Original Research Article

A study of sociodemographic profile, suicidal intent and hopelessness in attempted suicide patients

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Abstract

Background: Suicide is an important public health problem in both developed as well as developing countries. Suicidal intent score has been found to be a good predictor of subsequent completed suicide. Hopelessness is one of the dominant risk factors among people harming self or ending lives through suicides. Aim: To study the socio-demographic characteristics, intent, hopelessness of the patients presenting with attempted suicide in our region. Material and Methods: The present study was cross-sectional observational study. 100 patients who were brought to a teaching hospital, following suicidal attempt were interviewed. They were administered semi structure proforma to obtain various sociodemographic and clinical variables. Further assessment was done using Mini plus scale; BHS and SIS. Results: Males (54%), age group between 18-25years (40%), married persons (60%), mostly illiterate (41%), rural population (78%), housewives (32%) of Hindu religion (87%), belonging to lower socioeconomic status (60%), outnumbered others. Most of the patients reported moderate suicidal intent (55%) and moderate hopelessness (40%). And the association between severity of hopelessness and intent was found to be statistically significant. Conclusion: Assessment of suicide risk should include psychiatric diagnosis, and detailed evaluation of demographic characteristics, and actual life stress factors. The Beck's SIS is an useful adjunct to the assessment. Hopelessness was associated with suicidal intent. The assessment of hopelessness is important in clinical practice.

Key Words: attempted suicide, intent, hopelessness, Suicide intent scale, Beck's hopelessness score, Modified Kuppuswamy scale

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INTRODUCTION

Suicide is an important public health problem in both developed as well as developing countries.¹ Attempted Suicide is one of the acute emergencies and a challenging public health issue associated with several psychosocial and medical conditions. Suicide attempts are 10-40 times

more frequent than completed suicide.² Different biological, psychological, socioeconomic, and cultural factors can affect the incidence of suicide attempts.3 Suicide can be committed at any age. In 2015, suicide was reported as the second leading cause of death among the 15-29 years-olds around the world. Even gender-wise, women commit more suicide attempts than men, but men are more likely to die in their attempts than women, this finding is the most consistent finding in suicide research.⁴ In one of the study conducted in South Asian countries; living in rural regions was a risk factor for suicide. This association could be due to economic hardship, lack of social support, isolation and access to lethal means like pesticides. Religion-or the absence of religious beliefexerted an influence on the pattern of suicides.⁵ Suicidal intent has been found to predict completed suicide in most of the studies.^{6,7} Suicidal intent score has been found to be a good predictor of subsequent completed suicide. Therefore, with this tool it is possible to intervene and have pro-active measures in place to prevent future attempts. Hopelessness often leads to low mood and negatively impact one's ability to perceive oneself, other people and surroundings. It is the leading cause of suicide and many people around the globe experienced hopelessness and attempted suicide because of it. This is seen that presence of hopelessness is one of the dominant risk factors among people harming self or ending lives through suicides.⁸

As there is alarming increase in the number of suicide and attempted suicides various studies are being undertaken in different regions using different parameters or correlation of one or two parameters to identify the risk factors associated with attempted suicide but have been inconsistent. So, the present study was conducted to study the socio-demographic characteristics, intent, hopelessness of the patients presenting with attempted suicide in our region. As there are very minimal studies on them altogether and the findings of the study would help us to develop better understanding of attempted suicide patients.

MATERIAL AND METHODS

Source of data

Patients who attended psychiatric OPD/ Emergency department (Casualty) with history of suicidal attempt at tertiary care hospital. For the purpose of study, attempted suicide was defined as "Self-injurious behaviour with a nonfatal outcome accompanied by evidence (either explicit or implicit) that the person intended to die."

Study design

Cross- sectional observational study.

Sampling procedure

Simple Random Sampling.

