



STUDY OF SOCIODEMOGRAPHIC PROFILE AND MODE OF HARM IN PATIENTS ADMITTED IN EMERGENCY WITH DELIBERATE SELF-HARM

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ABSTRACT Deliberate self-harm (DSH) is an act with nonfatal outcome in which an individual deliberately initiates a nonhabitual behavior that, without intervention from others, will cause self-harm, or deliberately ingests a substance in excess of prescribed or generally recognized therapeutic dosage. It was a descriptive study with objective to describe the sociodemographic data and mode of Self harm in patients with DSH admitted in Emergency. Clinical data was obtained during the course of 1 year from 90 patients. Modified kuppusswami scale was used to assess sociodemographic variable. Proportion of DSH was found to be higher in patients of lower socioeconomic status, rural background and unemployed group. Ingestion of agrochemical poisons was the most common mode of DSH followed by hanging.

KEYWORDS : Deliberate self-harm; sociodemographic profile; mode of self –harm

Introduction:

Deliberate self-harm (DSH) can be defined as the intentional injuring of one's body without apparent suicidal intent.[1] These acts are usually nonfatal and not intended to end life. DSH contains but is not restricted to acts such as self-cutting, burning, ingestion of injurious substance or medication in excess of its therapeutic/prescribed dosage, ingesting a recreational or illicit compound in a bid to harm self, and consuming a non-ingestible compound, cell-battery, etc.[2] Several other terms have been used to refer to this behaviours such as self-injurious behaviour, para-suicide, and self-wounding.[3]

Although deliberately causing damage to one's own bodies is perceived as quite disturbing, patients who self-harm are commonly encountered in clinical practice. They are known to constitute around 9% of the patients in emergency departments and up to 20% in psychiatric hospital settings.[4] Reports from both clinics and emergency settings indicate an increase in the incidence of DSH – in India and internationally.[5]

Individuals who engage in DSH have also been found to have poor tolerance to distress, higher arousal in response to stressful events, poor verbal communication, and social problem-solving skills. However, DSH is deemed to be a complex phenomenon, and most times, a number of factors are at play when an individual engages in DSH. Non suicidal self-injury (NSSI) is a diagnostic category proposed by the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition as a “condition for further study” to encourage further research in this area. The proposed criteria requires an individual to engage in intentional self-inflicted damage to the surface of his/her body, on 5 or more days in the last 1 year, with the expectation that the injury will lead to only mild or moderate physical harm.[6]

Aim and objective:

1. To describe Sociodemographic profile and mode of DSH in patient admitted in emergency with history of deliberate self-harm.

Methodology

Method of Data Collection – This study included all patients who were brought to SRN hospital, Prayagraj over a period of 1 year in emergency and admitted for deliberate self-harm because of various reasons.

Patient of either sex, aged more than 18 years, having ability to speak and understand Hindi/English, able to give informed consent and cooperative for assessment were included in study. Those who were medically unstable for psychiatric assessment were excluded.

Statistical Analysis- Descriptive statistical analyses were presented

using summary and frequency tables. Chi- Square test with and without Yates correction was used. SPSS version 23 (Statistical Package for Social Sciences) was used for data analysis.

Total number of case with DSH presented in emergency= 200

↓
Total number of patients with DSH admitted= 180

↓
Total number of patients who were selected through convenience sampling= 110

↓
Patients who did not meet inclusion/ exclusion criteria= 14

↓
Patients who refused consent= 6

↓
Patient who gave consent and analysed= 90

Observation and Result

Table 1: Demographic profile of the study participants

Variable	Adult Onset (n=90)	
Gender	Male	50(55%)
	Female	40(45%)
Family Type	Joint	02(02%)
	Nuclear	88(98%)
Locality	Rural	63(70%)
	Urban	27(30%)
Religion	Hindu	86(96%)
	Muslim	4(4%)
Marital Status	Unmarried	46(51%)
	Married	43(48%)
	Separated	01(01%)
Occupation	Unemployed	52(58%)
	Unskilled worker	07(08%)
	Semi-skilled worker	13(14%)
	Skilled worker	15(17%)
	Others	03(03%)
Socioeconomic status	≤3907-Lower	58 (65%)
	3908-78062	29 (32%)
	>78062	3 (3%)

