



## Deliberate Self Harm and Psychiatric Co Morbidity: A Hospital Based Study

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### ABSTRACT

Deliberate self harm is often associated with Psychiatric disorders influencing morbidity and mortality. In this hospital based cross sectional study, total 275 DSH patients were assessed over 2 year period with DSM-IV for co morbid Psychiatric problems and results were analyzed using SPSS Version 13. Chi square, Z( Proportion) tests and Odds Ratio are used. 275 patients of DSH participated in the study. The group was dominated by young adults (82.17%), Males. (55.27%) Large Number of them came from rural areas belonging to low socio economic status. Farming among men and housewife among women were common occupations of people with DSH. 135 (49.09%) people in our study revealed one or the other major psychiatric disorder according to DSM IV criteria. 68.15% were males and 38.15% were females. An interesting finding was that distribution of DSH patients with psychiatric co morbidity in different age groups showed strong skew towards younger age. Significant association between Psychiatric illness and gender was found. Common psychiatric disorders found were Alcohol & substance abuse and Depression among males and adjustment disorders & depression in females. Our study found, DSH patients with psychiatric illness at higher risk of committing repeated acts of DSH. 62.04% DSH patients with co morbid psychiatric illness showed persistence of intention to die. All DSH patients should be carefully evaluated for co morbid Psychiatric disorders. There is also an urgent need to sensitize all Emergency duty physicians about DSH with co morbid Psychiatric disorders.

**KEYWORDS:** DSH, Psychiatric co morbidity, Gender, Previous attempt

### INTRODUCTION

Deliberate self harm (DSH) is a behavioral problem with significant clinical and public health importance.[1] The incidence of DSH is increasing and is being reported in much younger age group,[2] both in clinical and general population. [3] It is reported across several specific psychiatric illnesses like Personality disorders, Alcohol and Substance abuse, Affective disorders.[4] Importance of co morbidity in DSH has been emphasized.[5] Co morbid psychiatric disorders increase the risk of suicide six times compared with Psychiatric disorders without DSH [6] The aim of the present study is to estimate the prevalence of Psychiatric disorders among deliberate self harm patients attending a teaching hospital and to measure risk of associated repeat deliberate self harm.

### METHODOLOGY:

The Data was collected during the study period of two years from June 2008 onwards prospectively. This was a cross sectional study and study universe were patients attending hospital on emergency and regular OPDs with history of DSH. Medically unfit patients and those with organic brain syndrome were excluded. The study was cleared by the

institutional ethical committee and all Patients who consented to participate were included in the study. All patients after stabilization were interviewed by a Psychiatrist. A semi structured format was used to collect the information from both patient and the relatives subsequently by other members of study team. Diagnostic and Statistical Manual IV edition (DSM-IV) was used to categorize patients in to various groups of Psychiatric disorders. The results were analyzed using SPSS Version 13. Tests of significance like Chi-square and Z (Proportions) test were used. Odds ratio was used to estimate the magnitude of association between psychiatric illness and repeat deliberate self harm.

## RESULTS:

Socio demographic characteristics of DSH patients revealed the following findings; Total 275 patients with history of DSH were included in the study. Of them 226 (82.17%) belonged to younger age group < 35 years. Males who were 152 (55.27%) outnumbered females 123 (44.72%). There was rural preponderance with 162 (58.90%) people belonging to this group. Majority (62.90%) were married in the study population. Socioeconomic variables showed 79.27% belonging to the families with income less than 10,000 per month. Education up to secondary (10<sup>th</sup> grade) level was noted in 174(63%) study subjects. Among women 58.9% were Housewives and among men Unskilled labourers and Farmers were in majority.

**Table No. 1: Social Economic characteristics of DSH patients**

| Profile                      | Number | Percentages |
|------------------------------|--------|-------------|
| <b>Socio Economic status</b> |        |             |
| <5000                        | 105    | 38.18       |
| 5000 -10000                  | 113    | 41.09       |
| >10000                       | 57     | 20.72       |
| <b>Education</b>             |        |             |
| Illiterate                   | 68     | 24.72       |
| Primary & Secondary          | 174    | 63 .27      |
| College & Above              | 33     | 12.00       |
| <b>Occupation</b>            |        |             |
| Student                      | 35     | 12.72       |
| House wife                   | 65     | 23.63       |
| Unemployed                   | 08     | 2.90        |
| Unskilled                    | 97     | 35.27       |
| Skilled                      | 33     | 12.00       |
| Professional                 | 37     | 13.45       |

