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A Study to Assess the Socio-Demographic Profile and Psychiatric Morbidity among Patients with Deliberate Self-Harm in a Tertiary Care Hospital

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Abstract **Original Research Article**

Introduction: Self-poisoning or injury done to oneself irrespective to the purpose of the act is known as deliberate self- harm. It is associated with many factors like psychosomatic, biological, social factors and psychiatric disorders. It can be equally dangerous as suicide itself and sometimes more than that because of temporary or permanent disability caused to an individual. ***Aim:*** To study socio demographic profile and psychiatric morbidity among patients with deliberate self-harm. ***Methods:*** This study was conducted at SNMC and HSK, Bagalkot. This was a prospective case series study undertaken in patients admitted with history of deliberate self-harm. Study period was from June 15 2018 to August 15 2018. *Materials:* Sample size of 80 was calculated using open Epi software at 10% absolute precision and 95% confidence level. Socio demographic data was collected and participants were subjected to Brief psychiatry rating scale and Beck's depression inventory. ***Results:*** There was a male predominance of patients with mean age of 29.26 years. 87.5% of patients had formal education and the majority 27.5% were house wives. Organophosphorus poisoning (33.75%) was the most common mode of deliberate self-harm. Depression was the most common associated psychiatric comorbidity. ***Conclusion:*** Our findings suggest that majority of patients with deliberate self-harm are from rural background and the act is triggered by stressors in life. Depression is the most common psychiatric morbidity. Appropriate preventive measures in at risk group can prevent deliberate self-harm and subsequent death.

Keywords: Socio-demographic profile, Psychiatric morbidity, Deliberate self-harm.

INTRODUCTION

Suicidal act is defined as "the injury with varying degree of lethal intent and suicide as, such acts with fatal outcome." Attempted suicide or suicidal attempts are the acts which do not lead to the death of a person when done with intention of ending their lives. The term attempted suicide includes wide variety of self-destructive behaviours ranging from life threatening serious acts to minor acts done to grab attention [1].

In India, about 1, 00,000 persons commit suicide every year, contributing to about 10% of the suicides in the world [2]. It accounts for the major cause of death in more than five lakh people in a year in the Asia Pacific region [3]. Self-poisoning or injury done to oneself irrespective of the purpose of the act is known as deliberate self- harm (DSH) [4]. Most of the cases of DSH do not intend to end their lives. They do so due to depression, loss of patience or their control over surroundings. Other reasons can be to gain attention or out of anger. DSH is associated with many factors like psychosomatic, biological, social factors and psychiatric disorders [5]. It can be equally dangerous as suicide itself and sometimes more than that because of temporary or permanent disability caused to an individual [6].

Violent methods to commit suicide are more common in males than females. Reasons to useviolent methods can be more aggression, easy access to violent means, less concern about disfigurement of body and more suicidal tendencies among males than females [7]. There is an increase in suicide rates in Indian population from 14.9 in 2001 to 15.4 in 2010 per 100,000 populations [8]. Suicide rates are significantly higher in southern India where it accounts for more than 15 per lakh population while it's just 3 per lakh population in north India [9]. Prevalence rates of psychiatric disorders in suicidal cases ranges from 11.6% to 93% while for co morbid personality disorders it ranges around 7% [10-12]. There are significantly

higher chances of suicide in co-morbid psychiatric disorders as compared to psychiatric disorders without DSH [13].

Suicide is malaise which is multifactorial and also multidimensional [9]. This study is aimed to evaluate the socio demographic profile and psychiatric morbidity in attempted suicide patients.

Aims and Objectives

- To study the socio-demographic profiles of patients with deliberate self-harm.
- To assess the psychiatric morbidity associated with deliberate self-harm.

MATERIALS AND METHODS

Setting: This study was undertaken at S Nijalingappa Medical College and HSK hospital, Bagalkot. Study period was from June 15 2018 to August 15 2018.

