% of subjects with depressed CDI scores are suicidal vs 34% who are suicidal but not depressed. In the present study (20%) 10 reported that they have a failed relationship. Spirito A et al (2006) documented that it is not very surprising that interpersonal losses such as relationship break-ups, the death of friends are found in one-fifth of youth suicide cases [10].

In the present study (0%) 0 reported that they were addicted to some form of substance. T Nasel et al

(2007) revealed that depression and substance use were the only significant predictors of suicidal ideation as measured by the Suicidal Ideation-JR scale.

In the present study (32%) 16 adolescents reported that they had a poor academic performance. A Zheng et al (2014) analysis showed that academic burden and grade are the most significant psychological risk factors for suicidal tendencies in students. Angela S et al (2005) analyses revealed that failing academic performance (compared to above average) is associated with a five-fold increased likelihood of a suicide attempt.

In the present study out of (62%), 31 had minimal to moderate preparation of suicide attempt in study subjects and (4%) 2 had extensive preparation. A Atheyet al (2018) reported that Suicide decedents who did not actively prepare for suicide showed significantly higher risk-taking scores than suicide decedents who actively planned for suicide.

In the present study, (62%) 31 had a low risk of suicidal intent as per Beck's suicidal intent scale, (34%) 17 had medium risk and (4%) 2 had high risk of suicidal intent as per Beck's suicidal intent scale respectively.

In the present study, (64.5%) 20 female had low risk of suicidal intent as per Beck's suicidal intent scale, (35.5%) 11 had medium risk. Whereas (57.9%) 11 males had low risk, (31.6%) 6 had medium risk and (10.5%) 2 had high risk.

In the present study (66.7%) 20 studying in high school had a low risk of suicidal intent as per Beck's suicidal intent scale, (30%) 9 had medium risk and (3.3%) 1 had high risk of suicidal intent as per Beck's suicidal intent scale respectively. Whereas (55%) 11 studying in high school had low risk, (40%) 8 had medium risk and (5%) 1 had high risk.

In the present study (55.6%) 15 belonging to lower middle class had a low risk of suicidal intent as per Beck's suicidal intent scale, (44.4%) 12 had medium risk and (0%) 0 had high risk of suicidal intent as per Beck's suicidal intent scale respectively. (65%) 13 belonging to middle class had low risk, (25%) 5 had medium risk and (10%) 2 had high risk. Whereas (100%) 3 belonging to upper middle class had low risk.

In the present study in all cases had no premeditation it was an impulsive act and in

(3.75%). Berg et al. (2015) reported that emotion-relevant impulsivity – poor control overreactions following emotions – is a strong predictor of problem behaviours generally and suicidality specifically [7].

CONCLUSION

In this cross-sectional study, various factors associated with the risk of suicidal behavior in Adolescents were evaluated. Gender differences were also seen as females were more than males. Poisoning and hanging were the main methods used to commit suicide in adolescents.

Late adolescent age group was more vulnerable to suicidal behaviour with female gender predominance. Poisoning was noted as main method of suicidal attempt.

Considering the high suicide rates in adolescents, the importance of providing psycho-education, restricting access to lethal means, and promoting social integration in immigrants are various ways by which suicides in adolescents can be avoided.

Statement

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