Table-2 Mode of DSH

Mode of DSH	Number of patients		Chi-Square	p-Value
	Male	Female		
Agrochemical poisoning	33(57%)	25(43%)	0.11188	0.7303

Hanging	06(38%)	10(62%)	2.5693	0.1089
Overdose of prescribed medications	03(60%)	02(40%)	0.0424*	0.8369
Corrosive poisoning	01(25%)	03(75%)	1.58*	0.2083
Wrist/neck slashing	01(25%)	03(75%)	1.58*	0.2083
Others	03			
Total	47	43		

* The Chi-Square test with Yates correction.

Result

As shown in Table 1, Population of male patients was more than population of female patients. Most of the patients' relationship status was single. The proportion of DSH was lesser observed in separated patients. Proportion of DSH was much higher in patients with lower income (≤ 3907).

It was also observed that patients from rural areas formed a greater proportion of the cases associated with DSH. 86 cases (96%) were from Hindu religion and 4 (4%) from Muslim religion. Proportion of DSH is much higher in Unemployed. It was also observed that nuclear families contributed a greater proportion of the cases associated with DSH.

As shown in Table2, Most common mode of DSH was agrochemical poisoning, seen in 58(64.4%) patients among which 33 were male(57%) & 25 were female(43%), followed by Hanging in 16 patients, 6 male (38%) & 10 female (60%). overdose of prescribed medicine in 5 patients, 3 male(60%) & 2 female (40%). Wrist/neck slashing in 4 patients, 1 male (25%) female (75%). Other mode of DSH were penile amputation, jump from bridge into river and jumping to railway track in front of running train.

Discussion

In our study, patient presented with DSH to the hospital were commonly male as compared to female (55% & 45% respectively). A study conducted in a middle-income country showed that men had frequent DSH attempts than women^[9]. Finding of our study were similar to Ramdurg S et al^[8] who also reported 56% male and 44% female presented with DSH in their study. In Jegaraj MK et al^[7] study, the male: Female ratio was 0.93 with a slight female predominance (51.8%), However, there is at variance with western literature wherein majority of attempters was female^[12]. Predominance of male subjects can be understood to be arising out of sociocultural and occupational roles that Indian males have to perform as discussed by Latha KS et al^[13]. Although the role of women has recently changed in some ways over the years, with more females taking up jobs, yet Indian society continues to harbor male dominance. The culturally glorifying position of the males puts them to more stress and expectations.

	Male : Female
Ramdurg S et al ^[8]	56% : 44%
Jegaraj MK et al ^[7]	48% : 51.8%
Das PP et al ^[11]	53%: 47%
Latha KS et al ^[13]	62% : 38%
MR Nagendra Gouda et al ^[10]	61.3% :38.7%
Nozomi M et al ^[9]	37.5% :62.5%
Present study	56% :44%

Marriage is an almost universal phenomenon in India. In Indian studies, it is common to find a higher proportion of attempters being married. For example a multinational study by Fleischmann et al^[14] in which subjects from Indian centre who attempted suicide/indulged in self-harm were more frequently married than single. but in our study unmarried person higher, which were single 51%, married 48% and separated 01%. Similarly study by Nojomi M et al^[9] also reported 53.6% subjects as single who attempted suicide and Latha KS et al^[13] reported 63% subjects as single.

