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Original research paper

EFFECT OF PSYCHOLOGICAL FACTORS AND SOCIODEMOGRAPHIC PROFILE ON DELIBERATE SELF-HARM IN INDIAN SUBJECTS

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ABSTRACT

Background: DSH (deliberate self-harm) has recently become more common among Indian subjects. Self-harm has been connected to mental diseases such as depression, stressful life events, young age, and feminine gender. Understanding mental morbidities and sociodemographic characteristics in self-harming individuals might aid in the development of suicide prevention methods.

Aim: The current study sought to determine the impact of psychological variables and sociodemographic characteristics on willful self-harm in Indian individuals.

Methods: The current study analyzed and gathered data from 300 referrals of willful self-harm to the institute's Department of Psychiatry over the stipulated study period. The intensity of depression and suicide intent were quantified and verified using psychometric measures. The data collected was statistically examined.

Results: The study found that the bulk of the study population was between the ages of 18 and 29, with 70% (n=210) being male individuals. Poisoning was the most prevalent means of purposeful self-harm among research participants, accounting for 88.7% (n=266). Psychiatric disease was identified in 34.6% (n=104) of the individuals, with adjustment disorder accounting for 16.6% (n=50).

Conclusion: The current study found that clinical variables, psychological factors, and sociodemographic data had a significant influence on patients who try self-harm.

Keywords: psychological aspects, sociodemographic profile, DSH, intentional self-harm, self-harm.

INTRODUCTION

According to ICD-10, intentional self-harm (DSH) is defined as the act of self-poisoning, injury, or attempted suicide, regardless of the aim of the act. Deliberate self-harm involves measures taken without the intention of suicide, but rather to alleviate tension and convey anguish through suicide.

The term purposeful self-harm is favored over parasuicide or attempted suicide since this self-harm act might be motivated by a variety of non-suicidal reasons. A suicide attempt is an action that a someone engages in with the goal to die.1

The DSH conduct may or may not result in major medical effects or injuries. Several factors that may influence the medical outcomes of a suicide attempt include chance involvement by others after the behavior has begun, low intentionality or ambivalence, a lack of understanding regarding the lethality of the technique used, and/or poor preparation. Suicide attempts are a prevalent therapeutic problem in general hospitals, occurring 10-40 times more frequently than actual suicides. The bulk of those who attempt suicide are from rural areas, married men, and young.2

Organophosphorus poisoning is the most prevalent way of attempted suicide in Eastern Rural and Central India, followed by hanging, falling from great heights, drowning, drug overdose, and organophosphorus poisoning. Organophosphorus compounds have recently become more popular as DSH methods due to their ease of availability as agricultural and household chemicals.3

DSH is more prevalent in farmers than in the public and private sectors. Existing evidence linked DSH to severe depression and suicidal ideation.

Family expressiveness and coherence have both indirect and direct effects on suicidal thoughts, despair, and hopelessness. Knowledge of psychological and demographic self-harm aspects can aid in understanding and improving behavior, which can then be used to avoid self-harm.4 As a result, the current study sought to investigate the impact of psychological variables and sociodemographic characteristics on purposeful self-harm in Indian participants.

MATERIALS AND METHODS

The current cross-sectional, descriptive, observational study sought to determine the impact of psychological variables and sociodemographic characteristics on willful self-harm in Indian individuals. The research participants came from the Institute's Department of Psychiatry. All individuals provided verbal and written informed consent before to participation.

The current study evaluated participants with a history of DSH who were admitted to the Institute throughout the study period and were sent to the Department of Psychiatry following medical assessment and stabilization. The study excluded people who were unable to comply due to acute mental or physical sickness, as well as those who refused to engage in the study.

In all individuals, sociodemographic data such as age, gender, reasons for suicide attempt, employment, and education were collected using a pre-designed structured proforma. The study used Beck's suicidal intent scale5, which consisted of 21 questions scored on a Likert-type scale, including real desire for suicide in the last 7 days, preparation for a suicide attempt, and desire for death.

Each item had a minimum score of 0 and a maximum of 2. The scale examined the subject's mental state just before the attempt.

Another scale employed was Beck's depression inventory6, a 21-item self-reported scale for assessing depression severity. Each item was assigned a value ranging from 0 to 3 based on its severity. Standard cut-off scores in the manual were utilized for analysis, with 0-18 indicating minor depression, 18-30 indicating mild depression, 19-29 indicating moderate depression, and 30-63 indicating severe depression.

