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PREVALENCE AND SOCIODEMOGRAPHIC PREDICTORS AMONG PATIENTS WITH SUICIDAL IDEATION AND ATTEMPTS - A HOSPITAL BASED STUDY

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ABSTRACT Suicidality is a major public health problem across the world. Every year, 80000 people die from suicide causing devastating effects on families. The psychological, financial and social impact faced by families are immense and many struggle to come out of such crisis. Earlier studies have reported socio-demographic characteristics and psychopathological profiles as risk factors for suicidality. A few have highlighted significant differences in demographic and psychiatric profiles between those attempting suicide (SA) and those with suicidal ideations (SI). However, to the best of our knowledge, no study was taken up among the population of Andhra Pradesh. In this context, this study was undertaken. 67 patients from Psychiatry and Emergency Medicine Departments of Alluri Sitarama Raju Academy of Medical Sciences (ASRAM), Eluru were enrolled for the study. Information on socio-demographic characteristics was collected in the case proformas prepared for this purpose. Modified Kuppaswamy scale was used to assess socioeconomic status (SES). ICD-10 Diagnostic and Clinical Guidelines were used to diagnose the psychiatric disorders. The results were analysed for statistical significance using chi square and t tests. The results generated on age, gender, education, family type, socioeconomic factors, etc were analysed for significance and the results between SA and SI were found to be insignificant. However, the differences in the frequency of psychiatric diagnoses between these two groups were found to be significant. Further in-depth studies of a larger sample size are warranted to understand the phenomena of suicidality in our population so that necessary steps could be taken up to contain this crisis.

KEYWORDS :

Introduction:

Suicidality is a major global public health problem. The prevalence of suicidality varies widely between different ethnic groups [1.] Mann et al [2] reviewed the prevalence of suicidality in different countries and indicated highest rates in both European and Asian countries. WHO [3] showed highest rates of suicidality in Russia (30.1 per 100000 per annum). Extensive studies carried out all over the world indicated a strong association between demographic variables, psychiatric conditions and suicidality [4-5,1].

Kundadak Ganesh Kudva et al [6] reported an association between suicidality and socio demographic variables such as marital status and age. They have also observed higher levels of depression, anxiety and loss of self-esteem in divorced individuals and an association of suicidality with younger age group. Nock et al [7] and Kessler et al[8] also observed a similar association between younger age and suicidality. Eikelenboom et al [9] carried out a six year longitudinal study of predictors of suicide and observed unemployment to be a risk factor for suicide.

Suicidality comprehends Suicide Ideation (SI) and Suicidal Attempts (SA). The latter being a significant risk factor as well as predictor for further attempts. Extensive research carried out shows that age, gender, socioeconomic status, unemployment, financial crisis, family problems, depression, anxiety disorders and poor health etc., are risk factors for both suicide ideation and attempts, [10-11,12, 1.]

Oiesvold et al [13] reported no significant differences in risk factors between suicidal ideation and attempts in psychiatric Norwegian patients.

Despite the reported association between suicidality and demographic variables in certain ethnic groups, no data is available for the population of Andhra Pradesh and hence the present study is taken up.
The aim of the present study is to identify the prevalence and risk factors of suicidal ideation and attempts among patients of the Departments of Psychiatry and Emergency Medicine of a tertiary hospital in Eluru, Andhra Pradesh.

Subjects and Methodology:

67 patients who attended the outpatient department of Psychiatry and who were admitted in the Department of Emergency Medicine at Alluri Sitarama Raju Academy of Medical Sciences (ASRAM), Eluru were included for the study.

Information on age, gender, marital status, family type, education, socioeconomic status was collected in the case sheet proforma especially prepared for this purpose. Kuppaswamy scale was used to assess socioeconomic status (SES). ICD-10 Diagnostic and Clinical Guidelines were used to diagnose the psychiatric disorders. Patients in the age group of 15-90 years who gave consent were recruited for the study. Patients who were critically ill and not willing to participate were excluded.

The study was carried out after taking the approval of the Institutional Ethics Committee and patient informed consent was obtained after explaining the purpose and details of the study to the participants. Statistical tools such as chi-square,'t' test were used to find out the significance of the results.

Results:

In the present study an attempt has been made to compare and contrast the suicidal attempts (SA) and suicidal ideations (SI) in 67 patients from the Departments of Psychiatry and Emergency Medicine, ASRAM, Eluru for understanding suicidality phenomena among the people of Andhra Pradesh.

