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Original research article

A cross-sectional study examining the sociodemographic profile and psychological factors associated with deliberate self-harm in a tertiary rural health care setting

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Abstract

Background and Objective: Deliberate self-harm, or DSH, has been more popular in India lately. Self-harming behaviour is linked to female sex, younger age, stressful life events, and mental health conditions like depression. Planning suicide prevention methods can benefit from knowledge of the sociodemographic characteristics and psychiatric morbidities of patients who engage in self-harming behaviour.
Method: This was a cross-sectional, descriptive, observational study conducted at a hospital. Data was gathered from 170 consecutive DSH referrals to the Department of Psychiatry, Dr. VRK Women's Medical College, Aziznagar, Telangana, India between May 2023 to April 2024. Validated psychometric instruments that correlated with depression severity were used to measure suicidal thoughts.
Result: The majority of the study participants (n = 130, 70%) was male and fell into the 18 to 29 age bracket. The most frequent cause of DSH (n = 143, 91.46%) was poisoning. Of the patients, 59 (36.97%) had diagnosable mental diseases, with adjustment disorder being the most common (n = 34, 18.92%).
Conclusion: Our research sheds insight on the clinical, psychological, and sociodemographic characteristics of those who try self-harm.
Keywords: Deliberate self-harm, psychosocial factors, farmers, organophosphorus compounds, adjustment disorder

Introduction

Behaviours ranging from suicide to acts without suicidal intent (but with the purpose to express grief or release tension) are included in the category of deliberate self-harm. The term "deliberate self-harm" is preferred over "attempted suicide" or "parasuicide" because there are many non-suicidal intentions among the multitude of reasons or causes for this act of self-harm. A behaviour that is done with the purpose of dying, even partially, is called an attempt at suicide [1-3].

There is a possibility that the actions will cause injury or serious medical consequences. A suicide attempt's medical outcome can be influenced by a number of factors, including inadequate planning, ignorance about the method's lethality, poor intentionality or ambivalence, or fortunate interventions by others after the activity has started. Suicide attempts are a major clinical issue in general hospitals since they occur 10-40 times more frequently than actual suicides. The majority of suicide attemptants are young, married men from rural areas. The most common methods used by individuals to try suicide in Central and Eastern Rural India are hanging, drug overdose, organophosphorus poisoning, drowning, and jumping from heights [4-7].

Organophosphorus compounds have been used as a DSH approach more frequently recently because to their easy availability as chemicals for use in homes and farms.

Compared to farmers, those working in the public or private sectors showed a lower prevalence of DSH. Numerous studies have connected DSH to both depression and serious suicidal thoughts. Cohesion and expressiveness within the family have a direct and indirect effect on suicidal ideation, hopelessness, and depression. We may be able to stop self-harm if we have a better understanding of the psychological and sociodemographic aspects of the habit [8-10].

Material and Method

This study was carried out at the Department of Psychiatry, Dr. VRK Women's Medical College, Aziznagar, Telangana, India. Following the Institutional Ethics Committee's clearance, the study got underway, and data was gathered utilising successive sampling between May 2023 to April 2024. After receiving medical stabilisation, persons with a history of DSH who were brought to the hospital were initially admitted to the medicine department and then sent for evaluation to the psychiatric department. Every participant provided informed permission that included all study-related information as well as the option to withdraw from the study. The participants were informed in their native tongue about the

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confidentiality and use of data for scientific purposes provisions included in the consent. Following informed consent, all adult patients with a history of DSH were added to the research. The study eliminated those who were unwilling to participate or who were unable to cooperate because of an acute medical or mental ailment [10-11].

Result

Table 1: Socio-demographic variables (n = 170)

Variables		N (%)
Age group (years)	**18-29 years**	73 (42)
	30-39 years	50 (29.4)
	40-49 years	25 (14.7)
	50-59	14 (8.2
	≥60 years	8 (4.7)
Gender	**Male**	115 (67.6)
	Female	55 (32.3)
Religion	**Hindu**	143 (84.1)
	Buddhist	17 (10)
	Muslim	10 (5.8)
Education	**Illiterate**	11 (6.4)
	Primary	11 (6.4)
	Middle	23 (13.5)
	10 th	43 (25.29)
	12 th	61 (35.8)
	Graduation	15 (8.8)
	PG	4 (2.3)
Marital status	**Unmarried**	60 (35.29)
	Married	89 (52.35)
	Separated	4 (2.35)
	Widow	4 (2.35)
	Divorced	1 (0.5)
	Farm labourer	47 (27.6)
	Farmer	38 (22.35)
	Homemaker	28 (16.4)
	Self employed	22 (12.94)
	Student	17 (10)
	Employed	9 (5.2)
Living area	**Rural**	145 (85.29)
	Urban	15 (8.8)
Type of family	**Nuclear**	125 (73.5)
	Joint	45 (26.4)
Socioeconomic status	**Upper class**	8 (4.7)
	Upper middle class	29 (17.05)
	Middle class	36 (21.17)
	Lower middle class	62 (36.4)
	Lower class	35 (20.5)

Table 2: Clinical variables (n = 170)

