A Cross-Sectional Study of The Pattern of Cases of Deliberate Self-Harm in a Tertiary Care Hospital

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Abstract

Objective of the Study: To study the different methods used for DSH and precipitating factors

Materials and Method: The present study was conducted in the department of emergency medicine in St John's Hospital, Bengaluru. 337 individuals who were brought to the emergency department with an alleged history of DSH and were stable after medical management were selected for the study. Subjects were assessed using the structured questionnaire and a thorough history. Group differences for categorical variables were examined with fissure exact test.

Results: Analysis revealed that 60.5% of DSH cases were in the age group of 18-30 years, 54.3% were females, 37.7% of family problems, 42.1% preferred drug over dosage, 10.7% in February and17.8% on Mondays.

Interpretation & Conclusion: Young adults were the most vulnerable group. Singles outnumbered all others. Nuclear family and urbanization proved to be risk factors. Most of them attempted DSH because of family problems and most attempted at home. Drug overdose was the most preferred method.

Keywords: *Deliberate self-harm, Suicide attempt, Suicide prevention*

Introduction

Deliberate self-harm, both fatal and non-fatal, has become a serious challenge to the public and private health sector of India. Known in many other terms like attempted suicide, deliberate self-injury and Para suicide, an act of self-infliction is well defined by the word 'Deliberate Self Harm', which covers all dimensions of self-poisoning and injury – the purposes behind be any[1]. DSH also forms one of the most common causes for acute medical admissions for both men and women. Most of the developing countries including India don't maintain an active register of self-harm. England is the first nation to introduce one such, in 2002. Health service planning requires frequently updated information in the dynamic trends of self-harm, to assess the effectiveness of management and preventive measures, as well as to maintain an optimal provision of services to the victims.

This study considers all non-fatal self-harm cases as parts of deliberate self-harm and also carries references to intentional self-inflicted poisoning, injuries and self-harms which may or may not have fatal intents or outcomes. Some of the survivors of self-harm commit it again with a strong intention to die, but they fail. Presently no specific nomenclature exits to denote these two groups. Suicides have been studied and theorised extensively but a very few of those studies consider self-harm, which is a main reason why very less amount of data exists in the national level regarding DSH. Though the National Crime Bureau keeps the statistics of committed suicides, there is no credible source at national level for data regarding the number of deliberate self-harm cases. Most of the suicide cases were under reported in this regard.

Materials and Method

This study was conducted in the Emergency Medicine Department of St John's Medical College Hospital, a tertiary care hospital with a yearly Emergency OPD cases of around 50000. This hospital is located in Koramangala, situated in the south-eastern part of Bangalore. It is a cross-sectional study and data

collection was done from January 2014 to December 2014. All those individuals who came to/brought to the emergency department of the hospital with a known history of DSH and stable after medical management were selected. An average of 25-30 cases each month accounted to a total of 337 cases of DSH in the year 2014. All cases with history of accidental over dosage of therapeutic agents, alcohol or other poisons and fatal cases of deliberate self-harm were excluded.

A structured questionnaire was given to the subject after taking written informed consent by explaining them the pros and consequences of the study under taken at emergency department of St John's Hospital, Bangalore. An informed consent to participate in the study was taken from each one of the patients. Strict confidentiality was assured to the patients and their families regarding their identity and details collected during the interview. They were interviewed once they gained physical stability after resuscitation, recovery and a short period of observation in the emergency medicine intensive care unit.

This study has been granted ethical clearance by the Institutional Ethical Review Board (IERB), St. John's National Academy of Health Sciences. A pilot study was undertaken at St John's Hospital, Bangalore in December 2013 with individuals who came with history of deliberate self-harm. The purpose of this pilot study was to assess the feasibility of the study, ease with which individuals could answer the self-administered questionnaire and time taken per subject interview. A total of 10 subjects were interviewed in the pilot study. The pilot study helped in scheduling data collection for this study and incorporating changes in questionnaire where required.

Statistical examination and data treatment were carried out by standard statistical methods using SPSS 20 version software. All study variables were described by appropriate descriptive statistics methods like frequency and percentages were done by using Fisher's exact test since the expected counts in some cells were considerably small. The p value of <0.5 was considered to be statistically significant.

Results

Table 1. Age wise distribution of deliberate self-harm cases

Age group in years	Frequency	Percentage (%)
Below 14	3	0.9
14 & above- below 18	15	4.5
18 and above- below 30	204	60.5
30 and above- below 45	96	28.5
45 & above – below 60	13	3.9
60 & above	6	1.8
Total	337	100.0

Table 2. Sex wise distribution of DSH cases

Gender	Frequency	Percentage
Male	154	45.7
Female	183	54.3
Total	337	100

Table 3. Precipitating factors

Factors	Frequency	Percent
Debt	16	4.7
Marital conflict	68	20.2
Exam tensions	20	5.9
Other family problem	59	17.5
Illness	18	5.3
Mental illness	42	12.5
Death of dear person	3	.9
Drug addiction	11	3.3
Love affair	49	14.5
Unemployment	11	3.3
Career problem	7	2.1
Other causes	33	9.8
Total	337	100.0

Table 4. Methods

Methods	Frequency	Percent
Drug overdose	142	42.1
Drowning	1	.3
Self-immolation	3	.9
Other poisons	70	20.8
Hanging	14	4.2
Insecticides	56	16.6
Self-infliction of injury	23	6.8
Other means	22	6.5
Alcoholism	6	1.8
Total	337	100.0

