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SOCIO-DEMOGRAPHIC PROFILE AND SUICIDAL INTENT IN SUICIDE ATTEMPTERS: A cross sectional study from a teaching hospital in India

Medicine

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ABSTRACT

Background: Suicide is one of the ten major causes of death in India. Suicidal intent score has been found to be a good predictor of a subsequent completed suicide.

Objective: The present study was conducted to evaluate the socio-demographic profile and suicidal intent score of the suicide attempters and to determine the association of suicidal intent score with multiple socio-demographic factors.

Material and Methods: The present study was an observational cross sectional study. 72 patients admitted in a teaching hospital, secondary to suicidal attempt were interviewed. The Socio-demographic variables of these patients were recorded and suicidal intent scores were analyzed using Beck's Suicide Intent Scale. Data analysis was done using SPSS 20 statistical software and descriptive statistics and Chi-square tests were used to find significance. Statistical significance was assumed at $P < 0.05$.

Results: High suicide intent was present in majority of the patients 35 (48.6%). Suicidal intent score had significant association ($P<0.05$) with age, gender, type of family, education, marital status, reasons for suicide and substance abuse.

Conclusion: Such data is vital in assessing and understanding various sociodemographic factors influencing the intent of suicide in developing countries like India, and help plan prevention programs. The measurement of suicidal intent is valuable in the evaluation of future suicide risk in attempters. The patients with high intent should be targeted to receive intense out-patient services as a preventive measure.

KEYWORDS

Suicide intent score, Attempted suicide, High intent

INTRODUCTION:

Suicide is a major cause of death in all age groups. A suicide attempt was defined as a potentially self-injurious behavior associated with at least some degree of psychological intent to end one's life. Self-harm behaviors (e.g., cutting on oneself) not associated with intent to kill oneself were not considered to be a suicide attempt. The 2017 ICD-10-CM Diagnosis Code R45.851 describes suicidal ideation as "thoughts of or an unusual preoccupation with suicide". As per WHO reports, over 10-20 million attempt suicide and 1 million people die as a result of suicide every year world over, which surpasses the total deaths due to armed conflicts around the world. Out of every 1000 individual who commit suicide every day, 110 of these are estimated to be Indians.[1] Suicide is one of the 10 major causes of death in India. India ranks second in number of suicidal deaths.[2] According to the data from the National Crime Records Bureau, Ministry of Home affairs the suicide rate in India in 2009 was 1,27,151 deaths. Suicide attempt is a prominent factor for completed suicide.[3] In approximately 45% of suicide cases a history of unsuccessful attempt was found.[4]

Psychological autopsy studies have been used to construct an overall view of suicide by collecting all available relevant information on the subject's life preceding his or her death. In few psychological autopsy studies, psychiatric diagnosis of suicide victims were established using DSM-IIIR. In many studies majority of patients had depression and substance abuse disorders were frequent and co-morbidity was common.[5,6] In the last few decades (from 1975 to 2005), suicide rates increased by 43%. Sethi *et al*, studied 75 patients admitted for self - destructive behavior and found that majority of them belonged to unitary family set up, were unmarried males and almost 15% of them had history of previous suicidal attempts. Financial stress, rejection in love and strained familial relationships were the most common causes.[7] Das *et al* in their study on subjects with intentional self -harm attempts reported that the majority of the subjects were married, educated beyond matriculation, were employed or retired, belonged to a nuclear family, belonged to the middle socio economic status, and came from an urban background. The most common reason for the attempt was interpersonal problems with family members including spouse. The most common mode was consumption of insecticides followed by use of corrosives. The most common psychiatric diagnosis in the group was depression.[8] The use of organophosphorous pesticide poisoning for DSH was also reported by Chowdhury *et al* who found it the most predominant used method.[9] Concerns regarding increased suicide by farmers in India are well known.[10,11] Sarkar *et al* attempted to present a profile of those who commit DSH in comparison with those who expected to die after the suicide attempt. Those attempting DSH were younger, chose less lethal methods to attempt suicide, were more impulsive and had strong histrionic and unstable personality traits. In addition there was an absence of family history of suicide attempts.[12] It was found that 38% of patients treated for self-poisonings had completed only the minimum education. Lack of social integration has been identified in previous studies of suicide attempters and is thought to be an important risk factor for suicidal behavior.[13] The low level of education, lack of association with the labor market and high proportion of being single found among self-poisoning patients was similar to that found in studies on suicide attempters.[14]

