



# Suicide in Bangladesh: A mini review

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## ABSTRACT

**Background:** Suicide is a public health problem too often neglected by researchers, health policymakers, and the medical profession. **Objective:** It was aimed to provide a comprehensive understanding regarding the suicide based on the existing literature reporting suicide rates, and other suicide metrics, in Bangladesh. **Materials and Methods:** Search was done in PubMed, PubMed Central, Google Scholar, and BanglaJOL with searching keywords ranging date from January 2000 to December 2015. Finally, 13 articles were selected for review. **Result:** The average suicide rate was found 39.6/100,000 population/year and the most common method is hanging and poisoning, with the most prevalent age group is age under 40 years. More common in female, low socioeconomic condition with low literacy, in married persons, in housewives and discord with spouse is the most common associated factor. It's a criminal offence in Bangladesh; source of information is mainly police and forensic reports, and the nationwide survey is yet to be conducted and there is no suicide surveillance strategy. **Conclusion:** Suicide is a neglected and under attended public health problem in Bangladesh with few research and paucity of literature. Nationwide survey conduction and establishment of national suicide surveillance are now a time demanded step.

**KEY WORDS:** Bangladesh, suicide, suicide in Bangladesh

## INTRODUCTION

Suicide is a public health problem too often neglected by researchers, health policymakers and the medical profession [1,2]. Globally, approximately one million people kill themselves every year which represents a global mortality rate of 16 per 100,000 and WHO estimates for the year 2020 and based on current trends approximately 1.53 million people will die from suicide and 10-20 times more people will attempt suicide worldwide which represents on average 1 death per 20 s and 1 attempt every 1-2 seconds [1-3]. Worldwide, suicide is one of the three leading causes of death among those aged 15-44; the fifth most common cause of death overall and ranked number one among adolescents; 1.5% of total mortality and about 16% of injury mortality [1,4-6]. Hence, WHO called on member states to devise and implement national suicide prevention strategies, and there are recommendations to establish new or evaluate existing, National Suicide Surveillance Systems [2,4]. As the largest continent in the world, Asia accounts for about 60% of world suicides, and there has been a lack of systematic exploration of suicide methods in Asian countries [6]. Moreover, the extent of underestimation of suicide rate in this region has been a problem in these countries, and there are countries in Asia that do not systematically report suicide statistics at all and as such, the problem of suicide may be more severe than what the numbers show [4,6]. Bangladesh is a densely populous rising economy in south Asia having more incidence rate than the other Asian countries as well as recent review revealed that suicide rates in

South Asia are high compared to the global average, and there is paucity of reliable data on suicide rates in South Asia [4,6]. Although suicide is one of the forms of criminal offence in Bangladesh, there is no systematic suicide surveillance system and no Nationwide Survey on suicidal risk factors has yet been conducted in Bangladesh [1,7,8]. Religious and social factors continue to influence the diagnosis and registering of suicides as well as families do not disclose the true nature of the act, for fear of harassment by police and/or social stigma [2]. There is a paucity of literatures on suicide in Bangladesh context. Existing articles focus on the specific method of suicide such as hanging and poisoning as well as the association of mental disorder with suicide is searched very minimally. It was aimed to provide a comprehensive understanding of regarding suicide based on the existing literature reporting suicide rates, and other suicide metrics, in Bangladesh and to the best of author this is the first such review on this topic in Bangladesh that can open new horizon to address the national issue to the policy makers.

## MATERIALS AND METHODS

For selecting article, search was done in PubMed, PubMed Central, Google Scholar, and BanglaJOL with searching keywords ranging date from January 2000 to December 2015. There are few full downloadable articles, and total 34 articles were found. After exclusion of repetition, screening, finally selection was done on the basis of inclusion and

exclusion criteria and finally 13 articles were selected for review.

### Searching Words

1. Suicide in Bangladesh
2. Prevalence of suicide in Bangladesh
3. Methods of suicide in Bangladesh
4. Risk factors of suicide in Bangladesh
5. Epidemiology of suicide in Bangladesh.