	Single	Married	Divorced/Separated
Ramdurg S et al ^[8]	37%	59%	4%
Latha KS et al ^[13]	63%	37%	
Nojomi M et al ^[9]	53.6%	43.4%	3.2%
Das PP et al ^[11]	64.5%	32.1%	3.4%
Present study	51%	48%	1%

In our study, it was observed that Majority of people presented to DSH were from rural area (70%) compared to urban area (30%). Finding of

our study were corroborated with study by MR Nagendra Gouda et al^[10]. Reasons for the higher rates of suicidal attempts in many rural areas may include social isolation, easy availability of pesticides, greater difficulty in identifying warning signs, limited access to health facility and doctors, and lower levels of education. In contrary to our study, Urban DSH rates were substantially higher than rural DSH rates amongst both males and females aged between 15 to 64 years. Ramdurg S et al^[8] and Das PP et al^[11] also reported Urban subjects more involved from their studies.

	Urban : Rural
Ramdurg S et al ^[8]	78:22
Das PP et al ^[11]	53:47
MR Nagendra Gouda et al ^[10]	159:381
Kattimani S et al ^[7]	22:291
Present study	30:70

Mode of DSH

DSH attempts present to emergency department, self-poisoning were the most common mode of DSH according to study done in eight, low and middle income country^[14]

Finding of our study were corroborated with study by Jegaraj MK et al^[7] in which also self-poisoning was the most common method of DSH, and agricultural chemicals (46%) were commonly used to commit DSH. Overdosing with tablets (29.8%) was the second most common method used. Other studies from India also reported insecticide poisoning and tablet overdosage as the frequent modes of DSH.^[10,15] Das PP et al^[11] also reported that the most common method of self harm was consumption of insecticides (44.6%), followed by use of corrosives (17.5%) and use of psychotropic drugs (12.7%). About 17% of patients had harmed themselves after consuming alcohol.

In study by Ramdurg S et al^[8], the common method employed to execute self-harm was corrosive poisoning and insecticide poisoning. Unrestricted availability of the corrosive in Indian household for domestic purpose is the probable cause. In study by Latha KS et al^[13], Organophosphorus poisoning was reported to be a frequent method of attempting suicide (67%) followed by Drug overdoses in 21 attempts (29%). Restriction of access to the methods of suicide has received some attention as a possible way of prevention of suicidal death.^[16] However, it has been observed in an Indian study that when the use of pesticide was restricted, the mode of suicide changed while the total number of suicides remained static.^[17] Nevertheless, as poisoning was the most common method of suicide attempt, and pesticides were used most frequently, restricting the availability of organophosphorus compounds, banning the more toxic ones, as well as efforts to decrease the period between the ingestion and initiation of treatment by having poisoning treatment facilities in primary healthcare centers, may be helpful in preventing or lowering the rate of suicidal attempts.^[18]

	Agrochemical poisoning	Hanging	Drug overdose	Others
Ramdurg S et al ^[8]	52%	19%		22%
Jegaraj MK et al ^[7]	46%	5.3%	29.8%	6%
Das PP et al ^[43]	44.6%		12.7%	14.4%
Latha KS et al ^[48]	67%		29%	
MR Nagendra Gouda et al ^[42]	66.3%		17.8%	
Present study	64.4%	14.4%	8.9%	6.7%

CONCLUSION

Present hospital based descriptive study was conducted in SRN hospital, Prayagraj a tertiary care teaching hospital. This study included 90 patients of deliberate self-harm, who were brought to SRN hospital, Prayagraj. The design of study was cross sectional. Following conclusions were drawn from the study.

- Majority of patients were from age group 18 -29 (67%) years, single patient (51%) , intermediate or post high school diploma (education) (26%), unemployed (58%) and from rural area (70%).
- Male patients were more (55%) as compared to female patients (45%).
- Most common mode of DSH was agrochemical poisoning (64%), followed by hanging (18%), overdose of prescribed medicine wrist/neck slashing (14%). Other modes of DSH were penile amputation, jumping from bridge into the river, and jumping in front of running train.

LIMITATION

Patients of DSH who did not visit hospital were not included in the study. A community based study should be planned for further research.

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