Variables		N (%)
Mode of self-harm	**Poisoning**	109 (71.33)
	Insecticide	21 (12.35)
	Rodenticide	7 (4.11)
	Phenol	3 (1.76)
	Turpentine	11 (6.4)
	Salicylic acid	4 (2.35)
	Drug overdose	7 (4.11)
	Cutting	4 (2.3)
	Hanging drowning	4 (2.3)
Reasons for attempt	**Altercation with spouse**	48 (28.23)
	Demand of money from lender	47 (27.64)
	Altercation with family member	30 (17.6)
	Broken love affair	20 (11.7)
	Job related stress	7 (4.11)
	Failure in exam	5 (2.9)
	Other	13 (7.6)
Family history of DSH	**Yes**	24 (14.11)

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	No	146 (85.8)
Substance abuse	**Yes**	38 (22.3)
	No	132 (77.6)
Psychiatric diagnoses	**Not diagnosed with psychiatric illness**	103 (60)
	Adjustment disordered	30 (17.64)
	Moderate depression	17 (10)
	Severe depression	20 (11.7)

Table 3: Suicidal intent among the participants (n = 170)

Beck suicide intent scale	Male n (%)	Female n (%)	Total n (%)
Low	85 (73.27)	32 (27.58)	116 (71.33)
Medium	25 (14.67)	9 (4)	34 (29.31)
High	9 (4)	11 (6)	20 (17.24)

Table 4: Correlation of suicide intent with depression

Variables (Mean ± SD)		BSI Score (22.54 ± 7.86)
BDI Score (15.54 ± 10.65)	R	0.885
	P	0.0001*

Discussion

The current study set out to determine the psychological and sociodemographic components of DSH. The male to female ratio in our study was 2.3:1, with men making up 70% of the participants. The ratio of 1.7:1 in a study by Narang *et al*. (2000) is similar to that of the current investigation. The current study indicated that there were more married individuals (58%) than single participants (38%). Getting married sooner may be a reflection of custom and culture in the Indian subcontinent. Examining the differences in stress that married persons encounter, especially with regard to marital disputes, may be essential. According to the results of the current survey, 54% of the sample population worked as farm labourers or farmers, followed by homemakers (18%), students (15%), and company owners (13%). Similar findings were made by Mishra *et al*. (2015), who discovered that the Vidarbha region of Maharashtra-where most of India's cotton farmers reside-had higher-than-average suicide attempt rates [12-13].

These findings are consistent with those of Niaz U *et al.'s* (2006) study, which also found that the majority of participants were unemployed and from lower socioeconomic backgrounds. Individuals with poor incomes, education levels, and job prospects are more prone to feel insecure about their financial situation and to experience financial stress, which can escalate to suicidal thoughts and actions. According to the results of this study, which are similar to those of Sharma *et al*. (1998), Srivastava *et al*. (2004), and Gunnell *et al*. (2007), using pesticides to harm oneself was found to be the most common method. These studies emphasise that pesticides are easily accessible and relatively inexpensive, making them a preferred method of suicide attempt [13-15].

65.33% of the participants in the current study did not have a diagnosable mental condition. Just 34.67% of the patients could be diagnosed with a mental disorder. A study by Srivastava *et al*. A *et al*. (2005) found that 16.6% of people had depressive illness. As with a study by Srivastava S *et al*. (2000), a positive association between the severity of depression and suicide attempt was identified in the current investigation. An argument with a spouse or family member was the most frequent trigger for self-harm (29.9%), followed by a demand for money from a moneylender (29%), a broken relationship (11%), exam failure (1.3%), and stress from work (2.6%). These results are consistent with Ghimire *et al*. (2014)'s study, which discovered that marital and interpersonal problems are the main causes of DSH. Spouse quarrel was the most common cause of DSH. Because Indian society is sociocentric and places a high importance on interpersonal ties, Rich and Bonner *et al*. (1987) found that stress accounted for 30% of the variation in suicidal ideation in a stress-vulnerability model. It follows that male suicide is likely to be primarily caused by interpersonal conflict [16-19].

A study by Mishra *et al*. (2015) found that the Maharashtra cotton producer group was highly vulnerable to suicide because of related debt and a drop in the area's economic standing. In the farming community, debt from crop failure and the ensuing strain on families were the primary reasons for suicide attempts in the study population. According to a study by Bhattacharya AK *et al*. (2011), DSH may be seen as a maladaptive coping strategy that leads to impulsive acts, even though the majority of participants (65%) did not have a mental diagnosis. In the current study, there was a positive link between depression and suicidal intent. Thompson *et al*. obtained similar results (2005). The results of this study corroborate those of past studies that found a substantial correlation between depression and suicidal behaviour [20-23].

Conclusion

Younger men were more likely to purposefully harm themselves due to late loan repayment and interpersonal problems. Because it was so easily obtainable, organophosphorus poisoning was the main

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cause of DSH in rural agrarian populations. Regulations and control measures by the government regarding the sale and storage of pesticides may be able to lessen this problem. Given that the majority of research participants utilised DSH without having a diagnosed mental illness, it is possible to classify DSH as a maladaptive coping strategy. Reducing stress and promoting healthy coping mechanisms may help prevent self-harm. Our findings emphasise the need for individualised care based on the specific issues at hand and the requirement for a comprehensive psychological evaluation in every case of self-harm.

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