Alcohol use disorders are known to be associated with suicidal behaviors, and in keeping with this, Sri Lankan studies have reported that up to 50% of men were under the influence of alcohol at the time of the self-poisoning act.[15] In Sri Lankan studies, common examples for attempted suicide included domestic disputes and romantic relationship problems, leading to arguments with family members.[16]

Konradsen *et al* described alcohol misuse as a significant factor in non-fatal self-poisoning among Sri Lankan males. This study also described ways in which alcohol misuse (among males) led to domestic violence and interpersonal conflict within the home, thereby indirectly contributing to increased risk of self-poisoning in the misuser as well as his wife and children.[17] Interpersonal conflict has been reported to be the acute trigger associated with more than 60% of self-poisonings in Pakistan and India as well.[18]

Suicidal intent is defined as the seriousness or intensity of the subject's wish to terminate his or her own life.[19] Suicidal intent has been found to predict completed suicide in most,[20,21] although not all studies.[22] Measures of suicide intent and lethality are commonly used to determine the seriousness of suicide attempts and suicidal intent score has been found to be a good predictor of subsequent completed suicide.[23] Therefore with this tool it may be possible to intervene and have proactive measures in place to prevent future attempts. Risk factors for different degrees of suicidal ideation range from having ideas on own death to making suicidal plans and attempting suicide.[24] The risk of further suicidal behavior in patients reporting suicidal intention has led to psychiatric follow-up of these patients; being referred for specialist follow-up reduces the risk of a repeat attempt.[25] Clinically, there is a spectrum of self-poisonings varying from the clearly planned, medically serious suicide attempt with an outspoken intention to die, to impulsive actions that are never life threatening and where the intention is not to die but is, perhaps, to make an appeal to others.[26] Mental disorders, particularly depression, are well known risk factors, but physical illnesses, family history or traumatic life events are also important.[27]

Suicidal intent has two components: an objective component, which defines the circumstances surrounding the act (e.g., precautions taken against discovery, preparation of the act, presence of a note, degree of isolation), and a subjective component, which defines the subject's declarative statements about his intentions (e.g., feelings and thoughts at the time of the attempt, purpose, expectation to die, degree of ambivalence about living).[28] Thinking about suicide at one point in life is not uncommon, but most persons with suicidal ideation do not proceed to action.[29]

Assessing the intent can be particularly useful in situations where there is no correlation between the expected and actual outcome of the method used as may happen in those with a low level of literacy.

Aims of the study: The study had 3 objectives. Firstly, to evaluate the socio-demographic profile of subjects who were admitted to our hospital for suicide attempt. Secondly, to assess the intensity of the suicide attempt. And thirdly, to establish the association of the suicide intent score with the various socio-demographic factors in the suicide attempters presenting at a teaching hospital in South India.

MATERIALS AND METHODS:

Procedure:

This is a hospital-based cross-sectional study. The study was conducted at a teaching hospital in South India. Approval for the study was obtained from the Institutional Ethics Committee. The patients who attempted suicide were referred to Psychiatry Outpatient Department (OPD) for psychiatric assessment and necessary intervention from the medical facility after their physical condition improved. All the attempted suicide patients who attended Psychiatry OPD from August 2016 to January 2017, from ages 15-65 years were evaluated in detail with a reliable informant. Written informed consent was obtained for the study from both the patients and their primary caregivers. Total patients initially considered for the study were 85 of which 13 were excluded, as they suffered with comorbid medical and psychiatric illnesses (such as patients with mental retardation, Organic mental disorders, illicit drug use other than nicotine and alcohol and personality disorders) making the final study sample of 72 patients.

Socio-demographic and clinical profile sheet were completed to record variables including age, gender, locality, level of education, employment status, type of family, socio economic status, marital status, family history and substance use. Beck's Suicide Intent Scale was used to assess the severity of the intent in the patient.[30] Total score of 15-19 was regarded as low intent, score range of 20-28 as medium intent and a score greater than 29 was considered as high intent. The Suicide Intent Scale (SIS) was developed to assess the intent of suicide attempts, typically just after their occurrence. It consists of 15 items, each scored on a scale of 0–2 (total score range 0–30). Items 1–8 deal with the objective planning of the attempt, such as the manner of preparation and execution and the setting (objective subscale).[24] The remaining items deal with the subjects thoughts and feelings at the time of the attempt, such as the expectation to die and the possibility of rescue or intervention (subjective subscale).[31,32] Both subscales were found to be highly reliable (Cronbach α=.83 and α=.80, respectively).

