



Original Research Article

## A Study of Attempted Suicides in Kolar, Karnataka

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### ABSTRACT

**Context:** The suicides in southern India, among young men and women are the highest in the world. The suicide rate in Kerala was about 44.7 for males and 26.8 for females per lakh population, three times the national average. The present study was undertaken relating to the psychosocial investigations of suicidal attempts due to paucity of such studies in this country.

**Aims:** To study the suicidal risk and its relationship to socio-demographic factors and preferred methods of suicidal attempts.

**Settings and Design:** A cross-sectional hospital based study.

**Methods and Material:** Subjects admitted at R.L.Jalappa Hospital & Research Centre, Kolar from January to December 2006 with the history of suicidal attempts were studied using a structured proforma.

**Statistical analysis used:** The data was analyzed using statistical software SPSS version 11, by proportions and chi-square tests.

**Results:** A total of 251 subjects were studied. Higher suicidal attempts (75.7%) were seen in the age group of 15-30 years. There was almost equal distribution among males (53%) and females (47%). Agriculturist represented 36.3%, majority of them from rural background (75%) and 54.2 % were from nuclear families. Organo-phosphorous poisoning was common mode and only 5% subjects used physical methods. Family conflicts were the major precipitating factor for suicidal attempts. Only 18.3% of the subjects presented with psychiatric morbidity.

**Conclusions:** The suicidal attempts in the young are due to impulse control and zero frustration tolerance.

**Key-words:** Suicide, organo-phosphorous, psychiatric morbidity.

### INTRODUCTION

Suicide known since the birth of humanity is becoming a matter of great concern on account of its increasing incidence in the present day society with a steep rise in the suicidal attempts all over the world. <sup>[1]</sup> In India, different suicidal rates

have been reported. Vellore, Tamil Nadu (Southern India), reported several fold higher than those reported anywhere in the world, especially in young woman (148/lakh population). <sup>[2]</sup> Estimated suicidal rates in Kerala, Karnataka, Tamil Nadu, Andra Pradesh and Union territory of Pondicherry

were 27.7, 20.7, 18.6, 16.8 and 52.1 per lakh population respectively in 2005. [3]

Although suicides are deeply personal and individual act, suicidal behaviour is determined by number of individual and social factors. [4] Unfortunately it is not possible to predict suicide and the best that can be done is to identify groups at risk. Mainstream of suicidal persons communicate their self-destructive intentions to those around them including their physicians. [1] In this study the present study was undertaken with the objective of investigating suicidal risk and its relationship to socio-demographic factors and psychiatric morbidity pattern.

## SUBJECTS AND METHODS

A Cross-sectional study was carried out at R.L.Jalappa Hospital & Research Centre (RLJH & RC), attached to Sri Devaraj Urs Medical College, Kolar, serving the population of Kolar district and neighbouring districts of Andhra Pradesh state. Subjects admitted to RLJH & RC between January to December 2006, with history of suicidal attempts were included in the study.

Any act of self damage inflicted with self destructive intentions, however vague and ambiguous was taken as suicidal attempt. After obtaining the consent, the subjects were interviewed once they gained physical stability after resuscitation and later one of the family member of each subject was interviewed. The confidentiality of the information obtained was maintained.

Pre-designed and pretested structured proforma was used for recording the socio-demographic profile of suicidal attempts, including its mode, number of attempts, whether impulsive or planned. The lethality of suicidal attempts was graded into three stages of severity i.e., low, medium and high. The psychiatric morbidity was

assessed by using questionnaire of personal well being.

Subjects that left against medical advice prematurely and absconded from the hospital before they could be interviewed were not included in the study. Statistical analysis of the data was done on SPSS software version 11, by using proportions and chi-square test.

## RESULTS

**Table No-1: Sociodemographic profile of Suicidal Attempters.**

Category	No. (n=251)	%	P Value
<b>Age:</b>			
≤ 20	57	22.7	<0.001
21- 30	133	53.0	
31-40	31	12.4	
> 40	30	12.0	
<b>Sex:</b>			
Male	133	52.9	>0.05
Female	118	47.1	
<b>Domicile:</b>			
Rural	188	74.9	<0.001
Urban	63	25.1	
<b>Marital Status:</b>			
Married	160	63.7	<0.001
Separated	3	1.2	
Unmarried	88	35.1	
<b>Literacy Status:</b>			
Literate	220	87.6	<0.001
Illiterate	31	12.4	
<b>Family type:</b>			
Nuclear	136	54.2	<0.001
Joint	111	44.2	
Extended	4	1.6	
<b>Occupation:</b>			
Agriculture	91	36.3	<0.001
Housewife	56	22.3	
Professional	7	2.8	
Students	32	12.7	
Unemployed	12	4.8	
Others	53	21.1	

Table-1: A total of 251 subjects with history of suicidal attempts were studied. More than 75% of suicidal attempts were witnessed in economically productive age group (15-30yrs). A nearly equal distribution of suicidal attempts was observed among males (53%) and females (47%).

Three fourth of the subjects were from the rural background. The distribution of suicidal attempts by marital status reveals

significantly higher percentage among married (63.7%). Suicidal attempts were high among the literates (88%). Among the occupation, majority were agriculturists (36.3%), followed by homemakers (22.3%) and students (12.7%). Most of the victims of suicides belonged to nuclear families (54.2%).