Sample size: 100

The Sample size for our study was calculated based on prevalence of psychiatric comorbidity in attempted suicide patients in one of the previous studies with permissible error of 5%. Sample size was calculated using formula- Sample size (n) = $Z2 \alpha PQ/L2$. Where, n = sample size for study group; P= Prevalence rate 95% (from reference study); Q = 100-P (5); L = permissible error of 5% of P was 4.75; Power of study was 95%.

Thus, Sample size (n) = $Z2 \alpha PQ/L2 = (1.96)2 \times 95 \times 5/(4.75)2 = 80.88$ (round figure 100 samples were included in the study).

Inclusive criteria

• Patients above 18 years of age.

Exclusive criteria

- Medically unstable patients.
- Patients in Delirium.

Instruments used in the study

1. Semi structured proforma

A self-designed form to collect personal and sociodemographic details of the subjects has been used.

2. Mini international neuropsychiatric interview- plus (Mini plus)

MINI-PLUS is a brief structured diagnostic interview developed by Sheehan $et\ al$ in 1998 for diagnosing psychiatric disorders as per ICD 10 diagnostic criteria. The results showed that the M.I.N.I. has acceptably high validation and reliability scores but can be administered in a much shorter period of time (mean $18.7 \Box 11.6 \text{minutes}$), median 15 minutes).9

3. Suicide intent scale (SIS)

It consists of 15 items, each scored on a scale of 0-2 (total score range 0-30). Total score of 15-19 was regarded as low intent, Score range of 20-28 as medium intent and greater than 29 as high intent. Over the past 30 years, Beck's suicide intent scale(SIS) has been the prevailing psychometric scale for assessing suicide intent in suicide attempters.10

4. Beck's hopelessness scale (BHS)

BHS assesses 3 aspects of hopelessness: feeling about the future; loss of motivation; expectations of the future. The total score ranges from 0 to 20, with higher levels of hopelessness indicated by higher scores on the scale.11

5. Modified Kuppuswamy scale

The modified Kuppuswamy scale is commonly used to measure SES in urban and rural areas. Accordingly, the family is placed in appropriate socioeconomic class.12

Statistical data analysis

Statistical data was analyzed by using IBM SPSS 20.0 version software. For qualitative data analysis chi-square test was applied for statistical significance. If P-value was less than 0.05 was considered as statistical significant.

RESULTS

Majority of subjects of present study were of age group 18 to 25 years (42%) followed by 26 to 35 years (34%), 36 to 45 years (9%), 46 to 55 years (8%) and >55 years (7%). In the present study males comprised of 54% and females were 46%

Table 1: Sociodemographic characteristics of the study population

Sociodemographic characters	Frequency	Percentage	
Age			
18-25 years	42	42	
26-35 years	34	34	
36-45 years	9	9	
46-55 years	8	8	
>55 years	7	7	
Sex			
Male	54	54	
Female	46	46	
Domicile status			
Rural	78	78	
Urban	22	22	
Marital status			
Married	60	60	
Widowed	13	13	
Unmarried	27	27	
Education			
Illiterate	41	41	
Primary	23	23	
Secondary	20	20	
Graduate	16	16	
Occupation			
Housewife	32	32	
Farmer	23	23	
Students	16	16	
Business	9	9	
Others	20	20	
Religion			
Hindu	87	87	
Muslim	11	11	
Christian	2	2	

Most of them were from rural background (78%) and only 22% were from urban background. In our study married (60%) patients were found more commonly to attempt suicide, followed by 27% being unmarried and 13% widowed. Majority of our study population were illiterates accounting for 41%, followed by primary education (23%), secondary education 20% and graduation 16%. Occupation- wise, majority of the patients in the present study were housewives (32%), followed by farmers (23%), students 16% and business 9%. In the present study majority of the sample belonged to Hindu group 87%, followed by both Muslim 11% and Christianity 2%.