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

RESULTS

The current cross-sectional, descriptive, observational study sought to determine the impact of psychological variables and sociodemographic characteristics on willful self-harm in Indian participants. The current study analyzed and gathered data from 300 referrals of willful self-harm made to the institute's Department of Psychiatry during the study period. The study included 70% men (n = 210) and 30% females (n = 90).

The bulk of the research volunteers (46%, n=138) were between the ages of 18 and 29, followed by 30.7% (n=92) from 30-39 years, 14% (n=42) from 40-49, 6.7% (n=20) from 50-59 years, and 2.7%

(n=8) from 60 years or beyond. There were 58% married (n=174) and 38.7% unmarried (n=116) participants. Table 1 summarizes occupations, residences, family types, and socioeconomic position. In terms of self-harm characteristics in study subjects, the most common mode was poisoning in 88.7% of subjects, followed by insecticide in 12% (n=36) subjects, 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.

The reasons for the attempt were an altercation with a spouse in 29.9% (n=90), a money demand from a lender in 29.33% (n=88), a fight 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) participants, respectively. 9.3% (n=28) of participants had a positive family history of DSH, whereas 18.6% (n=56) had drug use. Psychiatric diagnoses included adjustment disorder, moderate depression, and severe depression in 16.67% (n=50), 8% (n=24), and 10% (n=30) of individuals, respectively (Table 2).

The study findings revealed that strong suicidal intent was present in 51.33% (n=154) men and 20% (n=60) females, for a total of 71.33% (n=214) participants. Medium suicidal intent was observed in 14.67% (n=44) men and 4% (n=12) females, totaling 18.66% (n=56) participants. Low suicide intent was reported in 8% (n=12) men and 6% (n=18) females, for a total of 10% (n=30) participants. (Table 3).

Beck's depression inventory revealed a significant association between suicide intent and depression in study participants, with mean scores of 14.82±9.65, r-value of 0.849, and p-value of 0.0001. (Table 4).

DISCUSSION

The current study analyzed and gathered data from 300 referrals of willful self-harm made to the institute's Department of Psychiatry during the study period. The study included 70% men (n = 210) and 30% females (n = 90). The bulk of the research volunteers (46%, n=138) were between the ages of 18 and 29, followed by 30.7% (n=92) from 30-39 years, 14% (n=42) from 40-49, 6.7% (n=20) from 50-59 years, and 2.7% (n=8) from 60 years or beyond. There were 58% married (n=174) and 38.7% unmarried (n=116) participants.

The occupation, residence, family type, and socioeconomic position are all summarized. These findings were consistent with earlier investigations by Thompson EA et al7 in 2005 and Bhattacharya AK et al8 in 2011, in which authors evaluated patients with demographics and DSH similar to those in the current research.

The study results showed that for self-harm characteristics in study subjects, the most common mode was poisoning in 88.7% of subjects, followed by insecticide in 12% (n=36) subjects, 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.

The reason for the attempt was an altercation with a spouse in 29.9% (n=90), a loan demand in 29.33% (n=88), a fight 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) participants, respectively. 9.3% (n=28) of participants had a positive family history of DSH, whereas 18.6% (n=56) had drug use. Psychiatric diagnoses included adjustment disorder, moderate depression, and severe depression in 16.67% (n=50), 8% (n=24), and 10% (n=30) of participants, respectively. These findings were consistent with

those of Ghimire H et al9 in 2014 and Srivastava S et al10 in 2000, who revealed DSH features similar to the results of the current investigation.

High suicidal intent was seen in 51.33% (n=154) men and 20% (n=60) females, for a total of 71.33% (n=214) participants. Medium suicidal intent was observed in 14.67% (n=44) men and 4% (n=12) females, totaling 18.66% (n=56) participants. Low suicide intent was reported in 8% (n=12) men and 6% (n=18) females, for a total of 10% (n=30) participants. These findings were consistent with the findings of Gunnell D et al11 in 2007 and Srivastava MK et al12 in 2004, who also observed suicide intent in study subjects comparable to the current study.

The study found a significant association between suicide intent and depression in study individuals, with mean Beck's depression inventory scores of 14.82±9.65 (r=0.849, p=0.0001). These findings were consistent with the findings of Ebenezer JA et al13 in 2013 and Mishra K et al14 in 2013, in which the authors observed an association of suicide intent with depression that was equivalent to the results of the current research.

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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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 1: Sociodemographic data in 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

Table 2: Clinical characteristics of study subjects

Beck's suicidal intent scale	**Males**		**Females**		**Total**	
	n	**%**	**n**	**%**	**n**	**%**
High	154	51.33	60	20	214	71.33
Medium	44	14.67	12	4	56	18.66
Low	12	8	18	6	30	10

Table 3: Suicidal intent in the study subjects

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

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