Table 5. Month wise distribution of DSH cases

Months	Frequency	Percent
April	31	9.2
August	33	9.8
December	20	5.9
February	36	10.7
January	33	9.8
July	29	8.6
June	23	6.8
March	30	8.9
May	26	7.7
November	30	8.9
October	22	6.5
September	24	7.1
Total	337	100.0

Table 6. Day wise distribution

Days	Frequency	Percent
Friday	39	11.6
Thursday	50	14.8
Monday	60	17.8
Saturday	47	13.9
Tuesday	45	13.4
Sunday	51	15.1
Wednesday	45	13.4
Total	337	100.0

Discussion

Table No. 1 depicts that the maximum number of DSH patients were in the age group of 18-30 years (60.5%) and least in the age group <14 yrs.(0.9%). The probable reason for young adults being the most important group of DSH patients is- they are the most vulnerable group and as they grow older, there is a chance of their traditionalist households becoming less supportive. They are more prone to job anxiety, higher expectations at home and work place. The modern day youth lives in a fast paced and highly competitive environment with an additional burden of peer pressure and familial pressure. It is a time of emotional turmoil and they are unable to cope with rejection or the other challenges faced in love. Most of the women in this age group are newly married and find it difficult to adjust and coexist in peace and harmony with their spouse and his family. One of the study determined the mean age of attempters as 25.3[2]. Another study shown that people belonging to the age group of 16 – 40 are found with more suicidal ideation in a study of suicidal ideators in a general hospital setting[3]. So almost all studies are consistent with these findings

Table No. 2 depicts that deliberate self harm is more prevalent in females. Although attempted suicide was 1.2 times higher in women relative to men[4] in some studies, other studies showed a male predominance of Male: Female ratio ranging from 1.13: 1[5] to 1.63: 1[6]. These differences may be reconciled by an appreciation of social changes in India, with a shift toward nuclear families and the cultural emphasis on the male stereotype which the individual tries to fulfill in vain. In our study the Male: Female ratio was 1: 1.19.

Majority of them were due to marital discord (20.2%) with other family problems (17.5%) coming a close second as depicted in table no 3. Most of the cases in other family problem were due to argument with one of the family member other than the spouse. So in total family problems formed a group of 37.7%. Love affairs formed 14.5% and illness 17.8 %(including insanity/ mental illness (12.5%). Studies on attempted suicide concluded most of the cases with interpersonal conflict, financial stressors, and educational burden as the most common triggers. Chronic pain and illness is featured as a common reason in some studies[2].

Self-inflicted injuries constituted 6.8% of the cases as depicted in table no 4, of which most of them were due to love failures and was probably motivated by what they had seen on the media when encountered with a similar situation. The common injuries noted were cut injuries near the wrist joint by a sharp object, injuries sustained while punching a mirror or a window and while banging their head on the wall. Other means of attempting DSH constituted around 6.5% and included cases such as consuming bangles, rings and injecting air. Only 4.2% of cases were due to hanging as it was done more with

a definite suicidal intention and most of them succeeded and hence excluded from the study. Those who survived this method were those who did it in front of or in the presence of others and was rescued immediately or due to an improper or failed technique such as a broken fan or ligature material. There was also one case of a person who attempted hanging because her mother had hung herself. 1.8% cases were attributed to alcoholism with most triggering factors being academic failure or the loss of a dear one. Next group was self-immolation (0.9%) and the least attempted method in our study was drowning (0.3%). As these are lethal methods and as DSH are non-fatal in nature only very few are in this group. An Indian study of suicide attempters classified motivation into 'the wish for change' and 'the wish to die' groups and found that the former had low lethality, lack of planning for their attempt, more likelihood of rescue and were not intoxicated during the attempt. The latter group utilized more drastic measures, such as hanging and was more likely to have a psychiatric disorder with co morbid alcoholism[7].

Most of them opted for drug over dosage. Among them, many were impulsive responses to acute psychosocial stressors. So most of the cases were unplanned type and used whatever accessible tool at that particular time. In drug over dosage cases, almost all of the drugs used were already available in their households. Analgesics, vitamins, cough syrups and psychiatric drugs were on the top of the list. The second highest numbers of cases were from poisons other than insecticides like herbal cockroach powder, phenol, goodnight solution, nail removers and rat poisons. The next groups were those who had insecticide.

Table 5 shows more cases were reported in the month of February forming 9.8% and then January and august with 9.8% each and least in the month of December around 5.9%. When analysed with the seasonal pattern of Bangalore, it was noted that the maximum incidence occurred in winter, followed by monsoon and summer. Table 6 shows more cases were attempted on Mondays at about 17.8% and it was followed by Sundays(15.1%). Thus Sunday and Monday constituted about 32.9% and these similarity can be seen in almost all of the yearly reports of NSRF[8].

In summary our study had identified as 18-30 years as the most stressful time period in one person's life as more prone to job anxiety, higher expectations at home and work place. Family problems were the first precipitating factor followed by love affairs. Most of them preferred drug overdose because of its easy availability followed by poisons. The month with more number of cases was February and in the winter season and among days it was Monday.

Ethical Clearance: This study has been granted ethical clearance by the Institutional Ethical Review Board (IERB), St. John's National Academy of Health Sciences.

Source of Funding: Self

Declaration of Interest: The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this article.

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