Table 2: Reason of suicide attempt

Reason of suicide attempt	Frequency	Percentage	
Family disputes	36	36%	
Alcoholic family members	6	6%	
Educational issues	6	6%	
Issues of love	6	6%	
Work place issues	1	1%	
Financial issues	19	19%	
Intoxication	25	25%	
Other	1	1%	
Total	100	100%	

The most common reason for suicide attempt in our study was family disputes (36%), followed by intoxication (25%), financial issues (19%), alcoholic family member (6%), educational issues (6%), issues of love (6%) and work place

issues (1%). As for past suicidal attempts, 5(5%) patients in the present study gave history of one 3 (3%) patients gave history of two or more suicide attempts had no past history of suicide attempt. In the present study, 19(19%) patients had a history of past psychiatric illness and 81(81%)of them had no history of past psychiatric illness; Of them alcohol use disorder being the most common (11%), followed by depressive episode (5%), psychotic episode (2%) and bipolar disorder (1%). Family history of suicide was given by only 7% patients while 93% did not have a history of suicide in family. The most common place of suicide was home (79%) among our patients, followed by workplace 18%.

Table 3: Hopelessness scores in attempted suicide patients

Hopelessness score	Frequency	Percentage
Minimal	4	4
Mild	35	35
Moderate	40	40
Severe	21	21
Total	100	100

In present study, minimal hopelessness was seen in 4%, mild hopelessness 35%, moderate in 40% and severe in 21%.

Table 4: Suicidal Intent scores attempted suicide patients

Suicidal Intent score	Frequency	Percentage
Low (15-19)	22	22
Medium (20-28)	55	55
High (29+)	23	23
Total	100	100

In the present study low suicidal intent was found in 22% of the patients, medium in 55% and high suicidal intent in 23%. Severe hopelessness in our patients was significantly associated with high suicidal intent (p-value=0.000*).

Table 5: Association between Hopelessness and Suicidal Intent in attempted suicide patients

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Hanalasanasa	S	uicide Intent Scores		Total	Chi anuna tast / D. value
Hopelessness Low	Low (15-19)	Medium (20-28)	High (29+)	Total	Chi-square test/ P- value
Minimal	2 (2%)	2 (2%)	0 (0%)	4 (4%)	
Mild	18 (18%)	17 (17%)	0 (0%)	35 (35%)	
Moderate	2 (2%)	36 (36%)	2 (2%)	40 (40%)	114.557 p=0.000 (Significant)
Severe	0 (0%)	0 (0%)	21 (21%)	21 (21%)	
Total	22 (22%)	55 (55%)	23 (23%)	100 (100%)	

DISCUSSION

In the present study, we included 100 patients. The most common age group was 18 to 25 years (42%) and 26 to 35 years (34%), followed by 36 to 45 years (9%), 46 to 55 years (8%) and >55 years (7%). Most common age group in Alam $et\ al^{13}$ study was 15 to 25 years. In Kosaraju et al study,14 most of the cases were in between the age group of 21 and 30 years. Gade et al found 37% of the cases of suicide attempters between the age of 26 to 35 years. 15 Thus, the authors observed a decline in the incidence of suicide attempts with increasing age. With the increasing age, individuals develop more adaptability to the stressful conditions, helping them to encounter challenging situations in a better way, thus contributing to lesser incidence of suicides. On the other hand, higher rates of suicide have been reported in the elderly in Korean population by Park et al.16 The high suicide rate among the elderly can be explained by "loss theory", which views aging as a natural process of life that is accompanied by continuous losses -losses of health, spouses, jobs, and social connectedness with relatives,

friends, and organizations; diminished social roles, financial independence, and meaning in life. In our study, males comprised 54% of the study population and females were 46%. Alam et al had 52% females. 13 Kosaraju et al¹⁴ also enrolled higher proportion of female subjects in their study. But Das et al have reported a higher incidence of suicide attempts in males when compared to females in Indian population,¹⁷ and Bansal PD et al18 also reported male preponderance which is similar to our findings. Das et al suggested that the trend might be because of higher responsibility of males in the family financial issues that contributes to increased exposure to stressful events. The high rates among females in most studies in contrast to that of ours might be explained on the basis of psychological and socio cultural reasons such as inadequate opportunities to express emotional conflicts and low social status of women in families. In this study, most of the cases were from rural background constituting of 78% and 22% were of urban background. Gade V et al found that most of the subjects in his study 61 (84.7%) were resident of rural

