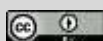


Original Article

Demographic Assessment of Suicidal Incidents 

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International License](https://creativecommons.org/licenses/by/4.0/).**ABSTRACT**

Introduction: Suicide is an important global cause of mortality. This long-term social issue is one of the major causes of unnatural death in Bangladesh, getting little attention. About one million people die each year by suicide over the world with a global mortality rate of 16 per 100,000 and 39.6 per 100,000 in Bangladesh. Poisoning has been found as the most frequent method of suicide. **Objectives:** This study has been conducted to show a demographic distribution on suicide events, its associated factors and some prevention strategies in Barishal district of Bangladesh. **Methods & material:** It is a cross sectional study which was conducted in the department of Forensic Medicine & Toxicology, Sher-E-Bangla Medical College, Barishal, Bangladesh from 1st January to 31st December, 2021. We collected data from

a total of 244 dead bodies of suicide victims, which were brought in the department of forensic Medicine & Toxicology at Sher-E-Bangla Medical College, Barishal, Bangladesh for postmortem examination. We explored the way of suicide, sex, age, profession, religious status & corresponding region of the suicidal incidences. **Results:** The most common mode of suicide were poisoning (52%) followed by hanging (48%). The most prevalent age group is age under 40 years, the rate of suicide among children is also increasing. and more women commits suicide than men. **Conclusion:** Young house wives, students, teenagers & poor farmers were found more prone to commit suicide & it is an underrated public health problem in Bangladesh. Establishment of national suicide surveillance is now a day's time demanding step.

Keywords: Suicides, methods of suicides, risk factors.

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INTRODUCTION

Suicide is a serious global public health issue. It is among the top twenty leading causes of death worldwide, with more deaths due to suicide than to malaria, breast cancer, or war and homicide. About one million people die each year by suicide over the world with a global mortality rate of 16 per 100,000 and 39.6 per 100,000 in Bangladesh ^[1]. Close to 703000 people die by suicide every year & there are many more people who attempt suicide ^[2]. Every suicide is a tragedy that affects families, communities & entire society, has long lasting effect on the people left behind. Suicide occurs throughout the lifespan and is the fourth leading cause of death among 15-29 years old globally in 2019. Suicide does not just occur in high income countries, but is a global phenomenon in all region of the world. In fact over 77% of global suicide, occurred in low middle income countries in 2019^[2]. Age, place of residence, economic status and illiteracy were the major contributing factors related to suicide. Adolescents, elderly and rural residents were the most vulnerable groups ^[3]. However, suicide is preventable with timely evidence based and often low-cost interventions & an effective, comprehensive multispectral suicide prevention strategy is needed.

In developing countries low socio-economic conditions of the people have been identified as the major influencing factor for suicide. Social & psychological pressures brought on by family disputes, failure in relationships & economic hardships are possible precipitating factors of suicide in low-income countries of Asia.

Bangladesh is a developing & densely populated country in the world. Suicidal event is an unusual way of death occurring daily in this country. In Bangladesh about 10,000 people commit suicide yearly & suicide is one of the major causes of death in young male & females. The number of suicidal incidences is remarkably increasing yearly. But it is a neglected public health problem in Bangladesh. This is usually taken as a criminal offence and the legal administrative consequences promote to hinder disclosure of suicidal events.

Police reports, forensic reports & media news are the major sources of getting information about suicide, though numerous incidences are being disclosed considering long term social impact on the family ^[1]. Barishal division located in the south-central part of Bangladesh, with an area of 13,644.85 km² & a population of 8,325,666. It has six districts; Barisal is one of the major districts of this division which has a divisional city and is also divided in 10 Thana. Around 2,324,310 people live here. The only tertiary level hospital & oldest medical College hospital is located in Barisal district where many referred cases are admitted in Medical College hospital. But there is lack of continuous exploration regarding surveillance & nation-wide study on suicide in this region. Therefore, this study was designed to analyze the demography of suicidal incidences occurred in one-year 2021 at Barisal district of Bangladesh. This study explores the suicidal demography of Barishal district based on the date of autopsy performed in the department of Forensic Medicine & Toxicology (DFMT) of Sher-E-Bangla Medical College (SBMC), Barishal, Bangladesh. SBMC is

one of the largest government medical colleges which were established in the year 1968. It has been conducting undergraduate & post graduate courses of different disciplines.