Study design: This study was a prospective, observational and analytical study.

Participants: Patients aged more than 15 years of age were included in the study. This study was conducted on 80 human participants fulfilling the inclusion and exclusion criteria. They were subjected to psychiatric assessment once the patient was medically stable.

Sample Size: Sample size calculation was done using Open Epi Software. According to the study conducted by Vijaykumar L [9], in South India 71% of the suicides were caused due socioeconomic conditions.
At 10% Absolute Precision and 95% confidence level, the sample size calculated was 80.

Ethical Approval: Ethical clearance was obtained from the Institute's Ethics Committee (Human Studies). Written informed consent (English) was taken from all study subjects, before enrolment in the study.

METHOD OF COLLECTION OF DATA

Inclusion Criteria

- Patients aged 15 years and above.
- Patients willing to participate in the study and give informed consent.

Exclusion Criteria

- Patients not giving informed consent
- Patients admitted to intensive care units and on ventilator.

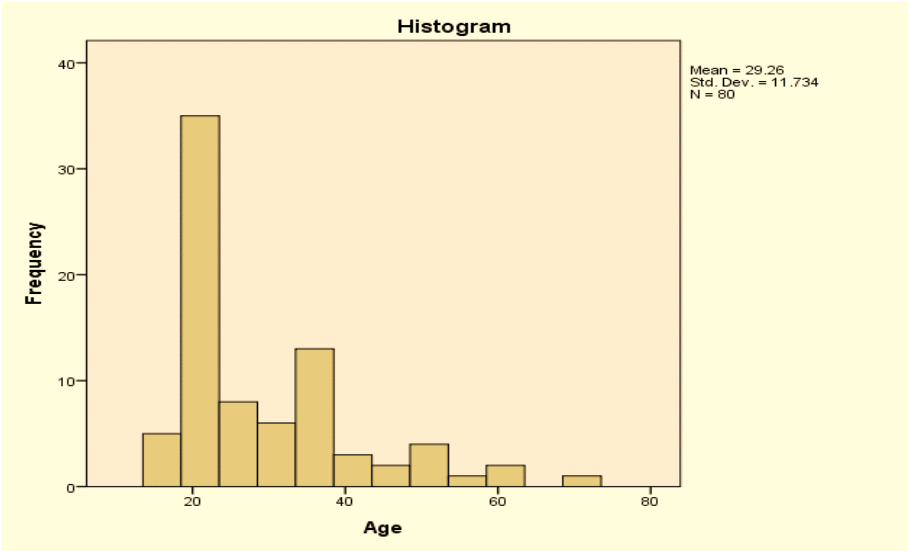
The nature and the purpose of the study was explained to the participants recruited considering inclusion and exclusion criteria. During the study period, all the recruits was given standardized self-answering questionnaires. Once the questionnaires were collected the sample was subjected to statistical analysis.

Instruments Used

- Socio demographic data sheet.
- Brief Psychiatry Rating scale.
- Beck's depression inventory.

RESULTS

A total of 80 subjects with history of deliberate self- harm were studied. Out of the total 80 cases studied, 41(51.2%) were males, 39(48.8%) were females. Age distribution is depicted below. Mean age was 29.26 years.