areas. 15 Sukumar S et al also found rural population to be 80% in his study which was similar to our study. 19 However, Singh K et al in his study found that urban background outnumbered the rural population in patients attempting suicide.²⁰ Various studies in India have shown varying results based on the population the study center is predominantly catering to. Studies suggest Urban life puts the patient in enormous stress, which the patient fails to cope up with and therefore tries to harm himself by showing suicidal behaviors; the rural set up on the other hand has its own set of risk factors such as easy access to poisonous agents like pesticides. Rural life is considered to be a protective factor on mental health. But with increasing number of suicide attempt in rural areas this protective influence is declining. This may be due to fast closing rural-urban divide as most of the villagers are moving to urban areas and the villages are becoming modernized and westernized. As with marital status, married (60%) patients in our study were found more commonly to attempt suicide, followed by 27% being unmarried and 13% widowed. Alam et al found 57% of the study population was married.¹³ Marital conflicts, family stress and financial issues would have contributed to the increased number of suicides in married group. However, Park et al found that compared to married people, the never-married/divorced/widowed were at greater risk of suicide, men being more susceptible.¹⁶ Gade et al found 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).15 A WHO report found that marriage is not a strong protective factor for suicide attempts in developing countries.²¹ Undesirable consequences of marriage act as a precipitating factor or a predisposing factor for suicide attempt. Majority of our study population were illiterates accounting for 41% or had primary education (23%), followed by secondary education 20% and graduation 16%. Gade et al observed that 42% of the suicide attempters in their study were illiterate (42%) which were similar to our study. 15 In one study of attempted suicide in India by Srivastava MK et al, 55.5% were uneducated.²² In summary, most of the study population was illiterate or had minimal education. Occupation-wise, majority of the patients in the present study were housewives (32%) and farmers (23%), followed by students 16% and business 9%. Parameshwaraiah et al²³ found housewives (30.7%) and farmers (21.35%) to be the common occupational groups similar to our study. Assessment of a person's employment is essential as it reveals the support system one has. Unemployed and unskilled patients are at higher risk for suicide than those who are employed and skilled; a recent sense of failure may lead to higher risk. Socioeconomic assessment revealed that 60% belonged to upper lower class on Kuppuswamy scale, followed by 26% belonged to lower middle, 11% belonged to upper middle and 3% belonged to lower class. Gade V et al observed 80% had monthly family income less than Rs. 5000.15 Pradhan on the other hand, observed 56% of the suicide attempters in their study from Sikkim belonged to middle socio-economic group.²⁴ This inverse relation between suicide attempt rate and socioeconomic status has been found in most studies both in India and other countries. Socioeconomic status play role in many spheres of one's life, be it one's interpersonal relationship, status in society or financial and health related aspects of one's life. Most physical and psychiatric illness are known to be more prevalent in low income groups. Also, treatment seeking behavior for various illnesses, especially psychiatric illness is very low among this population. This makes them vulnerable for suicide and suicide attempts. In the present study, religion distribution shows majority of the sample belonged to Hindu group 87%, followed by both Muslim 11% and Christianity 2%. The findings from the present study are in agreement with studies conducted by Gade V et al were he found 60 (83.4%) of subjects were Hindus. 15 Most of the studies on attempted suicide have reported preponderance of Hindus. Suicides and attempted suicide have been found to occur in all religions. Considering that majority of Indian population are Hindus nearby our study place, this finding is understandable. Although it is believed that suicide may have inner vulnerability factors the consistent finding that it is preceded by stressors or negative events highlights its importance in suicide prevention and management of suicide attempters. Most of these patients might not have seek help from a professional. Creating awareness about suicide behavior, making easy access to professionals at job sites and educational institutes can help tackle such situations effectively. In conclusion, interpersonal difficulties, alcohol, family disputes are the frequent stressors among suicide attempters. The place of suicide offers clues to the individual's psychological state and to the intentionality of suicide. Most common place of suicide was home (79%) among our patients, followed by workplace 18%. Bhatia MS et al found that home was the most common place for committing suicide.²⁵ Similar observation was made by Parameshwaraiah et al which were similar to our study. Approximately a third of males preferred sites outside their homes, especially hotel rooms, river beds, and the work place. Most males who consumed an insecticide or resorted to self-immolation did so at home.²⁶ Mohanty and colleagues found that indoor incidence was almost double the outdoor incidence, mostly in rainy season, and almost equally during day and night.²⁷ In conclusion, on assessment most