The DFMT of SBMC manages all the dead bodies those require post mortem examination, and all of the suicidal event must be recorded here. Thus, this study explores the most authentic data on suicidal incidences & this study conducting suicidal demography occurred in the Barisal district in the year 2021.

METHODS & MATERIAL

This cross-sectional descriptive study was conducted in the department of Forensic Medicine & Toxicology, Sher-E-Bangla Medical College, Barishal Bangladesh during January 1st 2021 to December 31st 2021. In this study the accumulated study subject includes only suicidal incidences of 2021. Data were collected from Surathal, Challan, final Post mortem report, report from chief chemical analyst, Mohakhali, Dhaka, Bangladesh which was submitted in the Department of Forensic Medicine & Toxicology for autopsy.

Here we excluded the accidental poisoning & some hanging report where we were not capable to comment either it was suicidal or homicidal.

Statistical analyses (percentage calculations) & graph generation were performed in Microsoft Excel (Version 2007).

Here we consider some variables for this demographic study: Age, sex, religion, Marital status, residence, educational status, profession & mode of suicide.

RESULTS

Among 244 cases of suicide victims, 98(40%) were male & 146(60%) were female. According to the study Poisoning was found to be the commonest method of suicide 52%(Table 1) and Hanging 48% was the 2nd most frequent way of suicide.

Table I: Distribution of study subjects by sex & mode of suicide (n=244)

Sex	Poisoning (%)	Hanging (%)
Male	50(20%)	48(20%)
Female	76(31%)	70(29%)
Total	126(52%)	118(48%)

Table II: Distribution of study subjects by age groups & mode suicide (n=244)

Age group in years	Way of suicide	Total subjects (%)
11-20	Hanging	50(20%)
	Poisoning	44(18%)
21-30	Hanging	34(14%)
	Poisoning	32(13%)
31-40	Hanging	20(8%)
	Poisoning	16(7%)
41-50	Hanging	02(0.8%)
	Poisoning	14(6%)
>50	Hanging	12(5%)
	Poisoning	20(8%)

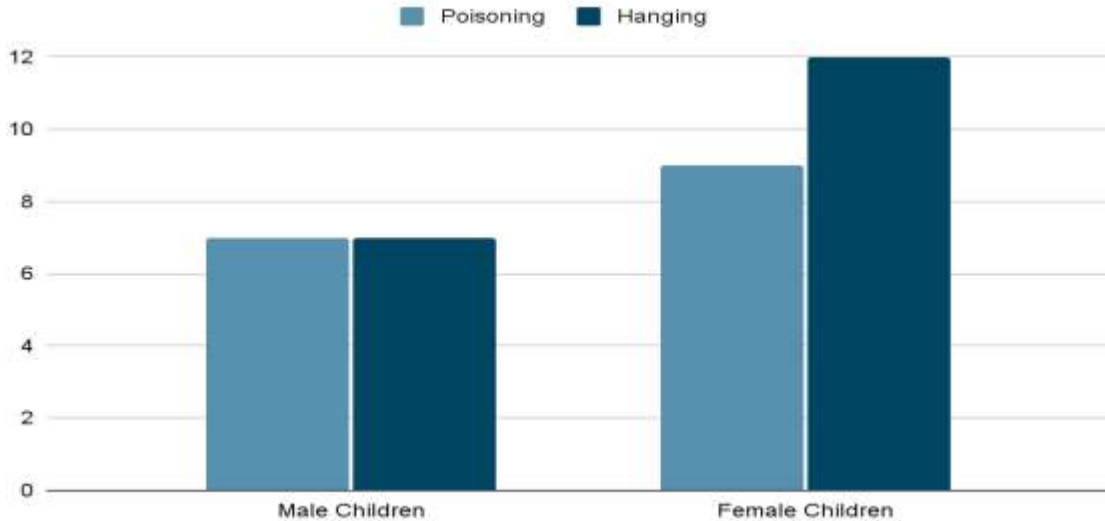


Figure 1: Prevalence of suicide among children

Data also shows that there has been an alarming rise of suicide among children, age < 18 years the prevalence of suicide total 35 (14%) where in case of poisoning male child 7(6%) & female 9 (7%) & in case of hanging male 07(6%) female 12(10%) (Table 2)

farmer 50%, Next prevalence of suicide 32% was committed by day laborer. Students were 3rd in number of suicidal incidences 18%. On the other hand, among 60% females maximum were homemakers 71% & remaining 29% were students. Among the home makers majority 40% committed suicide by poisoning.

