DELIBERATE SELF-HARM PRESENTING TO A TERTIARY CARE TEACHING HOSPITAL IN PAKISTAN: METHODS AND CLINICAL FEATURES

Anum Misbah Hasanat, Fareed Aslam Minhas

ABSTRACT

Objectives: To study the socio-demographic profile, the circumstances leading to self harm (DSH) and presence of any psychiatric illness in patients presenting to Accident and Emergency (A&E) Departments of RMC allied hospitals in Rawalpindi with attempt of DSH

Design: Descriptive study

Place and Duration of study: A&E departments of RMC allied hospitals in Rawalpindi in six months, from 1st November 2008 to 30th April 2009.

Subjects and Methods: All patients with deliberate self harm presenting to A&E departments of RMC allied hospitals in Rawalpindi who met inclusion criteria during the study duration were included in the study.

Results: Out of 386 participants, (52.1%) were males (47.9%) were females. The mean age of participants was 25.50 years. 89.1% patients had self poisoned themselves, 10.4% had done self injury and 2 patients had attempted both when presented to hospital. Organophosphorus poison was most commonly used substance for self poisoning used in 41.4% of cases. In cases of self harm, 64.3% had presented with lacerations and 11.9% with hanging. 4.1% patients had a previous history of physical illness and 3.4% patients were suffering from a physical illness at time of presentation. 4.4% patients had a past psychiatric history. 3.6% patients were suffering from a psychiatric illness at the time of presentation. 6.2% patients had attempted DSH in the past. Substance abuse was found in 8.0% of patients. Family history of DSH or suicide was found in 3.9% patients.

Conclusions: Among patients with DSH in A&E department male presented more than the females. Mean age belonged to about 25 years, mostly coming from low socio economic group. Self poisoning is the most commonly used method. Past history of DSH was found to be the major risk factor for future attempts.

Key Words: Deliberate Self Harm, Self Mutilation, Self Injurious behaviour, Parasuicide, Self Destructive behaviour, Suicide

INTRODUCTION

Deliberate self harm (DSH) is defined as any non fatal injury or harm which is reported by the patient as being self inflicted or which is felt by the clinician to be self-inflicted regardless of the wish to die or not as a result of the act[1]. Deliberate self harm (DSH) and suicide are one of the leading causes of morbidity and mortality around the world[2] accounting for more than 400,000 deaths annually[3]. Suicide is among the three leading causes of death among those aged 15-44 years in some countries, and the second leading cause of death in the 10-24 years age group[4]. Along with neuro-psychiatric disorders, suicide contributed to 12.7% of the global burden of disease as reported by WHO in 2007[5]. On the other hand, attempts of deliberate self harm are up to 20 times more frequent than completed suicide. This is almost equal to one attempt every 3 seconds, on an average[5]. More recent work shows that 60% of all world suicides are being attempted in Asia, which approximates to about 60 million people attempting suicide in Asia each year[4]. Evidence accumulated in recent years also shows that in all Islamic countries, patients presenting to hospitals with suicide and DSH constitute a large population. However information on suicide from Islamic countries is lacking, including those countries with populations exceeding 100 million people such as Bangladesh, Indonesia, and Pakistan[6].

In Pakistan, unfortunately the problem goes unnoticed and unrecorded at all levels. Data on suicide is not included in the national annual mortality statistics. As a result, national rates on suicide are neither known nor reported to the World Health Organization (WHO) (World Health Report 2000)[7].

The study was aimed to know the socio demographic profile, leading circumstances and associated psychiatric illness in patients presenting with DSH in emergency department.

Anum Misbah Hasanat: Psychiatrist, Kahuta Research Laboratories Hospital, Islamabad.
Fareed Aslam Minhas: Institute of Psychiatry. Benazir Bhutto Shaheed Hospital, Rawalpindi.
Correspondence:
Dr. Anum Misbah Hasanat
Email: anum_misbah@hotmail.com

SUBJECTS AND METHODS

The study was a multi centre study which took place simultaneously in Accident and Emergency departments three hospitals of Rawalpindi, allied with Rawalpindi Medical college: Holy Family Hospital (HFH), Benazir Bhutto Hospital (BBH) and District Head Quarters Hospital (DHQ). The catchment area includes the districts of Rawalpindi , Chakwal, Attock, Jhelum, Azad Jammu and Kashmir, Abbotabad, Khoshab and Gujrat etc. It was a descriptive study and was conducted over a period of six months from 1st November 2008 to 30th April 2009. A total of 386 patients were recruited through non probability, convenience sampling and included all patients of both genders above 10 years of age who presented in A&E department with either completed suicide attempts or DSH including self poisoning, self injury, probable self harm and unsuccessful attempts of deliberate self harm. All those patients were excluded where there was an accidental ingestion of any recreational drug or foreign bodies or where patients refused to give consent.