Our study revealed an interesting finding with 135 (49.09%) people having one or the other major psychiatric disorder according to DSM IV criteria. Among them 92 (68.15%) were males and 43(38.15%) were females. Distribution of DSH patients with psychiatric co morbidity in different age groups showed strong skew towards younger age , with majority female patients 29 (67.44%) in the age group < 25 years. But this association between age and psychiatric morbidity was not statistically significant. (Table No.2) The association between Psychiatric illness and gender was highly significant ( $X^2= 20.82, P= 0.000, df= 4$ ). Alcohol & substance abuse 30(32.6%) and Depression 23(25%) was major psychiatric disorder among males and adjustment disorders 19(44.20%) & depression 17(39.53) in females, followed by Schizophrenia & psychotic illness 10(7.4%) and other disorders like borderline personality & conduct disorders 14(10.37%), (Fig 1).

Table No. 2: Age and Gender grouping of psychiatric Co morbidity in DSH patients.

| Age     | Psychiatric illness |           |           |           | Total      | Statistical Test            |
|---------|---------------------|-----------|-----------|-----------|------------|-----------------------------|
|         | Present             |           | Absent    |           |            |                             |
|         | Male                | Female    | Male      | Female    |            |                             |
| <15     | 01 (1.08)           | 01(2.32)  | 02(3.33)  | 04(5)     | 08(2.90)   | $\chi^2=5.495$<br>P = 0.139 |
| 16 - 25 | 43(46.73)           | 28(65.12) | 39(65)    | 42(52.5)  | 152(55.27) |                             |
| 26 -35  | 27(29.34)           | 12(27.90) | 10(16.66) | 17(21.25) | 66(24.0)   |                             |
| >35     | 21(22.82)           | 02(4.65)  | 09(15)    | 17(21.25) | 49(17.81)  |                             |
| Total   | 92                  | 43        | 60        | 80        | 275        |                             |

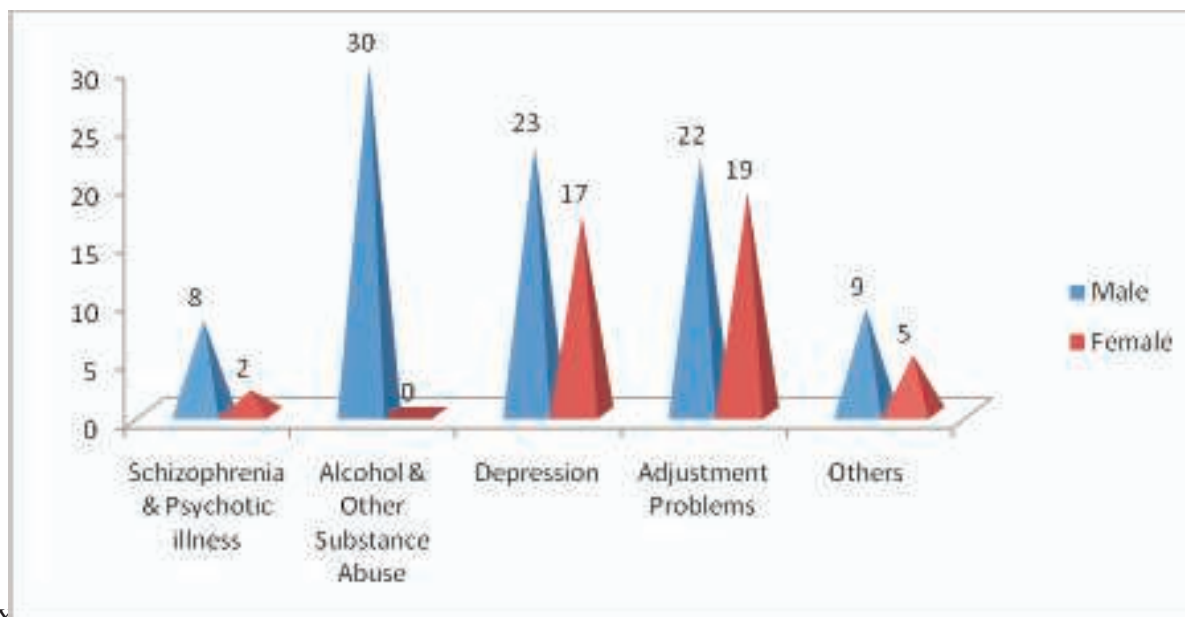


Fig No. 1: Distribution of Psychiatric Co morbid conditions among DSH patients

Our study found, DSH patients with psychiatric illness are 1.95 times at risk of committing repeated acts of DSH compared to patients without psychiatric co morbidity (Table No.3). A significant finding of this study was persistence of intention to die among DSH patients with co morbid psychiatric illness. 62.04% DSH patients with co morbid psychiatric disorders reported continued intention to die at the time of interview compared to 36.62% DSH patients without co morbid psychiatric disorders (Table No.4). This association showed statistical significance ( $X^2 = 7.14, P = 0.01$ ).

