

ORIGINAL ARTICLE**Influence of psychological factors and sociodemographic profile on deliberate self-harm in Indian subjects**

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ABSTRACT:

Background: There has been an increase in the trend for DSH (deliberate self-harm) in Indian subjects recently. The tendency to harm themselves has been linked to mental illnesses such as depression, stressful life events, younger age, and female gender. The knowledge concerning psychiatric morbidities and sociodemographic factors in subjects with self-harming behavior can help in programming suicide prevention strategies. **Aim:** The present study aimed to assess the influence of psychological factors and sociodemographic profiles on deliberate self-harm in Indian subjects. **Methods:** The present study assessed and collected data from 300 referrals of deliberate self-harm referred to the Department of Psychiatry of the institute within the defined study period. The quantification of the severity of depression and the suicide intent was assessed and validated using psychometric scales. The data gathered were statistically analyzed. **Results:** The study results showed that the majority of the study population was in the age range of 18 years to 29 years and there were the majority of male subjects with 70% (n=210) subjects. The most common mode of deliberate self-harm adopted by the study subjects was poisoning adopted in 88.7% (n=266) of subjects. Psychiatric illness which could be diagnosed was seen in 34.6% (n=104) subjects and the most common was adjustment disorder seen in 16.6% (n=50) subjects. **Conclusion:** The present study concludes that there is a large impact of clinical factors, psychosocial factors, and sociodemographic data on subjects who attempt self-harm.

Keywords: Psychological factors, sociodemographic profile, DSH, deliberate self-harm, self-harm

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INTRODUCTION

DSH or deliberate self-harm is defined as the act of self-poisoning, injury, or attempted suicide irrespective of the purpose of the act according to ICD-10. Deliberate self-harm includes actions with no intent to suicide but to relieve tension and communicate the distress through to suicide. The term deliberate self-harm is preferred over parasuicide or attempted suicide as there are various non-suicidal intentions among a range of causes or motives for this self-harm act. A suicide attempt is a behavior that the individual adopts with at least some intent to die.¹

The DSH behavior might or might not cause serious medical consequences or injury. Various factors that might affect the medical results of a suicide attempt include chance intervention by others after the behaviour has been initiated, low intentionality or ambivalence, lack of knowledge about the lethality of the method chosen, and/or poor planning. Suicide attempts are a common clinical concern with high prevalence in general hospitals and are 10-40 folds more frequent than complete suicides. The majority of the subjects that attempt suicide are from rural backgrounds, married males, and young.²

Out of the various modes of attempted suicide including hanging, jumping from height, drowning, drug overdose, and organophosphorus poisoning, organophosphorus poisoning remains the most

common method adopted in Eastern Rural and Central India. Recently, an increase has been seen in organophosphorus compounds used as DSH method owing to easy availability as agricultural and household chemicals.³

A high prevalence of DSH is seen in farmers in comparison to subjects from the public and private sectors. Existing literature data reported an association of DSH to high depression and suicidal intent. Family expressiveness and cohesion indirectly and directly affect suicide ideations, depression, and hopelessness. Knowledge concerning psychological and demographic self-harm factors can help in understanding and improving behavior which can further help in the prevention of self-harm.⁴ Hence, the present study aimed to assess the influence of psychological factors and sociodemographic profiles on deliberate self-harm in Indian subjects.

MATERIALS AND METHODS

The present cross-sectional, descriptive, observational study was aimed to assess the influence of psychological factors and sociodemographic profile on deliberate self-harm in Indian subjects. The study subjects were from the Institute's Department of Psychiatry. Verbal and written informed consent were taken from all the subjects before participation.

The present study assessed subjects with history of DSH admitted to the Institute within the defined study period and were subsequently referred to the Department of psychiatry after medical assessment and stabilization. The exclusion criteria for the study were subjects that were not able to cooperate owing to acute mental or physical illness and subjects that were not willing to participate in the study.

In all the subjects, sociodemographic data were gathered including age, gender, reasons for suicide attempt, occupation, and education in a preformed structured proforma. The study utilized Beck's suicidal intent scale⁵ comprising 21 items assessed on a Likert-type scale that assessed actual desire for suicide in the past 7 days, preparation for a suicide attempt, and desire of death. Each item had a minimum score of zero and a maximum score of 2. The scale assessed the mental state of the subject just before the attempt.

Another scale used was Beck's depression inventory⁶ which is another 21-item self-reported scale that assessed the severity of depression. The score was from 0-3 given to each item with increase in severity. Standard cut-off scores in manual were used for analysis as 0-18 depicting minimal depression, 18-30 showing mild depression, 19-29 showing moderate depression, and 30-63 depicting severe depression.