Sociodemographic profile

Variable		Numbers (%)
Gender	Male	41 (51.2%)
	Female	39 (48.8%)
Language	Kannada	74 (92.5%)
	Tamil	0 (0%)
	Telugu	1 (1.3)
	Malayalam	1 (1.3%)
	Hindi	39 (48.8%)
	English	12 (15%)
	Others	0 (0%)
Socio-economic Status	APL	19 (23.8%)
	BPL	61 (76.3%)
Educational Status	Nil	9 (11.3%)
	Illiterate/no formal education	1 (1.3%)
	Primary (1^{st} -5^{th} Std)	8 (10%)
	School (6^{th}-10^{th} Std)	26 (32.5%)
	Higher secondary (PUC)	18 (22.5%)
	Graduate	18 (22.5%)
Occupational Status	Unemployed	4 (5%)
	Farmer	17 (21.3%)
	Unskilled	7 (8.8%)
	Semiskilled	3 (3.8%)
	Skilled	8 (10%)
	Professional	3 (3.8%)
	Student	16 (20%)
	Housewife	22 (27.5%)
Marital Status	Single	29 (36.3%)
	Married	50 (62.5%)
	Divorced	1 (1.3%)
Referral	Self	1 (1.3%)
	Family	54 (67.5%)
	Physician	25 (31.3%)
Religion	Hindu	74 (92.5%)
	Muslim	6 (7.5%)
Residence	Urban	31 (38.8%)
	Rural	49 (61.3%)
Past History of Taking Psychotropic Medications	Yes	3 (3.8%)
	No	77 (96.3%)
Currently Taking Psychotropic Medications	Yes	3 (3.8%)
	No	77 (96.3%)
Suffering from Medical Illness	Yes	12 (15%)
	No	68 (85%)
Currently Taking any Medication	Yes	8 (10%)
	No	72 (90%)
Family History of Mental Illness	Yes	0 (0%)
	No	80 (100%)

Method of Deliberate self-harm

Description	Frequency	Percentage
OP Poisoning	31	38.75%
Drug overdose	15	18.75%
Unknown compound poisoning	14	17.5%
Lice powder poisoning	9	11.25%
Kerosene consumption	6	7.5%
Hanging	2	2.5%
Multiple cut	2	2.5%
Fall from building	1	1.5%

Degree of Premeditation

Description	Frequency	Percentage
None ; impulsive	74	92.5%
Suicide contemplated for 3 hours or less prior to attempt	4	5%
Suicide contemplated for more than 3 hours prior to attempt	2	2.5%

Severity of depression based Beck's depression inventory score

Score	Description	Frequency	Percentage
1	Normal	8	10%
2	Mild mood Disturbance	15	18.8%
3	Borderline Clinical depression	13	16.3%
4	Moderate depression	27	33.8%
5	Severe Depression	16	20%
6	Extreme Depression	1	1.3%

Frequencies of various items on Brief psychiatric rating scale

	Not present	Very mild	Mild	moderate	Moderately severe	severe	Extremely severe
Variable							
Somatic Concern	30 (37.5%)	15 (18.8%)	21 (26.3%)	9 (11.3%)	4 (5%)	1 (1.3%)	0 (0%)
Anxiety	10(12.5%)	2(2.5%)	11(13.8%)	19(23.8%)	23(28.7%)	12(15%)	3(3.8%)
Emotional withdrawl	34(42.5)	22(27.5)	11(13.8%)	5(6.3%)	5(6.3%)	2(2.5%)	1(1.3%)
Conceptual Disorganisation	39(48.8%)	20	15(18.8%)	4(5%)	1(1.3%)	1(1.3%)	0(0%)
Guilt Feelings	19(23.8%)	12(15%)	12(15%)	7(21.3%)	9(11.3%)	8(10%)	3(3.8%)
Tension	6(7.5%)	1(1.3%)	4(5%)	8(10%)	13(16.3%)	35(43.8%)	13(16.3%)
Mannerism and posturing	67(83.8%)	9(11.3%)	3(3.8%)	0(0%)	1(1.3%)	0(0%)	0(0%)
Grandiosity	29(36.3%)	23(28.7%)	12(15%)	13(16.3%)	1(1.3%)	1(1.3%)	1(1.3%)
Depressive mood	14(17.5%)	12(15%)	18(22.5%)	10(12.5%)	13(16.3%)	11(13.8%)	2(2.5%)
Hostility	14(17.5%)	12(15%)	18(22.5%)	10(12.5%)	13(16.3%)	11(13.8%)	2(2.5%)
Suspiciousness	48(60%)	14(17.5%)	9(11.3%)	1(1.3%)	3(3.8%)	4(5%)	1(1.3%)
Hallucinatory Behavior	75(93.8%)	1(1.3%)	2(2.5%)	2(2.5%)	0(0%)	0(0%)	0(0%)
Motor Retardation	68(85%)	9(11.3%)	3(3.8%)	0(0%)	0(0%)	0(0%)	0(0%0
Uncooperativeness	48(60%)	18(22.5%)	8(10%)	5(6.3%)	0(0%)	1(1.3%)	0(0%)
Unusual Thought Content	46(57.5%)	19(23.8%)	8(10%)	3(3.8%)	4(5%)	0(0%)	0(0%)
Blunted affect	70(87.5%)	7(8.8%)	2(2.5%)	0(0%)	0(0%)	1(1.3%))	0(0%)
Excitement	54(67.5%)	11(13.8%)	12(15%)	2(2.5%)	1(1.3%)	0(0%)	0(0%)
Disorientation	66(82.5%)	6(7.5%)	5(6.3%)	1(1.3%)	2(2.5%)	0(0%)	0(0%)