Data entry and analysis was done using SPSS 20 statistical software. The demographic and clinical characteristics were represented using descriptive statistics including mean, standard deviations, frequencies, and percentages, Chi-square tests (cross tabulation analyses) was used to compare the significant difference on categorical variables across groups. Statistical significance was assumed at $P < 0.05$.

RESULTS:

Table 1 shows the total study sample initially was 85, out of which 13 were excluded due to the exclusion criteria. 2 patients were excluded due to comorbid medical conditions, 3 were excluded due to illicit drugs use other than nicotine and alcohol, 8 were excluded due to co-morbid psychiatric illnesses, thus making the final study sample of 72.

TABLE 1: Study Sample

1	Initial sample size	85
2	Excluded Sample	13
	-comorbid medical condition	2
	-Drugs use other than alcohol and nicotine	3
	-Psychiatric illnesses	8
3	Final study sample	72(100%)

In Table 2 we found that from the 72 patients who attempted suicide, majority 30(41.6%) were in the age group of 15-25 years, whereas 27(37.4%) were in the age groups of 26-35 years, 7(9.6%) in the age group of 36-45 years, 5(6.7%) in the age group of greater than 55 years and 3(4.7%) in the age groups of 46-55 years. Males constituted 38(52.8%) and females 34(47.2%) of the study population. Hindu's composed 60(83.4%) of the total patients, 6(8.3%) were Muslims and 6(8.3%) were Christians. The Residence of most of the patients 61(84.7%) was in rural area, and 11(15.3%) came from the urban areas. Predominantly subjects were from nuclear families 64(88.9%) and only 8(11.1%) were from a joint family. Majority of the patients were illiterate 30(42%), 16(23%) had primary education, 16(21%) were graduates and 10(14%) of the study population had secondary education. In this study group 39(54.2%) were employed and 33(45.8%) were unemployed. A majority of the population 58(80.5%) had a family income of less than 5,000Rs per month, 12(16.7%) had earnings between 5,000Rs-10,000Rs per month and only 2(2.8%) had earnings of more than 10,000Rs per month. Majority of the subjects 42(58.3%) were married, 28(38.9%) were single and 2(2.8%) of the population were widow's. Family history of suicide was present in 5(6.9%) of the patients and absent in 67(93.1%) of the patients. 43(59.7%) of the subjects reported the primary reason for suicide as having family problems. Other factors precipitating suicide were described as 14(19.4%) chronic medical illness, 11(15.3%) financial problems, and 4(5.6%) under the influence of alcohol at the time of the attempt. The predominant method adopted for the suicide was ingestion of poison 51(70.8%), 13(18%) overdosed on sleeping pills like benzodiazepines, 4(5.6%) of the patients attempted to hang themselves and 4(5.6%) attempted to drown in water. 14(19.4%) of the patients had substance abuse history in the form of alcohol abuse, whereas 58(80.6%) did not have a history of alcohol use. 15(20.8%) of the patients had history of suicidal attempts in the past among the total sample, and 57(79.2%) did not have a past history of suicide attempts.

Table 2: Distribution of study population according to socio-demographic profile (n=72)

S.no	Socio demographic profile	N (%)
1	Age in years	
	15-25 yrs	30 (41.6%)
	26-35 yrs	27 (37.4%)
	36-45 yrs	7 (9.6%)
	46-55 yrs	3 (4.7%)
	>55 yrs	5 (6.7%)
2	Sex	
	Male	38 (52.8%)
	Female	34 (47.2%)