explains that the attempt might had occurred out of impulsivity therefore home has been found to be the most commonly chosen place of attempt. Hopelessness is a dynamic concept. It is believed to play an important intermediate role between the stressful event and subsequent suicidal behavior. Beck's hopelessness scale found minimal hopelessness in 4%, mild hopelessness 35%, moderate in 40% and severe in 21%. Jaiswal SV et al found that most of the patients had mild (34%) and moderate (40%) degrees of hopelessness, and the mean score was 9.64 which was very similar to our study.²⁸ Jain V et al in their study found 16% subjects having hopelessness score above 9.29 Adaptive functioning and hopelessness may influence each other and also the overall outcome of depression in suicidal individuals. Specifically, it seems plausible that stressful events in early life may lead to maladaptive coping techniques and contribute to the development of hopelessness. Suicide Intent Scores of patients in the present study found that low suicidal intent was found in 22% of the patients, medium in 55% and high suicidal intent in 23%. In a study conducted by Bharati S et al medium intent was seen in maximum number of patients (63.5%), followed by those with high intent score (26.2%) similar to our study.³⁰ whereas Gade V et al reported high intent score in majority of patients 35(48.6%), followed by 23(31.9%) having medium intent, and 14(19.5%) patients had low intent scores.¹⁵ In the present study, we found that low and medium suicidal intent contributed to majority (77%), therefore it may be inferred that most of the attempts were out of impulsivity. It was also seen that only 23% were found to have high intent, as most of them having high intent might have died due to suicide as they attempt with much lethal modes and miss intervention. Severe hopelessness on BHS in our patients was significantly associated with high suicidal intent. Jaiswal et al also found a strong positive correlation between hopelessness and suicide intent among impulsive suicide attempters, similar to our study.²⁸ Beck's theory of hopelessness has been applied to understand suicidal behavior and hopelessness has consistently been shown to be one of the best predictors of suicidal ideation and eventual suicide. In a 10-year prospective study by Beck and associates,31 it was reported that hopelessness was a strong predictor of future suicide, with ten out of eleven of eventual suicide completers (91%) in a sample of patients with suicidal ideation obtaining high scores on the Beck Hopelessness Scale. Only one completer (9%) had obtained less than the cutoff score (i.e., score of 9). Similar subsequent studies with psychiatric patient

of our study population had low and medium suicidal

intent and had no serious intention to end their life. This

samples reported hopelessness to be as high as 90%–94.2% predictive of suicide.³²

CONCLUSION

Suicide is an important public health problem. Assessment of suicide risk should include psychiatric diagnosis, and detailed evaluation of demographic characteristics, and actual life stress factors. The Beck's SIS is an useful adjunct to the assessment. Depression was found to be significantly associated with hopelessness and hopelessness was associated with suicidal intent. The assessment of hopelessness is important in clinical practice, since it is a risk factor, which can be identified and modified through appropriate interventions. Therefore, need for psycho-educating the general public about suicidal behavior and social skills training in adolescents and young adults is felt.

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