

Psychiatric Morbidity Among Suicide Attempters Who Needed ICU Intervention

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Abstract:

Background: Suicide is a tragic and serious but preventable public health problem all over the world including Bangladesh. Committing suicide has become a burning issue and mortality rate increases especially in young females. Psychiatric evaluation is needed in suicide attempted patients for better management plan to reduce such unnatural mortality, as well as the impairment related to suicidal thought and psychiatric disorders. **Objectives:** To assess the psychiatric disorders and conditions that needed sufficient clinical attention among the suicide attempters who needed ICU intervention. **Methods:** This cross-sectional study was carried out in an Intensive Care Unit (ICU) of a private hospital of Dhaka City from July 2008 to December 2008. Total forty four subjects of attempted suicide were included in the study and psychiatric diagnosis was made by using Diagnostic and Statistical Manual of Mental Disorders (DSM)-IV by psychiatrists after initial physical problems subsided. **Results:** The most common psychiatric diagnosis was Major Depressive Disorder. Female suffered more and among them attention-seeking behaviors were frequent. Thirty-four patients (77.3%) had previous history of psychiatric disorder. Chemicals (like; organophosphorous, kerosene, harpic and other medicine overdose) ingestion was the most frequently used method by the suicide attempters. **Conclusion:** This study may be helpful for further research regarding suicide attempters and its' association with mental problems. In primary health care setting, the physicians may get a clue to design a system for preventing, early recognition and managing suicidal ideas, thoughts and attempts. Psychiatric consultation should be made mandatory for all patients admitted following attempted suicide.

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Introduction:

Suicide is a tragic and serious preventable public health problem all over the world^{1,3}. It is one of the three leading causes of death among 15-44-year old people globally⁴. Suicide rates among young people appear to be rising in both developed and developing countries more quickly. In recent times, adolescent suicides have been on the increase^{1,4,5}. Examinations, peer pressure and emotional issues are said to be the triggers⁶. Like adults, the number of adolescents who committed suicide has been increasing in Japan also⁷.

Suicide is an act with a fatal outcome that is deliberately initiated and performed by the person in the knowledge or expectation of its fatal outcome. Attempted suicide is defined as a potentially self injurious action with a non-fatal outcome for which there is evidence, either explicit or

implicit that the individual intended to kill himself or herself. The action may or may not result in injuries⁸.

Population-based surveillance in a rural community in southwest Bangladesh revealed that suicide is a major cause of mortality, especially in young females. Mortality from suicide occurred at a rate of 39.6 per 100,000 populations per year from 1983-2002. Among young people, 10-19 years old, suicide accounted for 42% of deaths; 89% of suicide-associated deaths in this age group were in females. Suicide-associated death rates from this surveillance area are substantially higher than rates reported elsewhere in Asia, warranting further studies aimed at identifying risk factors for suicide and strategies for prevention⁹.

Psychiatric morbidity among suicide attempted patients means Psychiatric Disorders and the conditions that needed sufficient clinical attention among suicide attempted persons. This was established according to Diagnostic and Statistical Manual of mental disorders (DSM)-IV by psychiatrist.

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Prevalence study in India shown between 4 -12% of the general population had made at least one attempt and the repetition ratio (persons who attempted suicide again) is 50 %^{10, 11}.

According to National Crime Records Bureau of India it was seen that in every 5 minutes a person commits suicide, 7 attempts to kill themselves forming about 100,000 suicide death per year in India¹². According to the report of the Government of India it was found that the suicide rate is highest in the State of Kerala, nine years in a row, when compared to other states in India^{13, 11}.

Financial difficulties, psychosocial problems, failure in exams, defamation are the major stressors that lead to suicide in males. In Females harassment, family problems, diseases, unemployment etc. was found as the major stressors¹³. Low frustration tolerance, problems in education system, parenting attitudes, weakening protective values of social institutions like family, increased use of alcohol. All contributes to the stressor ultimately leading to suicide.

Biological studies suggest that low serotonergic activity is associated with suicidal behavior. Data from work with monozygotic and dizygotic twins indicate that the clustering of suicide in a family may represent a genetic predisposition to the psychiatric disorders that are associated with suicide¹⁰.

Methodology:

This is a cross-sectional study which was carried out in an Intensive Care Unit (ICU) set up of a private hospital of Dhaka City. The study was carried out from July 2008 to December 2008. Patients admitted in ICU following a suicide attempt were the subjects. Those who died after reaching to ICU following attempted suicide were excluded from the study. Patients were referred to the consultant psychiatrists for evaluation after the physical condition was stabilized.

A detailed clinical interview of each patient was taken after the initial problems have subsided. Consultant psychiatrists did the psychiatric assessment and a psychiatric diagnosis was made according to the DSM-IV where possible. On the other hand, the condition, which has drawn sufficient clinical attention, was also included in the list of Psychiatric Morbidity. The information regarding pre-morbid personality and disorders was crosschecked with a close relative or a reliable informant.

