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PSYCHIATRIC MORBIDITIES AMONG DELIBERATE SELF-HARM ATTEMPTERS, IN EMERGENGY SETTINGS, IN A TERTIARY HOSPITAL OF KOLKATA, WEST BENGAL

Psychiatry

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ABSTRACT

Introduction: Deliberate self-harm, including suicide attempt, is a potentially self- injurious behaviour, for which there is proof, that the individual, either implicitly or explicitly, has intention of self-killing. **Aims:** To assess the lethality of the deliberate self-harm attempts; also, to assess the risk of death and likelihood of rescue, of the attempts and to find out if there is an association between such morbidities, and the lethality of attempt and likelihood of rescue. **Material And Methods:** This cross-sectional, descriptive and analytical, quantitative, hospital-based study was conducted at KPC Medical College and Hospital, Kolkata. 182 patients of deliberate self-harm, who fulfilled the inclusion and exclusion criteria, were randomly selected by computer using a predetermined random number generated from computer. **Result:** The method of DSH attempt in male & female sexes. It is seen that in the 'cutting' method, 54.4% are males; in ingestion of oral agents, majority (62.2%) are females; in the hanging/ asphyxiation' method, 51.4% are males. **Conclusion:** The study found that, majority of the DSH attempters were females, young (median age being in the early 30s), Hindu, educated up to class 10, housewives followed by employed subjects, and married. Majority of the patients did not have a past history, or a family history of DSH attempt. The method of DSH attempt used by majority was ingestion of oral agents, followed by cutting, followed by hanging.

KEYWORDS

Poisoning, Deliberate self-harm, Suicide and Psychiatric morbidities.

INTRODUCTION

Deliberate self-harm, including suicide attempt, is a potentially self-injurious behaviour, for which there is proof, that the individual, either implicitly or explicitly, has intention of self killing[1]. It has become a burning issue, and is devouring almost all age groups. Suicidal behaviour has a large number of causes, which are complex and interact with each other. Identifying these factors, and understanding their role in suicidal behaviour is pivotal in preventing suicide.

The first recorded person to commit suicide was Empedocles, in 434 BC. One of his beliefs was that death was a transformation, and it is likely, that this idea had influenced his suicide. He died by throwing himself into the Sicilian volcano, Mount Etna[2]. Pythagoras was against suicidal act, believing that a sudden and unexpected departure of a soul would upset the delicate balance of Nature. Aristotle also condemned suicide, because he believed that it deprived the community of the services of one of its members[3].

In the Middle Ages, the Christian Church excommunicated suicide attempters, and those who completed suicide were buried outside consecrated graveyards. Christina Johansdotter was a Swedish lady, who had killed a child in Stockholm, with the only purpose of being executed. She wanted to seek suicide through execution (by committing murder)[4].

By the nineteenth century, suicide was being viewed in Europe, as caused not by sin, but by insanity[5].

In ancient Indian literature, there are stories of valour, in which suicide has been shown as a way to avoid shame and disgrace[6]. Suicide was mentioned in Ramayana and Mahabharata. When Lord Sri Ram died, suicide followed in Ayodhya like an epidemic. However, the Bhagavad Gita condemns suicide.

Suicide by starvation ("sallekhana") is believed to be associated with the attainment of "moksha" (ultimate liberation from birth and re-birth), and is practised even today. The practice of Johar, where Rajput women killed themselves to avoid being disgraced by invaders, is well known in Indian history. Isolated cases are still reported[7].

Deliberate self-harm is a conscious volitional act, due to a complex interaction of social, environmental, biological and cultural factors operating on an individual's life. WHO estimated that 877000 deaths were due to suicide in the year 2002. More than one lakh persons in India lost their lives by committing suicide during the year 2008, the all-India rate of suicides being 10.8. However, Sikkim reported the highest rate of suicide (48.2), followed by Puducherry (46.9), and suicide rate in Andhra Pradesh was 17.4 in 2008. Suicide attempt rates are found to be 10-40 times higher than completed suicide rates. A study by Peeter Värnik in 2012 shows that, India's adjusted yearly suicide rate is 10.5 per 1,00,000. India's National Crime Records Bureau (NCRB) reported that the total number of suicides in India was 1,33,623 in 2015[8].