### Inclusion Criteria

1. Full downloadable article in PDF form
2. Searched done in PubMed, PMC, Google Scholar and BanglaJOL
3. Time January 2000 to December 2015
4. Articles those discussed suicide in Bangladesh context
5. English language.

### Exclusion Criteria

1. Specific diagnosis as independent variable and suicide as dependable variable
2. Articles other than suicidal topics such as deliberate self-harm and accidental poisoning
3. Article of suicide outside the Bangladesh demography.

## RESULTS AND DISCUSSION

### Data Characteristics

Among the articles, there were 9 original articles, 3 review articles and 1 other type (thesis). Yearly distribution of article was 2005-1; 2006-1; 2009-1; 2010-1; 2011-1; 2012-2; 2013-3; 2014-3.

### Suicide Rate

Although there is no standard reporting system; no nationwide survey; and under-reporting is prevalent in Bangladesh, and the average suicide rate was found 39.6/100,000 population/year in the existing literature. There were variations in rate in regards to the region of the country. One community base survey revealed the rate as 128.8 per 100,000 population in Chuadanga region and it was found that South-west region of Bangladesh specially Chuadanga, Jenaidah, Kustia and Meherpur districts are the highest prevalent area of suicide in Bangladesh [1-4,6]. Countries with rates of more than 30/100,000 are considered high rates countries; those with rates between 10 and 29/100,000 as middle rates countries and those with rates <10/100,000 as low rates countries and Bangladesh belongs to the high rates country according to the reported suicidal rate [2,3]. According to the WHO Mortality Database, 85% of suicides in the world occur in low and middle-income countries, though data are unavailable for 73% of these countries [2]. A recent review showed that suicide rate in Bangladesh is even higher in comparison to the other south Asian countries [6].

### Method of Suicide

The method of suicide varies in different articles based on the discussed method whether hanging or poisoning as there is lacking any comprehensive articles. Among the methods, hanging and ingestion of insecticides are the most common method in Bangladesh. The other mentionable methods are burning, jumping in front of train, fall from the heights based on the availability, accessibility, and perception regarding lethality of the method. Feroz *et al.* found from the community-based survey that the common methods of suicide are hanging and then ingestion of insecticides [1] while Choudhury *et al.* found that poisoning is the dominant method of suicide [6]. There are other findings those supporting the hanging as the most common method of suicide in Bangladesh [3]; hanging then poisoning [9]; poisoning [10]. These methods are consistent with the subcontinent and inconsistent with the west countries [3,4,6]. The choice of method depends on their easy availability and accessibility, the high fatality [1]; a traditional culture that influences method choice, the mass media as a powerful cultural channel has played a significant role in the dissemination of suicide methods [6]. Suicides by firearms are very few in Bangladesh.

Bangladesh is still agro-based economy and majority of its people lives in villages. Both hanging and poisoning are preferable to existing culture as well and insecticides are lethal, easily available, accessible, poor storage can be the causes for choosing [1,3,6,11,12]. Regarding hanging Dopatta (orna) was the most common ligature material [6,12]; wherein another study rope was the most common ligature material in hanging [9].

### Age Distribution

Suicides are a more common among the productive people in Bangladesh though older age groups are more prone in other different parts of the world. It ranges from 10 to 78 years [3,6] but most prevalent age group is age under 40 years. The review revealed that most common age is 20-29 years [1]; 20-40 years [3]; 20-35 years [7]; 21-30 years [9]; below 30 years [12]; 18-40 years age-group [10]. The mean age of male was  $28.86 \pm 11.27$  years with age range of 8-70 years and the mean age of female was  $25.31 \pm 7.70$  years with age range of 11-78 years [3].

The review revealed that in Bangladesh mostly productive age group is being affected by suicide whereas in other parts of the world the older age groups are more prone to suicide. This premature deaths toll the economic development of the country and the family structures damage and the end result may prolong to the future generation in regards to physical, psychological, social as well as economic development.