The results obtained on demographic characteristic, such as age, gender, education, marital life, socioeconomic status among suicidal ideations and attempts groups are presented in Tables 1-4. Table 1 shows the mean age of those with suicidal attempts and suicidal ideations. The mean age of suicidal attempters was 30.71$\pm$17.57 years as against 34.30$\pm$14.28 years of those with suicidal ideations.

Table 1 Mean Age Distribution of suicidal Attempters and Ideators

Group	No.	Mean Age

Suicidal Attempt	24	30.71+ 17.57
Suicidal Ideation	43	34.30+ 14.28
Total	67	33.01 + 15.50

P- Value 0.367 (not significant)

Table 2 shows the results on the demographic variables such as gender, literacy (Education) and marital status among suicidal ideations (SI) and attempts (SA) groups.

Table 2 Demographic Variables of Suicidal attempters and suicidal ideators

Parameter	Group	
	Suicidal Attempt	Suicidal Ideation
Gender		
Female	16 (66.7%)	22(51.2%)
Male	8 (33.3%)	21(48.8%)
Education:		
High School	4 (16.7%)	10 (23.3%)
Intermediate	7 (29.2%)	13 (30.2%)
Primary School	2 (8.3%)	6 (14.0%)
Under graduates	11 (35.8%)	14 (32.6%)
Type of Family		
Joint Family	4 (16.7%)	6 (14.0%)
Joint Extended	1 (4.2%)	0 (0.0%)
Nuclear	18 (75.0%)	33 (76.7%)
Nuclear Extended	1(4.2%)	4 (9.3%)
Marital Status		
Married	10 (41.7%)	22 (51.2%)
Separated	0 (0.0%)	2 (4.7%)
Single	12 (50.0%)	16 (37.2%)
Widowed	2 (8.3%)	3 (7.0%)
Total	24	43

Values in parentheses are percentages

Gender: P- Value= 0.219(Not Significant); Literacy: P- Value= 0.691 (Not significant).

Type of Family: P-Value 0.499(Not Significant);Marital Status: P-Value 0.562(Not Significant).

Among the suicidal attempts group, 66.70 % were females and 33.33% were males. Among those with suicidal ideations, 51.2 % were males and 48.8% were females. Educational status of both groups was studied and the data is presented in Table-2. The patients were categorized into four sub-categories i.e. Primary school attended, High school completed, Intermediate completed and undergraduates. Majority of the suicidal attempters were undergraduates (35.8%) and 29.2 % had completed intermediate. 16.7 % had attended high school, while 8.3% completed only primary schooling. A similar trend was observed among the suicidal ideations group - 32.6% were undergraduates, 30.2% were intermediate completed and 23.3% completed high school studies. The marital status of the suicidal attempts and suicidal ideations group was studied. Among those who had suicidal attempts 50% were single and 41.7% were married. Only 8.3% were widowers. Among those with suicidal ideations 51.2% were married, 37.2% were single, 7% were widowers and 4.7% were separated.

Majority of subjects in suicide attempts group belonged to nuclear family (75%) set up. 16.7% belonged to joint extended family and 4.2% belonged to nuclear extended family (Table-2). A similar trend was noted among the suicidal ideations grpup with 76.7% belonging to nuclear family, 14% belonging to joint family and 9.3% belonging to nuclear extended family set up. The results on socioeconomic status of both groups are interesting (Table-3).

Table 3 Socioeconomic Status of Suicide attempters and ideators

Socioeconomic Status (SES)	Group	
	Suicidal Attempt	Suicidal Ideation
Lower	0 (0.0%)	2 (4.7%)
Lower Middle	12 (50.0%)	14 (32.6%)
Middle	5 (20.8%)	19 (44.2%)
Upper	1 (4.2%)	0 (0.0%)
Upper Middle	6 (25.0%)	8 (18.6%)
Total	24	43

Socioeconomic status 0.149 not significant

Among those with suicidal attempts, 50% belong to lower middle class and 25% belong to upper middle class. Only 4.2% belonged to upper class. Among the group with suicidal ideations 44.2% belong to middle class followed by lower middle class (32.6%) and upper middle class (18.6%).

The results were analysed using chi-square and "t" tests for the differences in age, percentages of males and females, marital status, type of family, socio economic status between Suicidal Attempts(SA) and Suicidal Ideations(SI) and the differences were found to be insignificant.