3	Religion	
	Hindu	60 (83.4%)
	Muslim	6 (8.3%)
	Christian	6 (8.3%)
4	Locality	
	Rural	61 (84.7%)
	Urban	11 (15.3%)
5	Type of Family	
	Nuclear	64 (88.9%)
	Joint	8 (11.1%)
6	Education	
	Illiterate	30 (42%)
	Primary	16 (23%)
	Secondary	10 (14%)
	Graduate	16 (21%)
7	Occupation	
	Employed	39 (54.2%)
	Unemployed	33 (45.8%)
8	Family Income (Monthly)	
	Less than 5,000 Rs	58 (80.5%)
	5,000-10,000 Rs	12 (16.7%)
	>10,000 Rs	2 (2.8%)
9	Marital Status	
	Married	42 (58.3%)
	Unmarried	28 (38.9%)
	Widow	2 (2.8%)
10	Family history of suicide	
	Yes	5 (6.9%)
	No	67 (93.1%)
11	Reasons for suicide	
	Financial problems	11 (15.3%)
	Family/Interpersonal disputes	43 (59.7%)
	Under influence of alcohol	4 (5.6%)
	Others like chronic medical illnesses	14 (19.4%)
12	Method adopted	
	Hanging	4 (5.6%)
	Poisoning	51 (70.8%)
	Drowning	4 (5.6%)
	Others	13 (18%)
13	Substance Use	
	Yes	14 (19.4%)
	No	58 (80.6%)
14	Past history of suicide	
	Yes	15 (20.8%)
	No	57 (79.2%)

In Table 3, high Suicide intent score was present in majority of the patients 35(48.6%), followed by 23(31.9%) having Medium Intent, and 14(19.5%) patients had low suicide intent score.

Table 3: Distribution of study population according to Suicide Intent Score (n=72)

S.no	Beck's suicide intent score	N (%)
1	Low Intent Score	14 (19.5%)
2	Medium Intent Score	23 (31.9%)
3	High Intent Score	35 (48.6%)

In table 4, suicide Intent score had a significant association with age, gender, type of family, education, marital status, reasons for suicide and history of substance use at the time of the attempt.

However in table 4, no significant association was found between suicide intent score and religion, locality, occupation, socio economic status, family history of suicide, method adopted for suicide and past history of suicide attempt.

High suicide intent score was seen in patients with age >55 years 5(100%), males 23(60.6%), from urban areas 9(81.8%), Hindu religion 30(50%), secondary education 7(70%), employed 20(51.3%), earning 5,000Rs to 10,000Rs per month 7(58%), married 28(66.6%), living in a joint family 8(100%) and having financial problems 11(100%) and under influence of a psychoactive substance 4(100%). Suicide intent was also high in patients with substance abuse mostly alcohol 12(85.7%), attempted suicide by drowning 3(75%), positive family history of suicides 5(100%), and history of suicidal attempts in the past 10(71.4%).

Table 4: Association of suicide intent score with different factors

S.no	Variables	Low Intent	Medium Intent	High Intent	P value
1	Age in years				
	15-25 yrs	12 (40%)	5 (16.7%)	13 (43.3%)	
	26-35 yrs	2 (7.4%)	15 (55.6%)	10 (37%)	
	36-45 yrs	0	2 (28.5%)	5 (71.5%)	0.002 S
	46-55 yrs	0	1 (33.3%)	2 (66.7%)	
	>55 yrs	0	0	5 (1000%)	
2	Sex				
	Male	2 (5.2%)	13 (34.2%)	23 (60.6%)	0.005 S
	Female	12 (35.3%)	10 (29.4%)	12 (35.3%)	
3	Religion				
	Hindu	10 (16.7%)	20 (33.3%)	30 (50%)	
	Muslim	1 (16.7%)	2 (33.3%)	3 (50%)	0.415 NS
	Christian	3 (50%)	1 (16.7%)	2 (33.3%)	
4	Locality				
	Rural	14 (23%)	21 (34.4%)	26 (42.6%)	0.44 NS
	Urban	0	2 (18.2%)	9 (81.8%)	
5	Type of Family				
	Nuclear	14 (22%)	23 (36%)	27 (42%)	0.009 S
	Joint	0	0	8 (100%)	
6	Education				
	Illiterate	11 (36.7%)	4 (13.3%)	15 (50%)	
	Primary	0	12 (75%)	4 (25%)	<0.001 S
	Secondary	1 (10%)	2 (20%)	7 (70%)	
	Graduate	2 (12.5%)	5 (31.25%)	9 (56.25%)	
7	Occupation				
	Employed	11 (28.2%)	8 (20.5%)	20 (51.3%)	0.31 NS
	Unemployed	3 (9%)	15 (45.5%)	15 (45.5%)	
8	Family Income (Monthly)				0.884 NS
	Less than 5,000 Rs	12 (20.7%)	19 (32.8%)	27 (46.5%)	
	5,000-10,000 Rs	2 (17%)	3 (25%)	7 (58%)	
	>10,000 Rs	0	1 (50%)	1 (50%)	
9	Marital Status				
	Married	3 (7.14%)	11 (26.2%)	28 (66.6%)	<0.001 S
	Unmarried	9 (32.2%)	12 (42.8%)	7 (25%)	
	Widow	2 (1000%)	0	0	
10	Family history of suicide				
	Yes	0	0	5 (100%)	0.058 NS
	No	14 (21%)	23 (34.3%)	30 (44.7%)	
11	Reasons for suicide				
	Financial problems	0	0	11 (100%)	<0.001 S
	Family/Interpersonal disputes	14 (32.5%)	16 (37.2%)	13 (30.3%)	
	Under influence of alcohol	0	0	4 (100%)	
	Others like chronic medical illnesses	0	7 (50%)	7 (50%)	
12	Method adopted				
	Hanging	0	3 (75%)	1 (25%)	
	Poisoning	14 (27.4%)	15 (29.4%)	22 (43.2%)	0.097 NS
	Drowning	0	1 (25%)	3 (75%)	
	Others	0	4 (31%)	9 (69%)	

