

Original Research Article

A study on suicidal tendency and co-morbidities among the patients attending the psychiatric outpatient department, tertiary care hospital, Nellore, SPSR Nellore district, Andhra Pradesh

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ABSTRACT

Background: Suicide is one of the ten major causes of death in India. Intentional self-harm is also associated with long term risk for repeated attempts as well as death by suicide. Individuals differ in the degree to which risk and protective factors affect their propensity for engaging in suicidal behaviors. The present study seeks to explore about suicidal intent among the self-harm attempters.

Methods: This was a hospital based cross-sectional study and includes both male and female patients attending the psychiatric outpatient department. After obtaining the informed consent and socio-demographic information, they were evaluated with semi-structured proforma.

Results: Descriptive analysis of the cases shows that 56 (46.6%) of age group between 31-40 years are commonly affected. Among the study subjects 79 (65.8%) attempters had no psychiatric illness for attempt and 41 (34.2%) subjects with past psychiatric illness, OP poisoning being the common method in 40 (33.3%) of attempters. In this study 80 (66.6%) of people did not have co-morbid conditions, drug dependency (alcohol dependence) was 20 (16.6%) and others are 20 (16.6%).

Conclusions: The suicidal attempts are more in females than males and it is also common in nuclear families, rural areas and individuals with past psychological problems. In this study suicidal attempts were more common among the people not suffering any other co morbid condition.

Keywords: Co-morbidities associated with suicidal attempts, Psychiatry, Suicide attempt

INTRODUCTION

Suicidal behaviour can be conceptualized as a spectrum disease ranging from suicidal thoughts through suicidal attempts or self-destructive behaviour to completed suicide.¹ Suicide is derived from the Latin word for “self-murder”. It is a fatal act that represents the person’s wish to die.

Suicide attempt is a self-injurious behaviour with a nonfatal /fatal outcome accompanied by explicit or

implicit evidence that the person intended to die. Para suicide is a term introduced to describe patient who injure themselves by self-infliction but who usually do not wish to die.² Globally an estimated 7 lakh suicide deaths occurred worldwide in 2021. Suicide is the fourth leading cause of death among 15-19 years old. Around 77% of global suicides occur in low- and middle- income countries. Ingestion of pesticide, hanging and using firearms are among the most methods of suicide globally.³ India ranks 43rd in descending order of rates of suicide with, a rate of 10.6 per one lakh reported in 2009.

Suicide is among the top 10 causes of death in India and among the top 3 causes of death in those who are between 16 to 25 years of age. The rates of suicide showed a descending trend from 1999-2002, and mixed trend during 2003-2006 with an increasing trend in 2006 to 2010.⁴ In India- southern states have a suicide rate of more than 15 per lakh, when compared to northern states, which have suicide rate less than 3 per lakh every year. Youth are now the group at highest risk in developing countries.⁵ Suicidal attempts are 20 times higher than the completed suicides.⁶ There is one suicide attempt for every 3 seconds in the world. In India, prevalence and incidence of suicide attempts are 0.8% and 5.4% respectively. For each suicide, there are 7-10 suicide attempts. The attempted suicide is recognized as one of the important predictors of suicidal deaths.⁶

Patients presenting with history of psychiatric disorder attending to the outpatient services of ACSR Government Medical College and Government General Hospital Nellore Andhra Pradesh were the study subjects. Information was collated from family members to ensure reliability and completeness of data.

The objectives of the present study included determination of age, sex and place distribution of the study participants attending the psychiatric outpatient department, past suicidal attempts, past psychiatric illness, reasons and methods of suicidal attempts and comorbidities among the study participants.

METHODS

This was a hospital based cross sectional study conducted in the psychiatric outpatient department of ACSR Government College and Government Medical College Hospital, Nellore from January to June 2018. All the patients attending the out-patient department psychiatry during the specified period constituted the sample frame for the study.

Inclusion criteria

Only those patients who were permanent residents of urban and rural Nellore were included in the study.

Inclusion criteria

Patients who did not give consent for participation in the study and those with severe psychiatric illness were excluded from the study.