### Gender Distribution

In Bangladesh suicide was more found in the females in comparison with the males that can be explained by passive

gender role, lack of economic freedom, early marriage, low literacy, lack of freedom in partner choice and such cultural factors, that is aligns with the others Asian countries as majority of the Asian countries had lower male-to-female suicide gender ratios [2,6]. Whereas in western counterparts as well as other many parts males are more prone to suicide [3,6]. Literature of this review revealed that suicide is a major cause of mortality, especially in young females [1,3,9,12]. Ahmad and Hossain found among their respondents 59% were female [13]; others found that 60% were female [9]; 82% were female [12]. Although Ali *et al.* found more males in their study (69%) [3] and Sarkar *et al.* found marginal difference mentioned as percentages of male is 52% [10].

### Sociodemographic Factors

Regarding nuptial status of the affected person, there are deviations to the married persons though its margin is different in different articles. Feroz *et al.* found 83% married [1]; others found differently as mentioned as 56.0% married [3]; 51% married [13]. The nuptial status varies from the western societies where marriage is protective, but in Bangladesh it may be a significant source of stress as because of early age at marriage, lack of autonomy in choosing partner, the joint family system and such [2]. Regarding socioeconomic status, suicide is the more prevalent in lower socioeconomic class then middle class and then higher class in Bangladesh though the class definitions were not mentioned in the article. Feroz *et al.* found 45.7% of the people who committed or attempted suicide was of the lower class, 37.1% were of lower middle class [1]; Jordans *et al.* found more in middle class [3]; highest frequency in lower socioeconomic status [7]. In regards to the literacy level suicide is more happened in the illiterate group with almost reciprocal relationship with education level [1,3]. Regarding occupation suicide is the more common in housewives followed by farmers [1,10]. Time of suicide was found consistent in different articles, mentioned as between 4 pm and 8 pm and during the period after 8 am until midnight and more people committed or attempted suicide during the second half of the day [1]. Ahmad and Hossain found 70% of victims hanged themselves at night and 98% were recovered from inside the living rooms [13].

### Risk Factors

Risk factors for suicide are not yet assessed comprehensively in Bangladesh context. The review revealed that most common risk factor is Quarrel among husband and wife. Other mentioned risk factors are discord with family, chronic diseases, failure in love affairs, drug addiction, unwanted pregnancy, family history of suicide, disappointments, loss of property, misfortune, poverty, and disgust with life, unhappy love, alcoholism, economic crisis, broken family, widowhood, mental illness, and criminality. Different authors found different common risk factors such as quarrel among husband and wife [1], family disputes [3], failure in love affairs [13], and quarrels or serious tension with husband [9,12]. A proper identification of risk factors of suicide in Bangladesh context will help to prevent the suicide as well as to take further steps in addressing the public health problem.

### Psychiatric Disorder

Psychiatric disorders are very minimally assessed in the articles. No article found as independent variable ascertaining the psychiatric disorders relation with suicide. Article those mentioned psychiatric points assessed only as a risk factor. Depression, mental illness, criminality, psychiatric disorder, substance abuse, and impulsivity are the mentionable disorders [1-3,8,11,13]. Only Qusar *et al.* analyzed the psychiatric morbidities among the suicidal attempters [8].

### Source of Primary Information and Reporting System

Although the reported suicide rate in Bangladesh is high compared to the global average, there is a paucity of reliable data as there is no suicide surveillance and even nationwide survey has yet to be done [2,4]. The articles are based on police, forensic medicine data, media, court, hospitals, and the focused study on selected population [1,2,8].

### Legal Aspects

Suicide is considered as the criminal offence in Bangladesh that is also prevailed in some other countries also but in many developed countries it is not considered as criminal offence [2,7].

### CONCLUSION

Suicide is a neglected and under attended public health problem in Bangladesh with few research and paucity of literature. Nationwide survey conduction and establishment of national suicide surveillance are now a time demanded step as the review revealed Bangladesh as a high suicidal rate country in Asia. Although it is the first review regarding suicide in Bangladesh context; articles in other languages, premium articles, other database searches and articles published in longer duration might contribute more. Further extensive review as well as the more methodological study is needed on suicide in Bangladesh to estimate the burden properly as well as to take necessary steps to deal adequately with the problem.

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