13	Substance Use				0.005 S
	Yes	2 (14.3%)	0	12 (85.7%)	
	No	12 (20.6%)	23 (39.7%)	23 (39.7%)	
14	Past history of suicide				0.073 NS
	Yes	3 (21.4%)	1 (7.14%)	10 (71.4%)	
	No	11 (19%)	22 (38%)	25 (43%)	

(S=significant p<0.05, NS=non significant)

DISCUSSION:

This study was conducted to ascertain the relationship of different socio demographic factors and their degree of intent to complete suicide. In this study 30(41.6%) of the patients were in the age groups of 15-25 years [Table 2]. This finding is similar to the study completed by Nagendra *et al* who found the peak incidence of suicidal attempt between 15-29 years.[33] Sahin *et al* reported that majority of subjects (76.8%) were less than 24 years of age.[34] Bansal *et al* in their study found that around 28% of attempted suicide cases were in the age group of 20 years or less,[35] and Ramdurg S *et al* observed a mean age of suicide to be 31.5 years.[36] WHO report showed that ages from 15 to 30 are at increased risk of suicide.[37] In our study we found that the relationship between age and suicide intent was statistically significant and suicide intent was highest 5(100%) in age group of >55 years (*P*=0.002) [Table 4]. In this study male patients 38(52.8%) were more than females (47.2%) in number [Table 2]. This finding is in agreement with the results of Bansal *et al* and Nagendra *et al* where the number of males outnumbered females.[33,35] The association between gender and suicide intent was found to be significant (*P*=0.005) and highest intent to be present in males [Table 4]. Men commonly use more lethal modes and plan the act more meticulously to avoid detection. In contrast, women commonly use less lethal modes, and are more impulsive, less well planned, and more likely to be found and rescued. According to WHO report more males committed suicide than females in majority of countries. In China, female suicides outnumbered male suicides in rural area. However in the urban region suicide incidence in female and male population was approximately equal.[37] Majority of the subjects in the study were Hindus 60(83.4%), which was similar to the findings of Nagendra MR (94.6% Hindus and 5.4% Muslims),[33] with intent being highest in hindu population 30(50%).This might primarily due to the large Hindu population in the study area. The relationship was not significant (*P*=0.415).