**Table No.3: Risk of Repetition of DSH and Psychiatric illness**

| Psychiatric Illness | Repeated attempts of DSH |            | Total      | Statistical test      |
|---------------------|--------------------------|------------|------------|-----------------------|
|                     | Yes                      | No         |            |                       |
| Present             | 16 (64.0)                | 119 (47.6) | 135(49.1)  | OR =1.95              |
| Absent              | 09 (36.0)                | 131 (52.4) | 140 (50.9) | 95%CI = 0.0781 to1.28 |
| Total               | 25                       | 250        | 275        |                       |

**Table No.4: Intention to Die in Psychiatric Co morbid DSH Patients**

| Psychiatric Illness | Intention to Die |             | Total      | Statistical test |
|---------------------|------------------|-------------|------------|------------------|
|                     | Yes              | No          |            |                  |
| Present             | 83 (62.4)        | 52 (36.62)  | 135 (49.1) | $\chi^2 = 7.14$  |
| Absent              | 50 (37.6)        | 90 (63.38)  | 140 (50.9) | P =0.01          |
| Total               | 133 (48.36)      | 142 (51.64) | 275        |                  |

**DISCUSSION:**

The presence of psychopathology elevates the probability of self-injurious behaviors and thoughts, and self-injury is associated with more symptoms and greater severity of psychopathology among both men and women.[7]

Most of the victims of DSH belonged to younger age group with slight male preponderance. DSH in younger age group is often reported. Males outnumbering females are also seen in few studies [8] though it is females often being reported to be more.

DSH was more among people belonging to low socioeconomic group in our study and majority were less educated. This is also reported in other studies[9]. Poverty is associated with multiple stresses therefore is a risk for DSH. Education influences coping and problem solving skills probably. More patients belonged to rural and agrarian background with farmers and agricultural labourers being highest among males and housewives and students among females, similar linkages were observed in another study, [10] Higher economic instability, risks associated with agriculture and easy availability of pesticides explain these findings.[11] In our study the prevalence of psychiatric disorders according to DSM IV criteria was 49.09%. This is far less than some of the western studies which have reported co morbid psychiatric disorders in 85-90% DSH patients [12] on the other hand few Indian studies have reported far less (3.5%)[13] Gender wise more number of Males were found to have Psychopathology than Females but age wise younger age females were more prone to psychiatric illness. But this association between age and psychiatric morbidity was not statistically significant. (Table No.2)

DSH is found in patients with a variety of diagnoses, including substance abuse, eating disorders, posttraumatic stress disorder, major depression, anxiety disorders, and schizophrenia.[14] as well as each of the personality disorders especially borderline personality disorder

Major psychiatric disorders found in our study population were Alcohol substance abuse and Adjustment disorder among the males and Depression and Adjustment disorder among females. High rates of Adjustment disorders are probably a reflection of influence of socio cultural milieu, similar rates were reported by others. [15] Our rates of Depressive disorders were similar to those reported by Gupta *et.al* [15] But far less than reported by Beautrais *et al*. [16] who reported 65%. Many western studies report far more alcohol and substance abuse (53.5%) [17] which is much higher than 22% found in our study. Risk of repeat DSH is real one. This risk increases with co morbid Psychopathology and its severity both emphasize need to evaluate these patients carefully. Our findings also show a significant risk of repetition of DSH with co morbid psychiatric disorder. Persistence of intention to die among high number of DSH patients with psychiatric co morbidity has important bearing on the plan of management of these patients.

### Study implications

DSH is growing public health problem. Significant number of these patients may end up with primary care doctors. There is an urgent need to sensitize Medical Officers regarding screening of DSH and Co morbid psychiatric disorders and their management at primary care level.

The study highlights the need for Multi disciplinary team approach comprising of Community Health personnel, Psychiatrist and NGOs to tackle Social & Psychopharmacological aspects to prevent DSH with Psychiatric Co morbidity.

### Limitations of the Study

The study was hospital based therefore all potential subjects may not have been included in the study. Being hospital based, may present false high association between DSH and Co morbid psychiatric disorders as people with DSH in non clinical setting may have been missed.

Study was restricted to Axis-I of DSM-IV as a result personality disorders may have been overlooked.

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