The data gathered were analyzed statistically using SPSS (Statistical Package for the Social Sciences) software version 24.0 (IBM Corp., Armonk, NY, USA) for assessment of descriptive measures, Student t-test, ANOVA (analysis of variance), and Chi-square test. The results were expressed as mean and standard deviation and frequency and percentages. The p-value of <0.05 was considered.

RESULTS

The present cross-sectional, descriptive, observational study aimed to assess the influence of psychological factors and sociodemographic profiles on deliberate self-harm in Indian subjects. The present study assessed and collected data from 300 referrals of deliberate self-harm referred to the Department of Psychiatry of the institute within the defined study

period. There were 70% (n=210) males and 30% (n=90) females in the study. The majority of the study subjects were in the age range of 18-29 years with 46% (n=138) subjects followed by 30.7% (n=92) subjects from 30-39 years, 14% (n=42) from 40-49, 6.7% (n=20) in 50-59, and 2.7% (n=8) from 60 years or above. There were 58% (n=174) married and 38.7% (n=116) unmarried subjects. The occupation, residence, family type, and socioeconomic status are summarized in Table 1.

For self-harm characteristics in study subjects, the most common mode was poisoning in 88.7% of subjects with insecticide in 12% (n=36) subjects followed by rodenticide phenol in 3.33% (n=10) subjects, and turpentine salicylic acid in 0.67% (n=2) subjects, drug overdose in 6% (n=18) subjects, hanging in 3.33% (n=10), cutting in 1.33% (n=4), and drowning in 0.67% (n=2) subjects respectively. Reason for the attempt was an altercation with a spouse in 29.9% (n=90), money demand from a lender in 29.33% (n=88), an altercation with a family member in 18% (n=54), a broken love affair in 11.3% (n=34), job-related stress in 2.67% (n=8), and exam failure in 1.33% (n=4) subjects respectively. Familial history of DSH was positive in 9.3% (n=28), and substance use in 18.6% (n=56) subjects. Psychiatric diagnosis was adjustment disorder, moderate depression, and severe depression in 16.67% (n=50), 8% (n=24), and 10% (n=30) subjects respectively (Table 2).

The study results showed that for suicidal intent in the study subjects, high suicidal intent was seen in 51.33% (n=154) males and 20% (n=60) females with a total of 71.33% (n=214) subjects. Medium suicidal intent was seen in 14.67% (n=44) males and 4% (n=12) females with a total of 18.66% (n=56) subjects respectively. Low suicidal intent was seen in 8% (n=12) males and 6% (n=18) females with a total of 10% (n=30) subjects (Table 3).

It was seen that for the correlation of suicide intent with depression in study subjects, Beck's depression inventory had mean scores of 14.82±9.65 where r- the value was 0.849 and the p-value was 0.0001 (Table 4).

Table 1: Sociodemographic data in study subjects

S. No	Characteristics	Number (n)	Percentage (%)
1.	Age range (years)		
a)	18-29	138	46
b)	30-39	92	30.7
c)	40-49	42	14
d)	50-59	20	6.7
e)	60 or more	8	2.7
2.	Gender		
a)	Males	210	70
b)	Females	90	30
3.	Education		
a)	Illiterate	18	6
b)	Primary	18	6
c)	Middle	40	13.3

d)	10 th -12 th	99	33
e)	Graduation	24	8
f)	Postgraduation	2	0.7
4.	Marital status		
a)	Divorced	2	0.7
b)	Widow	4	1.3
c)	Separated	4	1.3
d)	Married	174	58
e)	Unmarried	116	38.7
5.	Occupation		
a)	Employed	14	4.67
b)	Students	30	10
c)	Self-employed	40	13.33
d)	Homemaker	54	18
e)	Farmer	72	24
f)	Farm labourer	90	30
6.	Living area		
a)	Rural	280	93.33
b)	Urban	20	6.67
7.	Family type		
a)	Nuclear	230	76.7
b)	Joint	70	23.4
8.	Socioeconomic status (BG Prasad scale)		
a)	Lower class	62	20.67
b)	Lower middle class	116	38.67
c)	Middle class	64	21.33
d)	Upper middle class	50	16.67
e)	Upper class	8	2.67