Almost eighty five percent in this group were from rural areas 61(84.7%). The hospital where the present study took place is located in a rural area and the local population seeks emergency services which explains the predominance of rural subjects in our study. The other factors that can be hypothesized for the elevated incidence of suicide in rural population are the higher rates of economic problems, lower income and the increase in urbanization with inadequate preparation to cope with the stress of urban life. These findings are not in agreement with Farooque *et al* who found more suicide attempts in urban areas.[38] The suicide intent was highest in patients living in urban areas 9(81.8%) [Table 4] and the relation was found to be non-significant (*P*=0.44). The suicide rate is generally reported to be higher in urban areas because of a variety of stressors related to living and working in cities, including overcrowding and social isolation. Studies in recent years are consistent in this regard, suicide and attempted suicide were more common in persons living in urban areas.[39] Regarding education, majority of patients were illiterate 30(42%) or had basic primary school education 16(23%). 10(14%) patients had secondary education and 16(21%) were college graduates. Sahin *et al* found that majority (80%) of patients had primary education or were illiterate.[34] Nagendra MR found 27.4% of study subjects were illiterate, fifty percent had less or up to matriculation (52.2%).[33] Bansal *et al* observed that majority of the cases had high school education which was consistent with the findings of two other Indian studies.[35] Therefore with respect to education most of the studies were congruous with the minimum education level in those attempting suicide with the suicide intent being highest among people having education up to a secondary level 7(70%) and this relation was found to be statistically significant (*P*<0.001) [Table 4].

Although not statistically prominent, majority of the patients were employed 39(54.2%) and the unemployed constituted 33(45.8%). This finding is similar to those found in western studies by Welcher B *et al* and Nordentoft M *et al* but differs from many Indian studies.[40,41] Logaraj M *et al* established that unemployment was more prevalent in suicide attempters.[42] But in our study we found that high intent is present among the employed group 20(51.3%) and this relationship was not significant (*P*=0.31). This may be due to fact that employed people face more stress at their work place and also they may lack the coping skills required for facing the day to day stress factors. It was also found that 42(58.3%) patients were married and 28(38.9%) were single, and 2(2.8%) were widows. Other Indian studies also recorded the percentage of married subject in suicide attempters in the range of fifty to sixty percent.[35,36] The intent score was also found to be highest in people who were married 28(66.66%) and the relationship between marital status and suicide intent was found to be statistically significant (*P*<0.001) [Table 4]. The factors contributing towards these consistent results could be that married status comes with responsibilities including financial difficulties and relationship conflicts. Marriage is not a strong protective factor for suicide attempts in developing countries.[43] Socio-economic status has a critical relationship to suicide. When reviewing the relation of suicide intent score which was highest in people earning 5,000 to 10,000 Rs per month 7(58%) with economic status, it was not statistically significant (*P*=0.884). However the majority of the patients in the group 58(80.5%) belonged to lower socio-economic status groups with earning less than 5000Rs per month. This finding was consistent with the findings of the study of Nagendra MR *et al* who found that most (83%) of the suicidal attempts were from the low socio-economic groups.[33] Many studies conducted in different parts of the countries have reported that lower social class is an important risk factor for suicide and attempted suicide.[44,45] Sahin *et al* found that 78.8% of the patients were from lower socioeconomic status.[34] Financial difficulties could originate from multiple factors including death in family, lack of education, loss of job, environmental calamities and illness in family members In the present study [Table 2] 64(88.9%) belonged to nuclear family and 8(11.1%) to joint family. In Ramdurg *et al* study 41% belonged to nuclear family.[36] The study completed by Bansal *et al* reported 53% lived in a joint family.[35] Suicide rates may be low in joint families secondary to the social, economic and emotional support from the extended family, but they might also suffer from inter personal problems with co members of the family and financial disputes. The highest intent was present among people living in a joint family 8(100%) and the relationship between type of family and suicide intent was found to be statistically significant (*P*=0.009). About 5(6.9%) of the patients had a positive family history of suicide and the intent score was also highest among people who had positive history of suicide in the family 5(100%), but this relation was found to be not significant (*P*=0.058) [Table 4]. And as for the reasons for attempted suicide 43(59.7%) patients had family problems, 14(19.4%) patients had other reasons like medical illnesses [Table 2]. About one-fifth were found to have a physical illness in one study with dysmenorrhea being the commonest ailment, followed by peptic ulcer disease; hypertension, bronchial asthma and arthritis comprised the remaining.[42] Pain in the abdominal and pelvic regions has been reported more frequently among attempters [46]. 11(15.3%) had financial issues, 4(5.6%) were under the influence of psychoactive substance like alcohol during the act [Table 2], similar to the findings of the study of Nagendra MR *et al* where (27.2%) had family problems.[33] The intent score was highest in people having financial problems 11(100%) and in people who were under influence of a psychoactive substance 4(100%) at the time of the act. And the relationship between reasons for suicide and intent score was found to be statistically significant (*P*<0.001).This could be because of the debts among the farmers being so high that the attempters thought death would be the only escape left for them.