DISCUSSION

Our study was a teriary care hospital based study with a sample size of 80. Mean age of patients committing suicide in the study was 29.26 (SD = 11.734). The majority of suicides, 49 patients, (61.25%) were under the age of 30 years. Similar findings were found in study conducted by Kodali M *et al*., [14] and Tara R *et al.*, [1] There was a narrow male preponderance in patients with deliberate self-harm which was similar to the observation of study conducted by Muninarayana C *et al.*, [15] Sixty one (76.3%) patients belong to low socio-economic status which is in conformation with the study conducted by Kodali M *et al*., [14].

Seventy (87.5%) received formal education while a few 10(12.5%) had no education.

Most of suicide attempters were housewives, 22(27.5%) followed by farmers 17(21.3%) and students 16(20%). Similar findings were observed in a study conducted by Bansal PD *et al.*, [16] Fifty (62%) of study population was married corresponding to study conducted by Muninarayana C et al.[15] Forty-nine (61.3%) cases were from rural background, similar findings were observed in a study conducted by Ebenezer JA *et al*., [17].

Our study was observed that 74 (92.5%) of deliberate self-harm patients were Hindus. However this can't be reflected as a religious perspective as 85% of Indian population follows Hinduism.

Poisoning/ drug overdose was the most common method. Organophosphorus poisoning was commonly adopted by the cases, 31(33.75%) to attempt

suicide. Similar observation was made by Chaudhury *et al.,* [18] in their study.

Among 80 cases only 9(11.25%) were planned suicide while 71(88.8%) didn't do any preparation for attempt. It was impulsive decision for 74(92.5%) cases in the study. The findings were similar in study conducted by Ebenezer JA *et al*., [17].

Twenty-seven (33.8%) subjects had moderate depression while 16(20%) had severe depression. Similarly, study conducted by Kodali M *et al*., [14] shows depression as a major psychiatric morbidity to cause deliberate self-harm. Twenty three (28.7%) had moderately severe anxiety while 12(15%) had major no- psychiatric chronic medical illness, similar observations were made by Ebenezer JA *et al*., [17].

LIMITATIONS

This study was a hospital-based study, representing only the tip of the iceberg. It does not represent the actual number of cases occurring in society as hospital being out of reach to many and people being afraid to report to hospital due to legislative measures taken against the attempt, setting a drawback to the study.

CONCLUSION

The findings of the study suggest that majority of people with deliberate self-harm were from rural background. These were isolated, impulsive attempts triggered by various stressors in life. Most of them did not want to die actually but attempted suicide to escape or to solve the problems. Youths and housewives were mostly affected. Psychiatric morbidity in majority played the main role in the cause. Taken together the findings, it is concluded that identification of risk factors and variables causing deliberate self-harm in vulnerable groups and appropriate preventive measures on time can save lives of thousands of people.

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