All data collected was entered and analyzed in Statistical Package for Social Sciences (SPSS) version 13.0. Means and standard deviation were calculated for continuous variables and frequency and percentages were calculated for categorical variables. Chi square test was used to find any association between variables. $P>0.05$ was considered significant.

RESULTS

The demographic profile of patients shows that 52% males and 48 % females presented o A&E department with DSH. Maximum number of patients fell in the age range of 16-25 years with 63.7% males and 70.8% females. Marital status showed that 74.6% males and 54.1% females were unmarried as compared to married population with 23.4% males and 40.5% females. 2 male patients were divorced.

31.4% females and 42.3% males had studied up till tenth grade. 14.4% males and 20% females were uneducated. Only 3% males and 11.3% females were educated till graduation and above. Employment status shows that 30.3% males were unemployed , 24.4 % were students and 42.3 % were employed. In female population, 22.7% females were students, 34.65 were house wives and 5.4% belonged to working class.

35% of patients belonged to families where monthly income was between 5000-10,000 rs. 20% patients belonged to families with monthly income below 5000 rs. 27% patients had monthly income of families between 10,000-15,000 rs.

The relationship between gender and different substances used for self poisoning is shown in table 1.

Table 2 shows relation relationship between gender and different methods of self injury.

Pie charts 1 and 2 show site of lacerations in males and females consecutively.

Other parameters studied were circumstances surrounding the attempt of self harm, 302 (78.2%) had taken no measures to prevent themselves from being found by others, 71 (18.4%) had taken some passive precautions like being alone in a room but not doing anything to prevent themselves from being discovered or telling the family themselves, 13 (3.4%) cases had taken active precautions against being discovered. 4 people out of 386 thought of writing a suicidal note and only 3 had written it down. 212 (54.9%) patients had not informed the family after attempting the self harm, while 107 (27.7%) had told clearly. 233 (60.4%) of patients made DSH attempt when alone, 34 (8.8 %) attempted self harm in presence of others in the same room, 119 (30.8%) had attempted to harm themselves with people not in the same room but were present in vicinity of patient to help them in time.

Out of 344 patients with self poisoning, the name of substance was known to the patients or families in 199 (57.5%) of the cases and in rest of 147 (42.5 %) patients the name was not known.

The distribution of quantity of substance taken according to volume shows 46% had taken liquid between 500-1000 ml, 12 % had ingested liquid in amount between 250-500 ml and 42% had ingested less than 250 ml of liquid.

Estimated number of tablets shows that 60% patients had taken between 1-15 tablets, 22% had taken 16-30 tablets, 12% of patients reported that they had ingested between 31-45 tablets and 6% said they had taken more than 46 tablets for purpose of DSH.

16 (4.1%) patients had a previous history of physical illness whereas 13 (3.4%) patients were suffering from a physical illness at time of presentation. Regarding psychiatric history, 10 (2.6%) patients had a psychiatric OPD contact in the past and 7 (1.8%) patients had history of admission in a psychiatric ward in the past. 14 (3.6%) patients were suffering from a psychiatric illness at the time of presentation and 8 (2.1%) were taking psychotropics.

24 (6.2%) patients had attempted DSH in the past and out of those 14 (3.6%) had attempted it within last 12 months.

Substance abuse was found in 16 (8.0%) of patients with cannabis found as most commonly abused substance. In 4 cases multiple substances were abused. All of these patients were male.

Family history of DSH or suicide was found in 5 (3.9%) patients.

