

## Psychological Attributes and Socio-demographic Profile of the Victims of Suicidal Death

\*Sunny SN<sup>1</sup>, Simi TH<sup>2</sup>, Hassan SMM<sup>3</sup>, Zahan MS<sup>4</sup>, Rahman MJ<sup>5</sup>, Tarafder A<sup>6</sup>, Debnath MK<sup>7</sup>

### Abstract

Suicide remains a pressing public health concern, with psychological and socio-demographic factors playing a critical role in its occurrence. In Bangladesh, where mental health resources are limited, understanding the profiles of completed suicide victims is essential for targeted prevention strategies. Despite increasing suicide rates, comprehensive local data on victim characteristics remain scarce. A retrospective, cross-sectional study was conducted in the Department of Forensic Medicine and Toxicology, Sir Salimullah Medical College, Dhaka, Bangladesh, from July 2023 to June 2024, to analyze the psychological attributes and socio-demographic profiles of completed suicide victims in Dhaka. Using purposive sampling, 137 completed suicide cases were analyzed based on autopsy reports, medical records, and family interviews. Our study that young adults aged 20-35 years accounted for 45% of cases, with males (58%) outnumbering females. Unmarried individuals (52%), the unemployed (35%), and low-income groups (60%) showed highest vulnerability. Psychological autopsies identified depression (40%), family conflicts (30%), and financial stress (25%) as predominant triggers. Hanging (50%) and pesticide poisoning (30%) emerged as the most frequent methods, reflecting the means of accessibility. A significant seasonal pattern ( $p=0.021$ ) showed peak incidence during monsoon months (40%). This study identified that young, economically disadvantaged males with mental health concerns as Bangladesh's highest-risk suicide group. The findings underscore the urgent need for targeted prevention strategies combining mental healthcare, poverty alleviation, and means restriction to address this growing public health crisis.

CBMJ 2026 January: vol. 15 no. 01 P:84-88

**Keywords:** Autopsy reports, family conflicts, mental health, psychological factors, socio-demographic profile, suicide

### Introduction

Suicide is a major global public health issue, accounting for over 700,000 deaths annually, with 77% occurring in low- and middle-income countries (LMICs) like Bangladesh.<sup>1</sup> The World Health Organization (WHO) ranks suicide as the fourth leading cause of death among individuals aged 15–29, highlighting its disproportionate impact on young populations.<sup>2</sup> In Bangladesh, suicide rates have risen alarmingly, with recent studies reporting an annual incidence of 9.5 per 100,000 people, though underreporting may obscure the true burden.<sup>3,4</sup> Despite its severity, suicide prevention efforts remain inadequate due to limited research on victim profiles, sociocultural stigma, and insufficient mental health infrastructure.<sup>5</sup> Psychological factors particularly depression, anxiety, and acute stress are strongly associated with suicidal behavior.<sup>6</sup> A meta-analysis found that 65% of suicide victims in South Asia had untreated mental health conditions, with depression

1. *\*Dr. Sonia Naznin Sunny, Assistant Professor, Department of Forensic Medicine and Toxicology, Shaheed Monsur Ali Medical College, Dhaka.*
2. *Dr. Tamanna Hossain Simi, Assistant Professor, Department of Forensic Medicine and Toxicology, Community Based Medical Collage Bangladesh, Winnerper, Mymensingh.*
3. *Dr. S. M. Mainul Hassan, Junior Consultant, Department of Orthopaedic Surgery, National Institute of Traumatology and Orthopaedic Rehabilitation (NITOR), Dhaka.*
4. *Dr. Md. Sarwar Zahan, Assistant Professor & Head, Department of Forensic Medicine & Toxicology, Islami Bank Medical College, Rajshahi.*
5. *Dr. Md. Jahidur Rahman, Lecturer, Department of Forensic Medicine & Toxicology, Sir Salimullah Medical College, Dhaka.*
6. *Dr. Aditi Tarafder, Assistant Professor, Department of Forensic Medicine and Toxicology, Delta Medical College, Mirpur, Dhaka.*
7. *Dr. Milton Kumar Debnath, Lecturer, Department of Forensic Medicine & Toxicology, Cumilla Medical College, Cumilla.*