Table 2: Clinical characteristics of study subjects

S. No	Characteristics	Number (n)	Percentage (%)
1.	Self-harm mode	214	71.33
a)	Drowning	2	0.67
b)	Hanging	10	3.33
c)	Cutting	4	1.33
d)	Drug overdose	18	6
e)	Poisoning		88.7
i.	Turpentine salicylic acid	2	0.67
ii.	Rotenticide phenol	10	3.33
iii.	Insecticide	36	12
2.	Attempt reason		
a)	Exam failure	4	1.33
b)	Job-related stress	8	2.67
c)	Broken love affair	34	11.3
d)	An altercation with a family member	54	18
e)	Money demand from lender	88	29.33
f)	Altercation with spouse	90	29.9
g)	Others	22	7.33
3.	Familial DSH history		
a)	Yes	28	9.3
b)	No	272	90.6
4.	Substance use		
a)	Yes	56	18.6
b)	No	244	81.3
5.	Psychiatric diagnosis		
a)	No diagnosis	196	65.33
b)	Adjustment disorder	50	16.67
c)	Moderate depression	24	8

d)	Severe depression	30	10
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Table 3: Suicidal intent in the study subjects

S. No	Beck's suicidal intent scale	Males		Females		Total	
		n	%	n	%	n	%
1.	High	154	51.33	60	20	214	71.33
2.	Medium	44	14.67	12	4	56	18.66
3.	Low	12	8	18	6	30	10

Table 4: Correlation of suicide intent with depression in study subjects

Variables	Value	BSI score (20.33±6.85)
BDI score	R	0.849
14.82±9.65	P	0.0001

DISCUSSION

The present study assessed and collected data from 300 referrals of deliberate self-harm referred to the Department of Psychiatry of the institute within the defined study period. There were 70% (n=210) males and 30% (n=90) females in the study. The majority of the study subjects were in the age range of 18-29 years with 46% (n=138) subjects followed by 30.7% (n=92) subjects from 30-39 years, 14% (n=42) from 40-49, 6.7% (n=20) in 50-59, and 2.7% (n=8) from 60 years or above. There were 58% (n=174) married and 38.7% (n=116) unmarried subjects. The occupation, residence, family type, and socioeconomic status are also summarized. These data were comparable to the previous studies of Thompson EA et al⁷ in 2005 and Bhattacharya AK et al⁸ in 2011 where authors assessed subjects with demographics and DSH similar to the present study in their respective studies.

The study results showed that for self-harm characteristics in study subjects, the most common mode was poisoning in 88.7% of subjects with insecticide in 12% (n=36) subjects followed by rodenticide phenol in 3.33% (n=10) subjects, and turpentine salicylic acid in 0.67% (n=2) subjects, drug overdose in 6% (n=18) subjects, hanging in 3.33% (n=10), cutting in 1.33% (n=4), and drowning in 0.67% (n=2) subjects respectively. Reason for the attempt was an altercation with a spouse in 29.9% (n=90), money demand from a lender in 29.33% (n=88), an altercation with a family member in 18% (n=54), a broken love affair in 11.3% (n=34), job-related stress in 2.67% (n=8), and exam failure in 1.33% (n=4) subjects respectively. Familial history of DSH was positive in 9.3% (n=28), and substance use in 18.6% (n=56) subjects. Psychiatric diagnosis was adjustment disorder, moderate depression, and severe depression in 16.67% (n=50), 8% (n=24), and 10% (n=30) subjects respectively. These results were consistent with the findings of Ghimire H et al⁹ in 2014 and Srivastava S et al¹⁰ in 2000 where DSH characteristics reported by the authors in their studies were comparable to the results of the present study.

It was seen that for suicidal intent in the study subjects, high suicidal intent was seen in 51.33% (n=154) males and 20% (n=60) females with a total of 71.33% (n=214) subjects. Medium suicidal intent was

seen in 14.67% (n=44) males and 4% (n=12) females with a total of 18.66% (n=56) subjects respectively. Low suicidal intent was seen in 8% (n=12) males and 6% (n=18) females with a total of 10% (n=30) subjects. These findings were in agreement with the results of Gunnell D et al¹¹ in 2007 and Srivastava MK et al¹² in 2004 where suicidal intent in the study subjects similar to the present study was also reported by the authors in their respective studies.

The study results also showed that for the correlation of suicide intent with depression in study subjects, Beck's depression inventory had mean scores of 14.82±9.65 where r- the value was 0.849 and the p-value was 0.0001. These results were in line with the findings of Ebenezer JA et al¹³ in 2013 and Mishra K et al¹⁴ in 2013 where the correlation of suicide intent with depression reported by the authors in their studies was comparable to the results of the present study.

CONCLUSIONS

Within its limitations, the present study concludes that there is a large impact of clinical factors, psychosocial factors, and sociodemographic data on subjects who attempt self-harm.

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