Associations between varaibles

Chi-square analysis was done to find out associations between the following variables

Table 1: Relationship between gender and different substances used for self poisoning

Type of substance	Gender		Total
Used	Male	Female	
organophos-phate com-pounds	37 (42.0%)	45 (40.5%)	82 (41.2%)
psychotropics other than	2 (2.3%)	3 (2.7%)	5 (2.5%)
Benzodiaze-pines			
Benzodiaze-pines	18 (20.5%)	28 (25.2%)	46 (23.1%)
Liquids	14 (15.9%)	14 (12.6%)	28 (14.1%)
other drugs of prescription	10 (11.4%)	19 (17.1%)	29(14.6%)
Others	7 (8.0%)	2 (1.8%)	9(4.5%)
Total	88	111	199
Chi square test			
Pearson Chi square	df	p-value	
6.149	5	0.292	

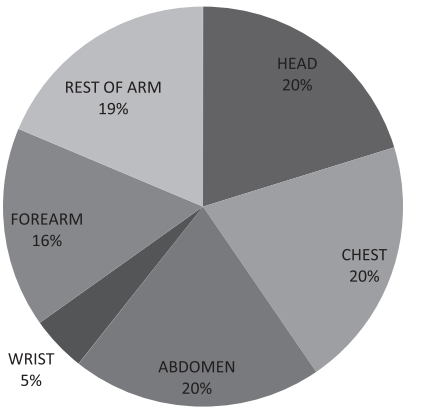
***p>0.05 considered statistically significant**

Table 2: Relationship between gender and different methods of self injury

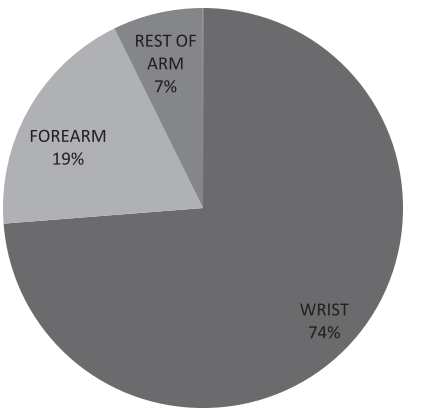
Method of self injury	Gender		Total
	Male	Female	
Lacerations	19(67.9%)	8(57.1%)	27(64.3%)
Hanging	3(10.7%)	2(14.3%)	5(11.9%)
Jumping From Height	2(7.1%)	1(7.1%)	3(7.1%)
Stabbing	1(3.6%)	1(7.1%)	2(4.8%)
Burning	0	2(14.3%)	2(4.8%)
Drowning	1(3.6%)	0	1(2.4%)
Banging The Head	2(7.1%)	0	2(4.8%)
Total	28	14	42
Chi Square			
Pearson Chi-Square	df	p-value	
6.017	6	0.421	

***p>0.05 considered statistically significant**

Graph 1: Distribution of site of laceration in male patients



Graph 2: Distribution of site of laceration in female patients



Association was found between gender and nature of act with p- value of 0.028 (< 0.05). Males are more inclined to attempt self injury.

An association was present between nature of act and history of previous attempts. (p-value 0.002, <0.05). Patients who presented with self poisoning more frequently had history of DSH in past.

DISCUSSION

Little litrature is available for comparison however few studies carried out previously have given almost the same results.

Age of patients in this study showed that maximum number of patients fell in the age range of 16-25 years with a mean age of 25.50 years. This is in agreement with other studies carried out in Pakistan previously. Zakiullah N et al.(2008) showed similar results with maximum number of patients falling in the same range of 16-25 years[8]. Similar findings have been obtained previously also in 1996 in another study carried out in Karachi where mean age was found to be 27.37 years[9]. Other studies from different parts of the world also give similar result[10, 11].

In this study gender distribution showed that males were more than females; with 52% males and 48% females. This was in contrast with other studies carried out in Pakistan previously. In the same study carried out in Karachi in 2008 by Zakiullah N, 60.2% females and 39.8% males[8] presented with DSH. Other studies also show a dominant female population having 59% females and 41% males[9]. In a study carried out in Turkey on patients presenting with DSH to hospital emergency department, the percentage of females was again higher than males[12]. There can be many reasons for this difference in findings. A number of male patients presented who were poisoned for purpose of mugging. This increased the total number of male patients who were included in the study. Also information regarding self harm in many female patients was not disclosed by the family because of stigma or shame so excluding them from the study.

Previous studies had shown that males attempting DSH were mostly single whereas females were mostly married[8]. In this study, the results showed that in both genders, most patients presented were unmarried with 74.6% males and 54.1% females. In females, the frequency of married women was 40.5%. This finding is consistent with the observation that being unmarried acts as a risk factor for patients who attempt DSH or suicide[4].