In terms of profession (Figure 1,2 & 3) Among 40% male, the maximum was

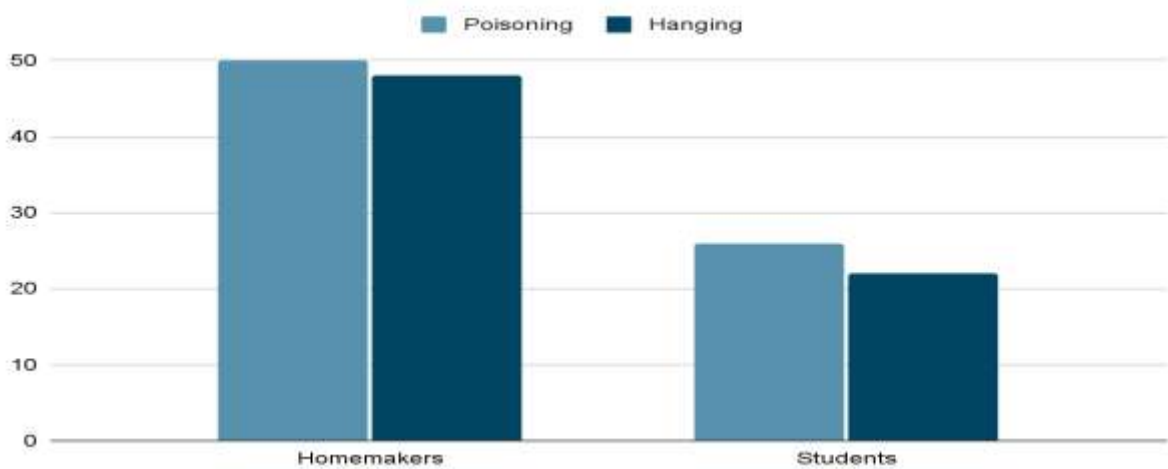


Figure 2: Distribution of study subjects (Female) by profession & mode of suicide

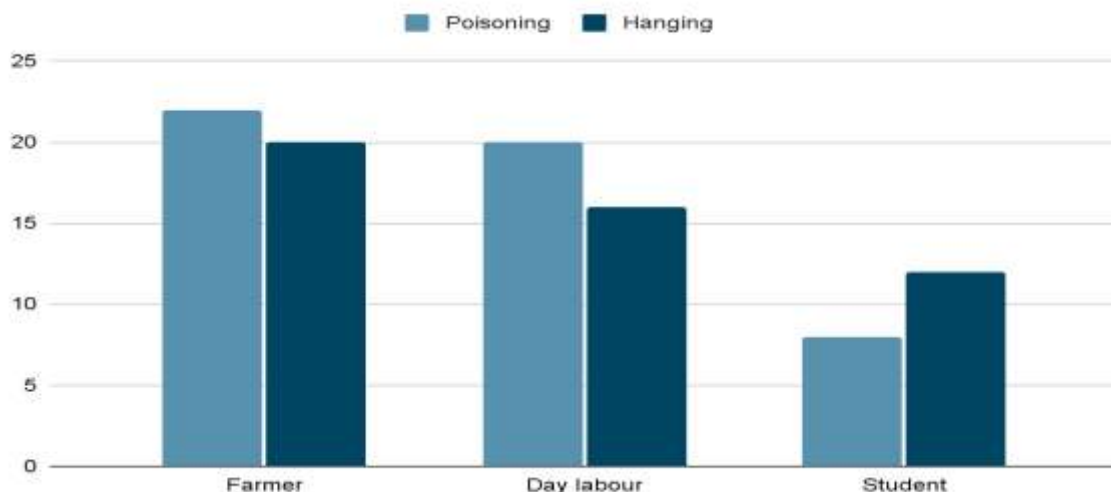


Figure 3: Distribution of study subjects (male) by profession & mode of suicide

Among the study subjects 84% were from Muslim religion, 13 % were from

Hindu religion & remaining 2.5 % were from Christian religion (Figure 4&5).