MATERIAL AND METHODS

Study Design- Cross-sectional, descriptive and analytical, quantitative, hospital-based study.

Study Setting-

1. IPD and OPD of Department of General Medicine, KPC Medical College & Hospital, Kolkata;
2. IPD and OPD of Department of Psychiatry, KPC Medical College & Hospital, Kolkata;
3. Other referrals to Department of Psychiatry;
4. Intensive Care Units of KPC Medical College and Hospital, Kolkata.

Place Of Study- K.P.C Medical College and Hospital, Kolkata.
Period Of Study- 18 months (1st January, 2019- 30th June,2020).
Study Population- All patients of deliberate self-harm, attending the emergency or OPD of KPC Medical College and Hospital, Kolkata.
Sample Size- 182 (as per CDC Atlanta calculator). Subjects selected on the basis of Simple Random Sampling.

Study Variables

1. Psychiatric morbidities.
2. Socio demographic status.
3. Age
4. Sex.

Inclusion Criteria

1. Patients of Deliberate Self-Harm, including any kind of physical/

mechanical injury, thermal injury, drug overdose or poisoning, carried out in the knowledge that it is potentially harmful, and the dose taken is excessive.
2. 18-65 years of age, both male and female.
3. Able to converse in Bengali, or Hindi, or English, and educated up to at least primary level.
4. Willing to participate in the study, and give informed consent.

Exclusion Criteria

1. Unable to talk due to critical or serious physical condition.
2. Patients with intellectual disability.
3. Presence of other comorbidities like malignancy, or other chronic debilitating diseases.

RESULTS AND DISCUSSION

This cross-sectional, descriptive and analytical, quantitative, hospital-based study was conducted at KPC Medical College and Hospital, Kolkata. 182 patients of deliberate self-harm, who fulfilled the inclusion and exclusion criteria, were randomly selected by computer using a predetermined random number generated from computer.

Comparing sex and past & family history of DSH: -

Majority of the patients (77.4%) do not have a past history of DSH attempt; only 22.5% have a past history. Bhatia et al.[9] had also made similar observations. Out of those who do have a past history, 65.9% are females. The difference is not statistically significant (p= 0.094).

Majority of the patients (83.5%) do not have a family history of DSH attempt; only 16.4% have a family history. Venkoba Rao had also made similar observations. Out of those who do have a family history, 53.3% are females. The difference is not statistically significant (p= 0.898).

Comparing sex and method & reason of DSH attempt: -

Majority of the patients (45.1%) ingested oral agents to commit the DSH attempt. This finding is supported by previous studies by Partha Pratim Das et al.[10]. The fact that the most common method is ingestion of oral agents, can be explained by wider & easier availability of oral agents (like organophosphorus compounds, other insecticides, weedicides, rodenticides, corrosives, Benzodiazepines), & easier execution of the method, as reported by most of the study subjects.

Ingestion of oral agents was followed by cutting (31.3%), followed by hanging/ asphyxiation (20.3%). It was seen that, in the "ingestion of oral agents" group, majority (62.2%) were females; in the "cutting" method, majority (54.4%) were males; in the "hanging/ asphyxiation" method also, majority (51.4%) were males. However, the difference was not statistically significant. This finding is contradictory to a study by Tsirigotis et al.[11], who found significant difference in the method of DSH attempt across genders.

Most of the subjects committed the DSH attempts because of "relationship issues" (43.9%), followed by "financial issues" (25.8%), followed by "familial issues" (20.8%), followed by "academic/ job stress" related issues (9.3%). It was seen that, "relationship issues" and "familial issues" were more in females (63.7% & 73.7% respectively); "financial issues" and "academic/ job stress" related issues were more in males (74.5% & 52.9% respectively). The difference was statistically significant (p= <0.0001). Similar findings were observed in previous studies by Partha Pratim Das et al.[10], This difference can be attributed to the structure of our society, differences in the roles played by men & women, differences in their responsibilities, differences in their social status & power.

Comparing age and presence/ absence of Neurosis: -

Majority of the DSH attempters were neurotic (72.5%). This finding is supported by previous studies by Partha Pratim Das et al.[10].