**Address of Correspondence:**

Email: [sonia.naznin089@gmail.com](mailto:sonia.naznin089@gmail.com)

being the most prevalent.<sup>7</sup> In Bangladesh, financial instability, familial conflicts, and marital discord further exacerbate psychological distress, creating a high-risk environment for suicide.<sup>8</sup> Additionally, socio-demographic variables such as age, gender, occupation, and socioeconomic status significantly influence suicide patterns. Young adults (20–35 years) are the most vulnerable group, often facing unemployment, academic pressure, or relationship breakdowns.<sup>9</sup> Gender disparities also exist, with men more likely to complete suicide due to lethal means (e.g., hanging), while women exhibit higher rates of non-fatal attempts.<sup>10</sup> The methods of suicide vary regionally based on accessibility and cultural acceptability. In Bangladesh, hanging and pesticide poisoning are the most common, accounting for 80% of cases due to the easy availability of these means.<sup>11</sup> A study in Bangladesh reported that pesticide ingestion alone contributed to 30% of suicides in rural areas, underscoring the need for stricter regulatory policies.<sup>12</sup> Socioeconomic factors further compound the risk, with poverty, low education, and lack of social support amplifying vulnerability.<sup>13</sup> Despite these insights, comprehensive data on completed suicide victims in Bangladesh remain scarce. Most studies focus on suicide attempts rather than fatalities, leaving critical gaps in understanding the profiles of those who die by suicide.<sup>3,5</sup> This study addresses this gap by examining the psychological attributes and socio-demographic characteristics of completed suicide victims in Bangladesh. By analyzing autopsy records, medical histories, and family interviews, our study aims to identify high-risk groups and inform targeted prevention strategies.

## Methods

This retrospective, cross-sectional study included 137 completed suicide victims whose autopsies were

conducted in the Department of Forensic Medicine & Toxicology, Sir Salimullah Medical College, Dhaka, Bangladesh, from July 2023 to June 2024. The study population comprised individuals of all ages and genders who died by suicide, as confirmed by forensic reports and police records.

**Inclusion criteria:** Cases were included if they met the following criteria: (1) confirmed suicide cases as per inquest, chalan, autopsy and medico-legal findings, (2) availability of complete demographic and circumstantial data, and (3) consent from family members for post-mortem interviews. Suicide methods included hanging, poisoning, drowning, and other violent means.

**Exclusion criteria:** Cases were excluded if (1) the cause of death was uncertain or pending investigation, (2) insufficient records or family refusal to participate, or (3) deaths resulting from accidents or homicides were misclassified as suicides.

Data was collected from autopsy reports, hospital records, and through structured questionnaire-based interview with family members. Variables included age, gender, occupation, marital status, socioeconomic status, psychiatric history, and suicide method. A standardized questionnaire assessed psychological triggers (e.g., depression, financial stress, family conflicts).

Data was compiled, coded and analyzed using MS-Excel and SPSS version 24.0 for Windows. Descriptive statistics (frequencies, percentages) summarized socio-demographic and psychological factors. Results were presented in tables in frequency and percentage. Chi-square test was applied to see seasonal variation of suicide incidence. A p-value <0.05 was considered statistically significant.

The study was approved by the Ethical review Committee of Sir Salimullah Medical College, Dhaka, Bangladesh.

## Results

We analyzed a total of 137 completed suicide cases to assess psychological attributes and socio-demographic profiles. The majority of suicide victims 60(45.3%) were in the 20–35 years age group, followed by <20 years age group 38(27.7%) and >35 years age group 37(27.0%). Males constituted 80(58.4%) of cases, while females accounted for 57(41.6%). Marital status revealed that unmarried individuals (51.8%) were more vulnerable than married (38%) or divorced/widowed (10.2%) persons. Occupational distribution showed that unemployed individuals (35.1%) and daily wage laborers (27.7%) were at the highest risk, whereas students (18.2%) and professionals (11.7%) had comparatively lower representation (Table-I).