The study subjects fulfilling the inclusion and exclusion criteria were selected by using systematic random sampling technique. A study done in India by Kumar et al has found that psychological problems are the common reason for attempting suicide (53.0%).⁷ Based on this estimate (53%), the sample size was estimated at 95% confidence interval with an alpha error of 0.05 and beta

error of 0.20 (with a power of 80%) using the below formula -

$$N = \frac{Z_{\alpha}^2 \cdot PQ}{L^2}$$

Where N is the required sample size.

Z_{α} is the 2 tailed Z value for the given alpha error (0.05) at 95% confidence intervals = 1.96

P is the assumed proportion of patients with psychological reasons for suicide attempts = 53.0%

Q is given by (100- P) = (100-53) = 47

L is the allowable error in terms of absolute precision = 10%

By substituting the values, we get,

$$N = \frac{(1.96)^2 \times 53 \times 47}{10 \times 10} = \frac{3.84 \times 53 \times 47}{10 \times 10} = \frac{3.84 \times 2491}{100} = \frac{9565}{100} = 95.65 \text{ (rounded off to 96)}$$

Applying a design effect of 1.2 for the sampling method, the required the required sample size is calculated as $106 \times 1.2 = 115.2$ (rounded off to 116). Thus, the actual sample of 120 was adequate for the present study.

RESULTS

Total subjects involved in this study group were 120, out of this 60 were males and 60 were females. Among all majority of the people who attempted suicide belonged to age group of 31-60 years 56 (46.6%) among them male were 29 (49.0%) and female 27 (45.0%) followed by <30 years, male of 38.0% and female of 40.0%. In the present study there was no difference among the suicidal attempters based on their domicile (rural and urban) and it shows statistically significant.

Table 1: Age and residence of study subjects (n=120).

Age and residence	Number of patients			P value
	Male (n=60) (%)	Female (n=60) (%)	Total (%)	
Age group (years)				
Less than 30	23 (38.0)	24 (40.0)	47 (39.2)	$\chi^2=0.15$; P=0.92; NS
31-60	29 (49.0)	27 (45.0)	56 (46.6)	
60 and above	8 (13.0)	9 (15.0)	17 (14.2)	
Residence				
Urban	31 (51.5)	19 (32.0)	50 (41.6)	$\chi^2=4.94$; P=0.02; S
Rural	29 (48.5)	41 (68.0)	70 (58.4)	

Table 2: Past suicidal attempts and past psychiatric illness of study subjects (n=120).

Past suicidal attempts and past psychiatric illness	Number of patients			P value
	Male (n=60) (%)	Female (n=60) (%)	Total (%)	
Past suicidal attempts				
Yes	17 (28.0)	24 (40.0)	41 (34.2)	$\chi^2=1.82$; P=0.17; NS
No	43 (72.0)	36 (60.0)	79 (65.8)	
Past psychiatric illness				
Nil	37 (62.0)	38 (63.0)	94 (62.7)	$\chi^2=2.43$; P=0.29; NS
Neurotic disorders	14 (23.0)	18 (30.0)	56 (37.3)	
Psychotic disorders	9 (15.0)	4 (7.0)	56 (37.3)	

Table 3: Reasons and methods used for suicide (n=120).

Reasons and methods	Number of patients			P value
	Male (n=60) (%)	Female (n=60) (%)	Total (%)	
Reasons for attempts				
Psychological	23 (38.3)	22 (36.7)	45 (37.5)	$\chi^2=0.04$; P=0.97; NS
Life events and financial	16 (26.7)	16 (26.6)	32 (26.7)	
Others	21 (35.0)	22 (36.7)	43 (35.8)	
Methods used				
Organo-phosphorous	26 (43.0)	14 (23.0)	40 (30.3)	$\chi^2=6.33$; P=0.04; S
Tablets	9 (15.0)	20 (33.0)	29 (24.2)	
Hanging	14 (23.0)	17 (28.0)	31 (25.8)	
Others	11 (18.0)	9 (15.0)	20 (16.7)	