The present study included 44 cases of attempted suicide subjects.

Results:

The cross-sectional study which was conducted during the six months period in an ICU set up among 44 patients of attempted suicide. This throws light on the fact that about 77.3% patients were suffering from psychiatric disorders or at least a problem which has got sufficient importance or clinical attentions for further interventions.

The age of the subjects ranged from 14 to 65 years. Maximum 43.2% respondents were from age group of up to 20. Second most (31.8%) was from age group 21 to 30 years. (As shown in Figure 1).

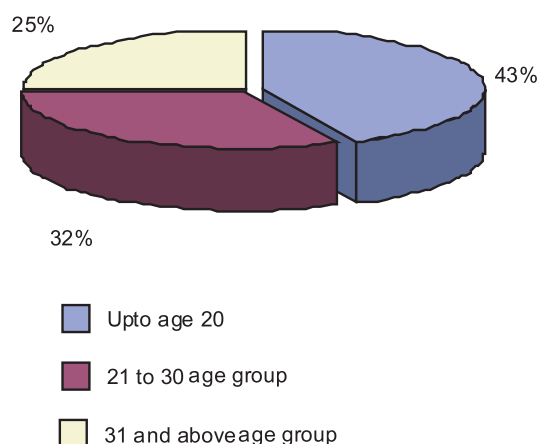


Fig.-1: Age distribution of the suicide attempted patients

In Table- I, it shows the current psychiatric morbidities or problems among the suicide attempters. Out of 44 patients 34 (77.3%) had psychiatric diseases and 10 (22.7%) had no psychiatric problems of clinical attention.

Table-I

Distribution of suicide attempters by current psychiatric morbidity (n= 44)

Psychiatric Morbidity present	Frequency	Percent	Valid Percent
Yes	34	77.3 (%)	77.3 (%)
No	10	22.7 (%)	22.7 (%)
Total	44	100.0	100.0

In the Table-II, it was seen that total number of female attempters was more (26) than male (18).

In relation to method used by the attempters, benzodiazepine overdose was 12, Tricyclic antidepressant (TCA) overdose was 7 and others chemicals (like; organophosphorous, kerosene, harpic and other medicine overdose) were 23. On the other hand, 2 male used physical methods like hanging.

In the Table III, it was shown that out of 44 patients 29 (65.9%) didn't have any history of previous attempts of suicide. However, noticeable number of patients 15 (34.1%) had previous experience of suicidal attempts.

Out of 44 patients 10 (22.7%) persons were not diagnosed as having any of the psychiatric disorders. Rest 34 (77.3%) were diagnosed with having psychiatric disease or conditions that need clinical attention. Maximum 11 (25%) were diagnosed as major depressive disorder, followed by attention seeking behavior 7(15.9%). Though attention seeking is not a diagnostic entity by DSM-IV but it is a condition that needs clinical attention. Next common was Personality disorder or conduct disorder, 4 (9.1%). Schizophrenia was 3 (6.8%); Obsessive compulsive disorder (OCD) and substance related disorder was 2 (4.5%). (In Table- IV and V).

Table-II

Distribution of sex and method used by the suicidal attempters (n=44)

	Sex	Method used				Total
		Benzodiazepines	TCA	Other Chemical (organophosphorous, kerosene, harpic and other medicine overdose)	Other method used (Hanging)	
	Male	5	3	8	2	18
	Female	7	4	15	0	26
	Total	12	7	23	2	44

Table-III

Distribution of respondents by previous attempts of suicide (n=44)

Valid	History of previous attempts	Frequency	Percent	Valid Percent
	No	29	65.9 (%)	65.9 (%)
	Yes	15	34.1 (%)	34.1 (%)
	Total	44	100.0	100.0

Table-IV

Distribution of suicide attempters by pattern of current psychiatric disorders (n=26)

Psychiatric disorders	Frequency	Percent	Valid Percent
Valid Major Depressive Disorder	11	25.0 (%)	25.0 (%)
PD/ conduct disorder	4	9.2 (%)	9.1 (%)
Schizophrenia	3	6.8 (%)	6.8 (%)
Obsessive Compulsive Disorder	2	4.5 (%)	4.5 (%)
Substance related disorder	2	4.5 (%)	4.5 (%)
Acute Stress Disorder	2	4.5 (%)	4.5 (%)
Sexual dysfunctions	1	2.3 (%)	2.3 (%)
Psychotic disorder NOS	1	2.3 (%)	2.3 (%)
Total	26	59.10 (%)	59.10 (%)

Table-V

Distribution of suicide attempters by conditions that needed sufficient clinical attention (n=8)

Psychiatric disorders or Problems Valid	Frequency	Percent	Valid Percent
Attention seeking behavior	7	15.9 (%)	15.9 (%)
Migraine	1	2.3 (%)	2.3 (%)
Total	8	18.20 (%)	18.20 (%)

Discussion:

The cross sectional study had got some limitations itself. The study sample does not represent the picture of whole country but is a very important clue to understand about the psychiatric and psychological status of patients who attempted suicide by using different methods.