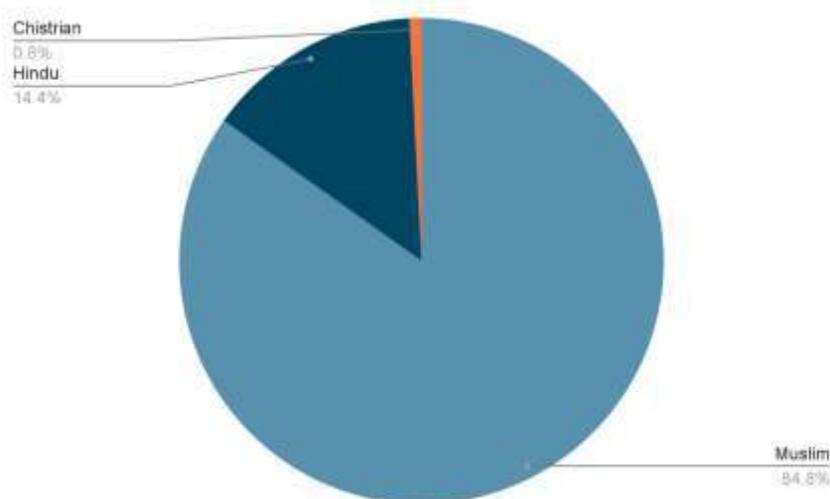


Figure 4: Distribution of study subjects by religion in case of poisoning

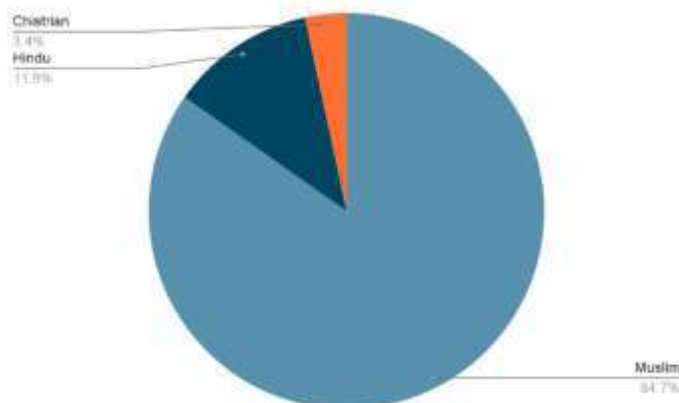


Figure 5: Distribution of study subjects by religion in case of Hanging

According to the distribution of study subjects by region (**Table 3**) maximum number of suicidal events 34 % occurred in Barishal Sadar. The 2nd prevalent region is Bakergonj having 20%

of total events. Ujirpur & Gouronodi region were in 3rd place (9% of total suicide incidence) in number of suicidal events (Figure 6).

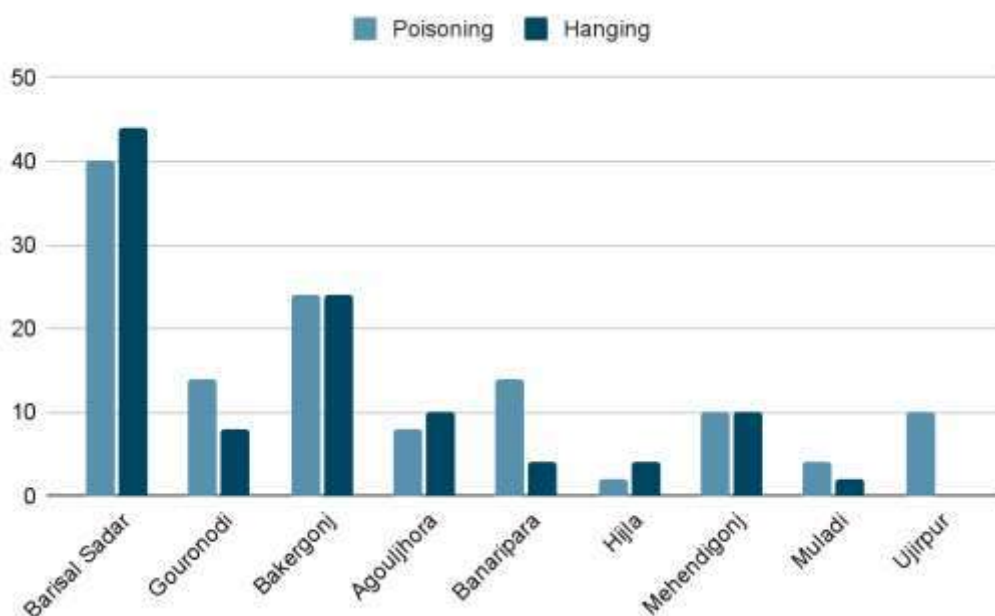


Figure 6: Suicide in different area of Barisal District

Table 3: Distribution of study subjects by region (Police station) (n=244)