In the present study [Table 2], the most common method adopted was 51(70.8%) poisoning, followed by 13(18%) ingestion of benzodiazepine tablets, and drowning and hanging were found in 4(5.6%) of the population. Similar observations were made by Choudary *et al*, Eddleston *et al* .[47,48] Violent methods such as drowning, jumping from a height, and strangulation are less common.[49] The association between violent methods and high intent has been shown by Astruc *et al*.[50] Most of the people were farmers in this region. Easy availability of pesticides may be the reason for its common use of suicide attempt. Drug overdose using medically prescribed and non-prescribed drugs is another common though less frequent method.[42] The intent score was highest among people who adopted drowning 3(75%) as a method for suicide and the relation between intent and methods was found to be non-significant(*P*=0.097). 14(19.4%) of the patients had substance

use in the form alcohol, and 58(80.6%) patients had no history of substance use. Intent score was high among substance users in the form of alcohol 12(85.7%) and this relationship was found to be statistically significant (*P*=0.005) [Table 4]. It is also found that 15(20.8%) of the subjects had a past history of suicide attempts whereas compared to subjects 57(79.2%) who did not have a prior history of an attempt, and the intent score was high among people had a past history of attempted suicide 10(71.43%) and this relation was found to be non-significant (*P*=0.073).

The suicide intent score, which predicts the risk of subsequent completed suicide, was high in 35(48.6%) of the attempters, medium in 23(31.9%) and low in 14(19.5%) among the total study population [Table 3].

LIMITATIONS OF THE STUDY:

The study was conducted within limited time frame and was not a longitudinal follow up study. It was done on patients in a hospital-based population and it may not be representative of persons who attempted suicide in the general population. And responding to an authority figure like physicians may be intimidating to the patients, thus anonymous population surveys may provide a different data. A patient who tried to die may deny suicidal intent to avoid hospitalization. Shame, ambivalence, confusion or intoxication can contribute to recall bias. A larger community based study with follow up of study subjects might give us a detailed idea about the influencing factors of suicidal intent score.

CONCLUSION:

In our study we had found that suicidal intent score had significant association with age, gender, type of family, education, marital status, reasons for suicide and substance abuse. But no significant association was found between suicide intent score and socio economic status, method adopted for suicide, religion, family history, past history of suicide attempt, locality, and occupation. Data such as this is particularly useful for assessing and understanding the various socio-demographic factors influencing the intent of suicide in developing countries like India, and help plan prevention programs. The subjects with high suicide intent should be targeted to receive intense outpatient services as a preventive measure. Continued surveillance is needed to design, implement and evaluate programs that can lead to reduction in morbidity and mortality related to suicide. The findings from several studies suggest that non-fatal self-poisoning is associated with brief premeditation in the context of acute interpersonal stress, albeit that no study investigated concurrent long term stressors or other vulnerability factors which might have increased the risk of non-fatal self-poisoning in the context of interpersonal stress. This finding suggests that one potential area of intervention to reduce rates of non-fatal self-poisoning is at a primary preventive level, through community programs aimed at developing interpersonal skills and skills for coping with interpersonal stress. Community and national level strategies to reduce alcohol misuse is an essential, albeit challenging, area of intervention to reduce rates of attempted self-poisoning. Safe storage of pesticides has already been suggested as a method of reducing the burden of non-fatal self-poisoning in this country. Similar integrated preventive measures have been proposed for other Asian countries, and further research is required to explore the effectiveness of such approaches.

Reduction of attempted suicide rates needs to be a national priority, and available evidence suggests the need for integrated intervention strategies which encompass several broad aspects, namely community based development of interpersonal skills among young people, community based programs to reduce alcohol misuse, plus screening for and specific management of those at high risk of repetition following non-fatal self-poisoning. Persons with a history of serious suicide attempts are at greater risk for future suicide than those who have made less serious attempts, and services in developing countries need to establish priorities in the identification and management of those who are at high risk of suicide. Even within the same area, the pattern of poisoning may vary over time, so regularly updating epidemiology data to identify trends of suicide attempts and to identify the risk factors and understanding the characteristics of suicide attempters with high intent will help designing suicide prevention strategies and developing crisis services.

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