In this study, 43.2%¹⁹ patients belonged to the age group below 20 years, which was comparable to other studies done in India, Kerala. In the study it was found that 45.6% (n=94) patients belonged to the age group 15 to 34 years,⁽¹⁴⁾ on the other hand age more than 31 years was only 25%. In recent times adolescent suicides have been on the increase¹. Exams, peer pressure and emotional issues are said to be the triggers⁶. If the young generation of today has already run out of hope, the challenge lies in the hands of the adult society to make them realize that life is worth living¹⁵.

In the present study males constituted 40.9%¹⁸ of the total sample size and females 59.1%²⁶. Comparing these figures with the number of completed suicide cases that underwent medico legal autopsy at the Forensic Departmental Academy of Medical Science, Kannur, Kerala, India, it was found that males constituted 66% (n=245) and females 34% (n=135) of the completed suicide group during the same time period¹⁵. This means in the current study for attempted suicide, the male female ratio is opposite than that of India study. It means females in Bangladesh are more vulnerable for committing suicide than India. This notion also supported by a study conducted by ICDDR, B in Bangladesh. They found that 89% of suicide-associated deaths in the young age group were in females⁹.

In this current study the method used for suicide was divided into four groups. The four methods that were used for attempted suicide were benzodiazepines, TCA overdose, other chemicals such as organophosphorous,

kerosene, harpic and other medicine overdose, other methods used such as hanging. Most of the times the attempters after recovery from the initial physical problems do not want to disclose the actual name of the chemical or the medicine they used for doing this. Most common name was benzodiazepine overdose 27.3% (12 out of 44). On the other hand, different chemicals (like; organophosphorous, kerosene, harpic and other medicine overdose) was 52.3%. Total 7 people took TCA and 2 men wanted to commit suicide by hanging. The result was a bit different from some study done in India. It was found that Organo-phosphorus and Organo-carbamate poisoning was the most frequent method used by patients to attempt suicide and it was supported by other studies from India^{16,17}. This can be explained by the easy availability of insecticides and pesticides in most households.

Another important finding was the previous attempt of suicide. In this current study it was seen that 31.1% patients has got another history of attempted suicide. It reveals that previous attempts further increase the risk of suicide attempts.

Among the different diagnosis and problems, maximum were 11(25%) who were diagnosed as Major Depressive Disorder. Untreated Depressive disorder is always dangerous. Most of the time these problems are misdiagnosed or under diagnosed in country like Bangladesh. Thus sufferings of the patients increase with time and severity. It followed by attention seeking behavior (15.9%). Though attention seeking is not a diagnostic entity by DSM-IV but it is a condition that needs clinical attention. Low frustration tolerance, problems in education system, parenting attitudes, weakening protective values of social institutions like family, increased use of alcohol all contributes to the stressor ultimately leading to suicide¹⁴.

Next common problem was Personality disorder or conduct disorder, 4 (9.1%). As Conduct disorder is diagnosed as Antisocial Personality disorder after 18 years of age, so personality disorder and conduct disorder patients were not differentiated. Schizophrenia was 3 (6.8%); OCD and substance abuse was 2 (4.5%).

Prevention of suicide while potentially effective is challenging. It requires multifaceted approaches and adaptation of strategies to locally relevant cultural factors¹⁸.

Implications for prevention

Suicide is a complex, long-term outcome that requires complex theoretical models for appropriate study and complex interventions for effective prevention.

The highest likelihood of success in saving lives in the long run lies in well designed, comprehensive programs focused on prevention, identification and appropriate treatment of Mental and Addictive Disorders particularly in Primary care^{3,6}.

This could be facilitated by continuing education for health care professional to identify and treat mental illness and by making psychiatric consultation mandatory for all patients admitted following attempted suicide¹⁶.

Further studies will be needed to more closely examine the underlying factors responsible for suicide and characteristics predictive of suicidal death, and to identify opportunities for contact with a physician or mental health services before suicide is contemplated or attempted¹⁸.

At the policy and public health level, increased restrictions on access to most commonly used lethal methods of suicide especially insecticides (organophosphorus and organo-carbamate compounds) and prescribed medications, improving control of facilitatory factors such as alcohol, influencing the media in their portrayal of suicide and reporting of method may contribute to a reduction in suicide rates¹⁹.

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