This can be explained by the fact that, the subjects with no underlying neurosis usually make the DSH attempt out of impulsivity. This group of subjects are younger in age, & more vulnerable to stress & emotional outbursts. Previous studies have also shown that their suicide ideations are not as severe, & their medical outcomes were also better, than their neurotic & older counterparts.

Comparing SALSA Total score and presence/ absence of Neurosis & Psychosis: -

It was seen that, in DSH attempters who had no Psychosis or Neurosis, the mean SALSA Total was 8.6 (SD= 3.45) & median SALSA Total was 11. In those who were Neurotic, mean SALSA Total was 14 (SD= 3.79) & median SALSA Total was 16. In those who were Psychotic, mean & median SALSA Total both were 13 (SD= 11.31). The difference was statistically significant for Neurosis, but not statistically significant for Psychosis.

Comparing sex and Global Impression of Lethality (GIL) of the DSH attempt: -

It was seen that, in the "subminimal" category, both male & female were 50%; in the "low" category, 50.7% were females; in the "moderate" category, majority (60.9%) were females; in the "high" category, majority (54.5%) were males. The difference was not statistically significant. This finding is contradictory to a study by Mergl et al.[12] in which it was observed that, suicidal acts were more lethal in men than women.

Comparing sex and Risk Category of the DSH attempt: -

It was seen that, in the "low risk" category, 50.6% were males; in the "low/ moderate" category, 57.1% were females; in the "moderate" risk category, 57.4% were females; in the "high/ moderate" category, 66.7% were females. The difference was not statistically significant. This finding is again contradictory to the aforesaid study by Mergl et al.[12] in which it was observed that, suicidal acts in men had more risk of death, than those in women.

Comparing sex and Rescue Category of the DSH attempt: -

It was seen that, in the "high rescue" category, 52% were males; in the "high/ moderate" category, 59.5% were females; in the "moderate" category, 61.1% were females; in the "low/ moderate" category, 53.8% were males. The difference was not statistically significant. Again, this observation is contradictory to the aforesaid study by Mergl et al.[12] in which it was seen that, suicidal acts in men had lesser chance of rescue, than those in women.

Hypothesis Test for SALSA items between those who are Neurotic & those who are not Neurotic: -

The null hypothesis was that, the medians of the SALSA items were the same in those who are Neurotic, & those who are not Neurotic. But this study found that all the items of SALSA (Method of Attempt, Reachability, Physical Consequences, Medical Intervention Need & Global Impression of Lethality) as well as SALSA Total rejected the null hypothesis, & were statistically significant. Similar findings were reported in previous studies by Peters et al.[13]

Hypothesis Test for ERRRS Risk items between those who are Neurotic & those who are not Neurotic: -

The null hypothesis was that, the medians of the ERRRS "Risk of Death" items were the same in those who are Neurotic, & those who are not Neurotic. But this study found that all the items of ERRRS Risk of Death (Lethality of method, Impaired Consciousness, Physical Damage, Reversibility of Method, Medical Treatment Required) as well as Total Risk Score & Risk Category rejected the null hypothesis, & were statistically significant. These findings are supported by observations made in previous studies by Goldney[14].

Hypothesis Test for ERRRS Rescue items between those who are Neurotic & those who are not Neurotic: -

The null hypotheses were that, the medians and the distribution of the ERRRS "Likelihood of Rescue" items were the same in those who are Neurotic, & those who are not Neurotic. But this study found that, the item "Access to Rescue", the Total Rescue Score & Rescue Category rejected the null hypothesis, & were statistically significant. Similar findings were reported in previous studies by Goldney[14].

Comparing Global Impression of Lethality (GIL) and presence/ absence of Neurosis & Psychosis: -

When GIL was compared among patients with and without neurosis, it was seen that, in the "Subminimal" category, majority (68.8%) of the subjects were not neurotic. In the "moderate" category, all subjects were neurotic; in the "high" category, majority (81.8%) were neurotic. The difference was statistically significant. Hence, it can be said that, lethality of the DSH attempt was more in patients who had a neurotic disorder. This is supported by observations made in previous studies by Bi et al.[15].