Among the study group 79 (65.8%) attempters had no psychiatric illness, out of that 43 (72.0%) were males, and 36 (60.0%) were females, 32 (26.6%) were suffering with neurotic disorders and 13 (10.8%) were suffering with psychotic disorders. In the present study 45 (37.5%) subjects were suffering with psychological stress, out of that 23 (33.0%) were male 22 (27.0%) were female, and life events and financial problems were 16 (23.0%) in males and females. In this study many subjects with no history of previous attempts, 79 (65.8%) committed the suicidal attempts and followed by 31 (24.2%) had the history of past suicidal attempts. Among all majority of people consumed op poisoning 40 (33.3%), out of that 26 were male and 14 were female, followed by hanging 31 (25.8%) and tablet poisoning 29 (24.1%) and was statistically significant. In this study 80 (66.6%) of people did not have any co-morbid conditions, out of that male and female were 40 and followed by drug dependency 20 (16.6%) and others were 20 (16.6%).

Table 4: Co- morbidities among suicidal attempters (n=120).

Co- morbidities	Number of patients			P value
	Male (n=60) (%)	Female (n=60) (%)	Total (%)	
Nil	40 (67.0)	40 (67.0)	80 (66.8)	$\chi^2=1.66$; P=0.44; NS
Drug dependency	12 (20.0)	8 (13.0)	20 (16.6)	
Others*	8 (13.0)	12 (20.0)	20 (16.6)	

*Communicable diseases and non-communicable diseases.

DISCUSSION

Total subjects involved in this study group were 120, out of this 60 were males and 60 were females. Among all majority of the people who attempted suicide belonged to age group of 31-60 years 56 (46.6%) among them male were 29 (49.0%) and female 27 (45.0%) followed by <30 years, male of 38.0% and female of 40.0% and a study by Sahin et al, finds 76.8% cases were in age group between 18 to 24 years. as well as finding of Nagendra et al who found peak incidence of suicidal attempt is between 15 to 29 years.^{8,9} In the present study there was no difference among the suicidal attempters based on their domicile (rural and urban) and prior studies find increased rates in either rural or urban population.^{10,11} Among the study group 79 (65.8%) attempters had no psychiatric illness, out of that 43 (72.0%) were males, and 36 (60.0%) were females, 32 (26.6%) were suffering with neurotic disorders and 13 (10.8%) were suffering with psychotic disorders and other studies in India also shown the same findings.^{12,13} In the present study 45 (37.5%) subjects were suffering with psychological stress, out of that 23 (33.0%) were male 22 (27.0%) were female, and life events and financial problems were 16 (23.0%) in males and females. In this study many subjects with no history of previous attempts, 79 (65.8%) committed the suicidal attempts and followed by 31 (24.2%) had the history of past suicidal attempts and prior studies also stated the same finds.^{14,15} Among all majority of people consumed op poisoning 40 (33.3%), out of that 26 were male and 14 were female, followed by hanging 31 (25.8%) and tablet poisoning 29 (24.1%). In this study 80 (66.6%) of people did not have any co-morbid conditions, out of that male and female were 40 and followed by drug dependency 20 (16.6%) and others were 20 (16.6%). In this study many subjects with no history of previous attempts 79 (65.8%) committed the suicidal attempts and followed by 31 (24.2%) had the history of past suicidal attempts and prior studies also finds past psychiatric or medical disorders past history of attempt, and family history of psychiatric or medical disorders to be more common in suicide attempters.^{16,17}

The present study was a hospital based cross-sectional study with no subsequent follow-up. There is a need of prospective studies for further evaluation. Such studies provide a better understanding of the dynamics of

personality with psychiatric morbidity and other co morbidities across the lifespan.

CONCLUSION

In the present study, the suicidal attempts are more in females than males and it is also common in 31 to 60 years age group and individuals with past psychological problems. In this study suicidal attempts are more common among the people not suffering any other co morbid condition. This was a cross-sectional study hence there is a need of prospective studies for further evaluation. Such studies provide a better understanding of the dynamics of personality and psychiatric morbidity, other co morbidities across the lifespan.

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