Table-4 shows the details of psychiatric disorders among the suicidal attempts and suicidal ideations groups. Various types of disorders were observed in both the groups. Among the suicidal attempts group, a higher prevalence of adjustment disorders (29.2%) and depressive episodes (20.8%) were observed. In 12.5% of cases recurrent depressive disorders and in 8.3% of cases specific personality disorders were also noticed. Other disorders such as dissociative disorders, acute stress reaction, bipolar affective disorder and depressive episodes et cetera were observed in less than 5% cases each. Among the ones with suicidal ideations, a high percentage of depressive episodes (41.9%) and bipolar affective disorders (16.3%) were observed. Generalized anxiety disorder was observed in 9.3% of cases. Overall the results showed that, among the total subjects interviewed 64.2% of those with suicidal ideations and 35.8% of those with suicidal attempts had a diagnosable mental health condition. The statistical analysis of the results on the frequency of these problems showed that the differences between the Suicidal Attempts (SA) and Suicidal Ideations (SI) groups were significant.

Table 4: Diagnosis of Psychiatric Disorders based on ICD-10 scale among suicidal attempters and suicidal ideators.

Psychiatric Problems	Group	
	Suicidal Attempt	Suicidal Ideation
Acute Stress Reaction	1(4.2%)	3 (7.0%)
Adjustment Disorder	7 (29.2%)	2 (4.7%)
Adjustment Disorders,		
Dissociative Disorders	1 (4.2%)	0 (0.0%)
Biplolar Affective Disorder		
Depressive Episode	1 (4.2%)	7 (16.3%)
Dissociative Disorders	5 (20.8%)	18 (41.9%)
Generalised Anxiety Disorder	0(0.0%)	2 (4.7%)
Mental and Behavioral	1 (4.2%)	4 (9.3%)
disorders due to multiple		
drug use and use of other	0 (0.0%)	1 (2.3%)
Psychiatric		
Mixed Anxiety Depressive	0 (0.0%)	2 (4.7%)
Disorder	1(4.2%)	1(2.3%)
Obsessive Compulsive	0 (0.0%)	1(2.3%)
Disorder	1 (4.2%)	0(0.0%)
Paranoid Schizophrenia		
Planned Suicide Attempt with	3 (12.5%)	0 (0.0%)
Depressive Symptoms		
Recurrent Depressive	0 (0.0%)	1(2.3%)
Disorder		
Schizophrenia	1 (4.2%)	0 (0.0%)
Severe Depressive Episode	2 (8.3%)	1(2.3%)
Specific Personality Disorder		
Total:	24 (64.2%)	43(35.8%)

-Value= 0.024 (Significant)

Discussion:

In this present hospital-based study an earnest effort has been made to compare suicidal ideations and attempts among 67 participants. The participants included were referred to the Department of Psychiatry at ASRAM, Eluru for suicide risk assessment and psychotherapy. Patients, who were being treated for attempting suicide at Department of Emergency Medicine ASRAM, were also recruited for the study when willing and able. The results generated on socio-demographic variables and ICD-10 diagnoses among those with suicidal ideations (SI) and those with suicidal attempts (SA) were discussed.

In the present study the mean age was 30.71± 17.57 years for the SA group and 34.30±14.27 for the SI group. Our results are in agreement

with those of Kumar [14] Venkoba Rao [15] Shukla et al [16] and Ponnudorai et al [17] who also reported approximately the same age. However some studies reported higher age for suicide cases [18].

There have also been some studies on the gender distribution in SA and SI groups and the results are controversial. While some studies indicated high percentage of males in both the groups, some other studies reported high percentage of females. In the present study high percentage of females was observed among suicide attempters. Our results are in agreement with the studies of Unni and Mani [19] Kar [20] and Amudhan et al [21] who also reported preponderance of females among suicide attempters. In the present study, 51.2% of males were observed among those with suicide ideations. Belsiyal et al [22] observed 65.6% of males among 128 hospitalised inpatients.

In the present study both SA and SI are educated, none are uneducated. However, Srivatsava et al [23] reported high percentage of uneducated people among SA group. Bhatia et al [24] carried out a study in suicidal ideators (n= 260), attempters (n= 58) and completers (n= 55 and reported that sociodemographic variable such as literacy, occupation socioeconomic status did not vary significantly among the three groups.