Comparing Rescue Category of the DSH attempt and presence/ absence of Neurosis & Psychosis: -

When Rescue Category of the DSH attempt was compared among patients with and without neurosis, it was seen that, in the "High Rescue" category, majority (61.3%) of the subjects were not neurotic.

In the "Moderate" category, majority (98.1%) of the subjects were neurotic; in the "Low/ Moderate" category, all the subjects were neurotic. The difference was statistically significant. Hence, it can be said that, the overall likelihood of rescue was less in patients who had a neurotic disorder. This finding is supported by observations made in previous studies by Kumar et al.[16]

When Rescue Category of the DSH attempt was compared among patients with and without psychosis, it was seen that, in the "High Rescue" category, majority (93.3%) of the subjects were not psychotic. In the "High/ Moderate" category also, majority (83.8%) did not have psychosis. In the "Moderate" category, as well as in the "Low/ Moderate" category, majority were not psychotic (92.6% & 84.6% respectively). The difference was not statistically significant. However, the present study had only 17 psychotic patients. So, the results cannot be generalized to the entire population.

Comparing Method of the DSH attempt and presence/ absence of Neurosis & Psychosis: -

When Method of the DSH attempt was compared among patients with and without neurosis, it was seen that, in the "No or Questionable Seriousness" category, majority (66.7%) of the subjects were not neurotic. In the "Moderately serious" category, all the subjects were neurotic; in the "Highly Serious" category, majority (83.3%) of the subjects were neurotic. The difference was statistically significant. Hence, it can be said that, the overall seriousness of the method of DSH attempt was more in patients who had a neurotic disorder. Again, similar findings were observed in previous studies by Goldney[14], Bi et al.[15].

TABLES

Past history of DSH versus Sex					
			Sex		Total
			Female	Male	
Past History	No	Count	72	69	141
		% within PastHistory	51.1%	48.9%	100.0%
	Yes	Count	27	14	41
		% within PastHistory	65.9%	34.1%	100.0%
Total		Count	99	83	182
		% within PastHistory	54.4%	45.6%	100.0%

Method of DSH used in each Sex					
			Sex		Total
			Female	Male	
Method	Cutting	Count	26	31	57
		% Within Method	45.6%	54.4%	100.0%
	Oral Agents	Count	51	31	82
		% Within Method	62.2%	37.8%	100.0%
	Hanging/ Asphyxi ation	Count	18	19	37
		% Within Method	48.6%	51.4%	100.0%
	Others (jump, fire etc.)	Count	4	2	6
		% Within Method	66.7%	33.3%	100.0%
Total		Count	99	83	182
		% Within Method	54.4%	45.6%	100.0%

Age Distribution among Neurotic & Non- neurotic Patients						
NEUnonNEU	N	Mean	Median	Mini-mum	Maxi-mum	Std. Deviation
Non-Neurotic/<7	50	26.92	24.00	18	49	8.609
Neurotic/>=7	132	36.27	33.50	18	64	13.509
Total	182	33.70	30.50	18	64	13.025

CONCLUSION

The study found that, majority of the DSH attempters were females, young (median age being in the early 30s), Hindu, educated upto class 10, housewives followed by employed subjects, and married. Majority of the patients did not have a past history, or a family history of DSH attempt. The method of DSH attempt used by majority was ingestion of oral agents, followed by cutting, followed by hanging. The reason behind the attempt in majority was relationship issues, followed by financial issues, followed by familial issues, followed by academic or job stress related issues.

Majority of the DSH attempters had a neurotic disorder. Neurotic patients were older than those who did not have neurosis. Among neurotic patients, majority were females.

Lethality of DSH attempt, risk of death and likelihood of rescue did not depend on the sex of the subject.

In patients who had a neurotic disorder, the method of DSH attempt was more serious, Rescuability was less, and Physical Consequences, Medical Intervention Need & Global Impression of Lethality were more. The overall lethality of the DSH attempt was more in neurotic patients, than those who did not have a neurotic disorder.

The study found that, the overall seriousness of the method of DSH attempt was more in patients who had a neurotic disorder.

The study also found that, the overall likelihood of rescue of the DSH attempt was less in neurotic patients, than those who did not have a neurotic disorder.

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