**Table No-2: Nature of Suicidal attempts.**

Category	No. (n=251)	%	P Value
<b>Lethality:</b>			
Low	44	17.5	<0.001
Medium	88	35.1	
High	119	47.4	
Type of Suicidal attempts:			
Planned	75	29.9	<0.001
Impulsive	176	70.1	
<b>Rescue:</b>			
Likely	145	57.8	<0.05
Unlikely	106	42.2	
<b>Number of attempts:</b>			
Single	242	96.4	-
Multiple	9	3.6	

A significantly more representation of subjects with high lethality suicidal attempts (47.4%). Most of the subjects had impulsive suicidal attempts (70%) and only 30% of them had planned their attempts. In 58% of the suicidal attempts rescue was likely. Nine subjects had a history of more than one attempt in the past [Table-2].

**Table No-3: Method of Suicidal attempts.**

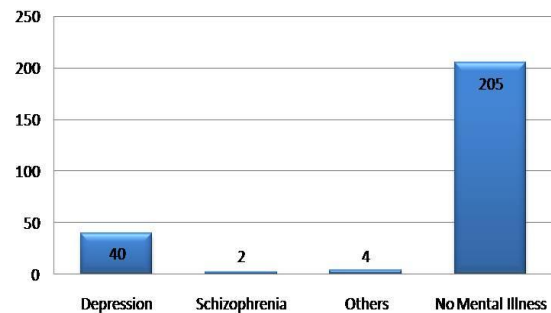
Category	No. (n=251)	%
<b>Physical:</b>		
Burns	1	0.4
Hanging	9	3.6
Self inflicting wounds	2	0.8
<b>Chemical:</b>		
Organophosphorous Poisoning	144	57.4
Overdose of drugs	81	32.2
Others	14	5.6

Most of the subjects (57.4%) used chemical methods (Insecticides & pesticides) as suicidal method, followed by drug overdose (32.2%). Only 5% of them used physical methods like hanging, burns & self inflicting wounds [Table-3].

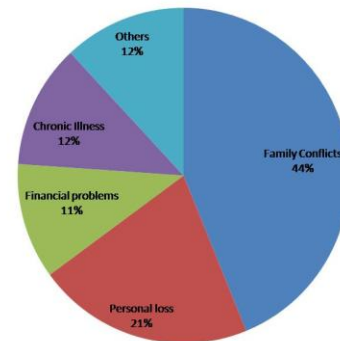
*Assessment of precipitating factors immediately preceding the suicidal attempt [Figure-1] showed overrepresentation of family conflicts 110(43.8%), followed by personal loss 53(21.1%) and financial problems 28(11.2%).*

Among psychiatric morbidity, 15.9% of subjects had depression, 0.8% had schizophrenia and 1.6% had other mental illness [Figure-2].

**Figure-2: Psychiatric Morbidity**



**Figure-1: Precipitating factors for Suicidal attempts**



## DISCUSSION

The gravity of the problem is highlighted by the fact that nearly three fourths of suicidal attempts in India are by people in the socially and economically productive age group of 15-49 years, [1,5-7] as observed in the present study. These

findings show that attempted suicides is rising rapidly among the youths.

Across the country the suicidal attempts for males is consistently higher than that of females. [1,5,6,10] But some studies including the present reported nearly equal distribution of males and females. [5] Whereas Sharma et al observed that, highest number of females reported suicidal tendencies than males. [8,11] It is known from the studies of the west that, more women than men attempt suicides, but fewer succeed. [12]

Three-fourths of the study subjects were from the rural areas and 36% of them were from agricultural background, while a study from Orissa reported more number of suicidal attempts among unemployed. [11] However, Jain et al reported that, 75% belonged to urban area and 32% of the suicidal attempters were students, followed by housewife. [1] Reasons for higher rates of suicidal attempts in many rural areas may include social isolation and easy availability of pesticides.

In our study more than half of the subjects were from the nuclear families. Similar observation was made by Nagendra Gouda MR et al. [6] This may be attributed to breakdown of joint family system, which had previously provided emotional support. However, a study from Orissa reports that, higher proportions of suicidal attempters from extended families which was attributed to mental illness and stress in contrast to those from nuclear families. [11]

World-wide studies have shown an increased risk of suicidal attempts among those who are separated. [1, 4] However, in Indian studies it is common to find a higher proportion of the suicidal attempters being married as observed in this study. [6,11] Marriage is an almost universal phenomenon in India, marital partners in India are virtually strangers to each other's and so are the families. Hence, several

adjustment issues could arise among the married. [5,6]

Nine subjects had history of more than one suicidal attempt in the past. Similar observation was pointed out by other studies. [1,4,8]

Among the various causes as reported by the subjects notable were family conflicts. This is in conformity with other studies. [1,6,10] This was followed by death of the close family member, chronic illness and financial problems. However, financial setback is well reported as major cause of suicides in Indian studies. [11]

Organophosphorous poisoning was the most commonly used method for suicidal attempts, similar to the present study. [1,6,7,10] This may be attributed to the rural and agriculture background and easy availability of the pesticides at their homes. K E Sadanandan Unni et al observed that there is significantly high representation of subjects with low lethality than high lethality. [9] A reverse phenomenon was observed in our study, where 47.4% belonged to high lethality group and most of the attempts were impulsive in nature. This may be attributed to lack of awareness of the severity of the attempts and easy availability of the insecticides at home, which could have been prevented by keeping insecticides under lock and key and not giving easy access to the inflammable materials. Sarkar et al reported most of the attempts were planned with high lethality. [13] Psychiatric morbidity pattern showed, 18% with mental illness, while V Jain et al observed that, majority of the attempters had psychiatric illness, [1] although hospital reported studies in India have reported similar findings with depressive disorders being the most prominent. [11,14]

## CONCLUSION

The study highlights the suicidal attempts in the young are due to impulse

control and zero frustration tolerance. This is in context to the popular beliefs that, the suicide is more common in people with severe depression or severe stress disorders like, financial difficulty and failure in love.

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