Police station	Poisoning	Hanging	Total (%)
BarishalSadar	40	44	84(34%)
Gournadi	14	08	22(09%)
Bakergonj	24	24	48(20%)
Agouljhora	08	10	18(7%)
Banaripara	14	04	18(7%)
Hijla	02	04	06(2.5%)
Mehendiganj	10	10	20(08%)
Muladi	04	02	06(2.5%)
Ujirpur	10	12	22(09%)

DISCUSSION

Our study revealed that females, teenagers, farmers and students were the main shareholders of suicide. Committing suicide by female could be divided into three major age groups. Firstly, the teenagers who are more emotional & strongly susceptible to negative inputs & more risk to commit suicide. They were found committed suicide over love failure, family disputes and exam pressure by family. For married women family disputes, domestic violence and insecurities in the work place is the leading cause. In this study we found that the productive age group is being affected by suicide. These premature deaths hamper the progress of the the economic development of the country & family structure may damage. The end result may prolong to the future generation in regard to physical, psychological, social as well as economic development. We observed that people commit suicide mostly by poisoning and hanging. But the result of this study showing that poisoning & hanging are the most common mode of suicide in Barisal district. These choice for the types of suicidemostly depends on the availability & accessibility of suicide material.

In Barishal district majority of people live in villages & they run their life on agriculture. Both poisoning & hanging are preferable to existing culture as well insecticides are lethal, easily available, accessible, poor storage system can be the cause for choosing . From this study we found that maximum number of male suicide victims were farmer, it is due to agricultural dependency in most people & due to financial crisis. Besides this, jobless struggle to meet the

requirements of their families & depression was the other cause of suicide by male.

In case of females, the maximum numbers were homemakers and the remaining were students. It is alarming that young age group and students are the major victim of suicide, reason includes failed romantic relationship, study pressure, family reasons, failure in exams, banning them from playing online game, scolded by parents.

In terms of religion, these studies demonstrate that most of the victims were Muslim, as majority of the population here are Muslim.

Here in this study, maximum suicides occurred in Barishal Sadar. Bakergonj & Mehendigonj thana were the second prevalent region in term of suicidal events.

Actual causes of region variations could not be identified but population & land area difference may be a factor.

CONCLUSION

In our country suicide is a under attended public health problem which is preventable. Here in this study, we found most of the suicide occur among young's, student, house maker, farmer due to different cause as we described above & there are number of measures that can be taken at population to prevent suicide & suicide attempts. Establishment of national suicide surveillance is now a time demand step, which assesses the need scientifically. At the end, our expectation is that the findings of this study may suggest the responsible authorities to take necessary steps to address it & taking proper preventive measures to reduce suicidal incidences.

ACKNOWLEDGMENTS

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CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest.

REFERENCES

1. Mohsin Ali Shah, Srijony Ahmed, S. M. Yasir Arafat, "Demography and Risk Factors of Suicide in Bangladesh: A Six-Month Paper Content Analysis", *Psychiatry Journal*, vol. 2017, Article ID 3047025, 5 pages, 2017. <https://doi.org/10.1155/2017/3047025>
2. World Health Organization. Suicide [Internet]. World Health Organization. World Health Organization: WHO; 2021. Available from: <https://www.who.int/news-room/fact-sheets/detail/suicide>
3. Md. Mohsin Ali Shah, Srijony Ahmed, S. M. Yasir Arafat, "Demography and Risk Factors of Suicide in Bangladesh: A Six-Month Paper Content Analysis", *Psychiatry Journal*, vol. 2017, Article ID 3047025, 5 pages, 2017. <https://doi.org/10.1155/2017/3047025>
4. Arafat, S. M. Y. (2018). Suicide prevention activities in Bangladesh. *Asian Journal of Psychiatry*, 36, 38. [10.1016/j.ajp.2018.06.009](https://doi.org/10.1016/j.ajp.2018.06.009)
5. Frustration and suicide rising among youths [Internet]. *New Age | The Most Popular Outspoken English Daily in Bangladesh*. [cited 2023 Aug 13].
6. Arafat SMY, Saleem T, Edwards TM, Ali SA, Khan MM. Suicide prevention in Bangladesh: The role of family. *Brain & Behavior [Internet]*. 2022 May 1;12(5):1–7. <https://doi.org/10.1002/brb3.2562>