In the present study in both SA and SI groups majority of the individuals belong to nuclear family followed by joint extended family. Our results are in agreement with that of Bharathi et al [25] who also reported a high percentage of Suicide Attempters (53.8%) from nuclear families. However, Ramdurg et al [26] observed 48% of suicidal attempters belonged to joint family and 44% belonged to extended family and 8% belonged to nuclear family.

In the present study, 12 (50%) out of 24 attempters were single and 41.7% were married. Among SI group 22 (51.2%) out of 43 subjects were married and 16 (37.2%) were single. Bhatia et al[24] in a hospital based study also observed 61.5% of participants out of 260 ideators and 62.1% out of 56 attempters were married. Sarkar et al [27] from Pune and Das et al [28] from Chandigarh also observed that majority of the suicide attempters were married. Narang et al [29] concluded that variables such as type of family, economic status, and education level have no statistical significance for suicide attempt.

In the present study among SA group 50% belonged to lower middle class, 25.0% belonged to upper middle class. Only 4.2% belong to upper class. Among SI group 44.2% belong to middle class, 32.6% belong to lower middle class and 18.6% belong to upper middle class. Statistical analysis of the results on social status showed no significant effect on suicidality in SA or SI. The results are in agreement with those of Das et al [30] and Bhatia et al [(24)] who also showed no significant effect of socio-economic status on suicide attempts and ideation.

In the present study, the pattern of psychiatric disorders based on International Classification of Diseases revision 10 (ICD-10) was studied in both suicidal attempts and suicidal ideation groups. The frequency and occurrence of Adjustment disorders, Dissociative disorders, Bipolar Affective Disorders, Generalized Anxiety disorders etc were noted in both the groups indicating that these disorders could potentially play a role as a risk factor for suicide. A high percentage of Adjustment Disorder (29.2%), Depressive episodes (20.8%), Recurrent Depressive Disorders (12.5%), and Personality disorders (8.3%) were noted among those who had suicidal attempts. On the other hand, the percentage of Depressive episodes (41.9%), Bipolar affective disorder (16.3%) were observed among suicidal ideations group. The overall results of this study show a high percentage of SA and SI with mental health disorders. Earlier studies carried out all over the globe also indicated mental illness is associated with suicidal ideation and suicidal attempts. Srivatsava et al [30] observed suicidal attempts in 16.6% patients with suicidal ideation with major depressive episodes. APP [31] reported mental disorder in majority of the patients at the time of suicide attempts. Beautrais [32] studied the association between mental disorders and risk of suicidal Attempts (SA) in 302 consecutive individuals and reported mental disorders in high percentage of cases. The authors concluded that the risk of suicide was definitely higher in persons with mental illness and the degree varied with age and gender. Our results are in agreement with that of Rao et al, [33] Henriksson et al [34] Cheng et al [35] Allebeck et al [36] Lecrubier [37]. The studies carried by Ando et al [38] in a multicentric cross sectional survey investigated association of psychological factors with suicidal ideation(SI) and concluded the importance of treatment of patients with severe depression to prevent suicide. Lamis et al [39.] Mathew et al [40.] Bosak et al [41] Rao et al [33.] and Altonen et al [42] also reported a high percentage of psychiatric problems, personality disorders and bipolar disorders .In 2021 Liu et al [43] studied the risk factors associated with suicidal behaviors and found a strong association between suicide and late life depression. In a recent study, Belsiyal et al [44] studied the frequency of suicidal ideation (SI) and attempts(SA) among 128 participants and concluded that suicidal ideation is common among the patients with depressive disorders.

Kundadal Ganesh Kudva et al [6] also observed significant association among depression, bipolar, anxiety disorders with suicidal ideation and attempts. Kesler et al [8] indicated as early as in 1999 that psychiatric problems are associated with suicide. Subramaniam et al [45] showed 43.6% of individuals endorsing suicidal ideation and 12.3% individuals endorsing suicidal attempts among those with depressive disorders. Handley et al [46] reported suicidal ideation (SI) among 48% individuals with depression and suicidal attempt(SA) in 16% of individuals with depression in Australian rural population. Subramaniam et al [47.] showed suicidal ideation in 31% of individuals with bipolar disorder and suicidal attempts in 11,5% individuals with bipolar disorder. Michaels et al [48] illustrated suicidal ideation and attempts more frequently among those with bipolar disorder.

Conclusion:

The present study showed no significant difference in the sociodemographic variables between suicide attempts (SA) and ideations (SI) groups. However the study demonstrated significant association between psychiatric problems and suicidality and significant differences for psychiatric problems between suicide attempt and ideation groups.