Educational status revealed that 82.9% of patients had received some kind of formal education. 37% of the patients had education till matric. This finding was in agreement with previous study by Khan MM et al[13]. Being unemployed or low socioeconomic status is described as a risk factor for DSH and suicide as it increases the burden of psychosocial stresses[10, 14]. In our study 35% of families of patients fell in the income range of 5,000 to 10,000 rupees. 29% of patients were reported to be unemployed.

Regarding method of self harm, this study revealed self poisoning to be more prevalent than self injury with 86.1% males and 94.6% females presenting with self poisoning. Previous studies have also showed same findings with self poisoning being more than self injury[8]. Association between gender and method of self harm was significant and showed that males were more inclined towards self injury and more lethal methods as compared to females.

In this study organophosphorus poisoning came out to be the most commonly used substance, being used in 41.4% of the cases. This is in agreement with studies carried out worldwide where organophosphorus poisoning has been identified as most commonly used substance for DSH especially in agricultural countries and in most countries of Eastern Mediterranean Region[15, 16].

Most commonly used organophosphorus compound was rat poison which comes in forms of small pills and powder. Benzodiazepines are the second most commonly used substance for self poisoning with almost 22.7% of patients using them for DSH. It reflects the ease of access of these drugs which are available on over the counter prescriptions despite the fact that the law of Pakistan states that these drugs can only be dispensed if prescribed by a certified practitioner.

For patients presenting with self injury, most commonly used method was injury by laceration made on wrist. Most commonly used instrument was razor.

Horrocks J et al. concluded similar findings in his study that cutting was the most common form of self-injury, accounting for 61.7% of self-injury episodes. Most commonly used instrument was razor and most preferred site was the forearm followed by the wrist[3].

It was seen that most of the patients had not taken any precautions against being found out or the act was made in presence of others. This indicates that such acts may lack an actual intent to die and there may be other factors associated with that. Such acts were mostly impulsive. The intent to die could not be established in the project as people appointed to fill out the proformas were not trained to take a psychiatric history to establish intent to die. Suicidal note is considered as a predictor to assess the severity of illness. It was found in only 3 patients.

Psychiatric illness appears to be one of the important risk factors for self harm. Almost 34% of Pakistani population suffer from common mental disorders, and depression is implicated in more than 90% of suicides[17]. However in this study only 17 (4.4%) patients had a past psychiatric history and 14 (3.6%) patients were suffering from a psychiatric illness at time of DSH. This may be due to the fact that people recording the data were not trained to get a psychiatric history and most patients were not referred for psychiatric evaluation. In this study only 4.1% patients had past history of physical illness and only 3.4% patients had a physical illness at the time of presentation.

In 6.2% of the cases, previous history of self harm was found. Almost half of these patients (3.6%) had attempted DSH attempts in past 12 months. Gunnell D et al has also shown in his study that about 6% patients after being discharged from a psychiatric ward were readmitted for repeated attempt of self harm in following one year and most of these attempts were within three months of being discharged[18].

Family history of self harm is a strong predictor for further attempts[8]. This was seen in 3.9% of the patients.

Substance abuse was found in 8.0% of cases which is slightly less than what has been found in previous studies[8]. The percentage still speaks strongly about a correlation between substance abuse and DSH which has been established[12, 8].

LIMITATIONS

Limitation of the study was that the staffs responsible for data collection was not trained for psychiatric assessment. So this study gives the basic profile of the patients in terms of demographic variables but does not give the details of associated psycho social stressor nor it

discusses the probability of a psychiatric illness in these patients. It also does not address the disposal of such patients and the results of a psychiatric evaluation if done.

CONCLUSIONS

Among patients with DSH, males present to Accident and Emergency Departments more than females. Mean age is 25.50 years. Most of the patients are single and belong to low socio-economic group. Self poisoning is the most commonly used method with organophosphorus compounds as most commonly used substance. In self injury, laceration at wrist is most common. Past history of DSH attempts is recorded as a strong risk for future attempts.

FUTURE IMPLICATIONS

Deliberate self harm is an under researched area in the country. Most patients present to hospital after making the attempt, get emergency medical treatment and get discharged from there. Thus more extensive research is required in these areas which can help in better understanding of the problem. This in turn can guide policy makers to formulate plans which can address such a grave issue on national level.

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