**Table-I:** Socio-demographic profile of suicide victims (n=137)

Variables	Frequency	Percentage
Age group (in years)		
<20	37	27.0
20–35	62	45.3
>35	38	27.7
Sex		
Male	80	58.4
Female	57	41.6
Marital status		
Unmarried	71	51.8
Married	52	38.0
Divorced/Widowed	14	10.2
Occupation		
Unemployed	48	35.1
Daily wage laborer	38	27.7
Student	25	18.2
Professionals	16	11.7
Others	10	7.3

Psychological triggers included depression (40.1%), family conflicts (29.9%), financial stress (24.8%), and chronic illness (5.1%) (Table-II). The most common suicide methods were hanging (50.4%) and pesticide poisoning (29.9%), followed by drug overdose (11.7%) and other means (8%) (Table-III). Seasonal variation indicated a higher incidence during monsoon (40.2%) and summer (35.0%). as compared to winter (24.8%) ( $p < 0.05$ ) (Table-IV).

**Table 2:** Psychological triggers in suicide victims (n=137)

Trigger	Frequency	Percentage
Depression	55	40.1
Family Conflict	41	29.9
Financial Stress	34	24.8
Chronic Illness	7	5.1

**Table-III:** Suicide methods (n=137)

Methods of suicide	Frequency	Percentage
Hanging	69	50.4
Pesticide poisoning	41	29.9
Drug overdose	16	11.7
Others	11	8.0

**Table-IV:** Seasonal variation in suicide incidence (n=137)

Season	Frequency	Percentage	p-value
Monsoon	55	40.2	0.021
Summer	48	35.0	0.035
Winter	34	24.8	0.042

Chi-square test was applied to reach p-value.

## Discussion

This study provides critical insights into the psychological and socio-demographic profiles of completed suicide victims in Dhaka, Bangladesh, aligning with global patterns while highlighting region-specific risk factors. Our findings demonstrate that young adults (20–35 years) constitute the most

vulnerable group (45.3%), consistent with a previous report identifying suicide as the fourth leading cause of death in this age group.<sup>2</sup> The male predominance (58.4%) mirrors trends observed in South Asia,<sup>10</sup> likely reflecting societal pressures on men to fulfill economic provider roles amidst Bangladesh's competitive job market.<sup>8,14</sup> The high proportion of unmarried individuals (52%) contrasts with a previous study from the west,<sup>15</sup> but aligns with regional research showing marital discord as a significant stressor.<sup>8</sup> Our occupational data revealing unemployment (35.1%) and daily wage laborer (27.7%) as high-risk categories underscores the devastating impact of economic instability, particularly in low-income populations.<sup>13,16</sup> Those findings support a previous report that socioeconomic deprivation remains a key determinant of suicidal behavior in LMICs.<sup>13</sup> Psychological factors followed expected patterns, with depression (40.1%) emerging as the most prevalent trigger, consistent with a previous meta-analysis' results.<sup>7</sup> However, the prominence of family conflicts (29.9%) and financial stress (24.8%) as proximal causes highlights culturally-specific stressors in Bangladesh's collectivist society.<sup>17</sup> The predominance of hanging (50.4%) and pesticide poisoning (29.9%) as methods reflects regional trends of lethal means accessibility,<sup>11,12</sup> emphasizing the need for means restriction policies. Notably, seasonal variation showed a higher incidence during monsoon (40.2%), potentially linked to agricultural stressors and reduced economic activity.<sup>18</sup> This finding contradicts some temperate climate studies,<sup>19</sup> but aligns with tropical region research,<sup>20</sup> suggesting climate-specific suicide patterns warranting further investigation. Our study's retrospective design, while useful for profiling, limits causal inferences – a challenge noted in similar mortuary-based research.<sup>21</sup> Recall bias in family interviews and potential under-

reporting of mental health conditions may affect data accuracy.<sup>5</sup> Nevertheless, our findings corroborate key patterns from hospital-based studies<sup>3,4</sup> while providing rare autopsy-verified data.

This study has several limitations, including its single-center design, potential recall bias in family interviews, and lack of psychological autopsies. The purposive sampling may limit generalizability, and under-reporting of mental health conditions could affect data accuracy regarding psychological triggers. Future studies should employ multi-center designs with psychological autopsies to improve data reliability.

## Conclusion

This study delineates a high-risk profile of suicide victims in urban Bangladesh, emphasizing the intersection of psychological distress and socioeconomic vulnerability. While confirming some global patterns, it reveals context-specific factors requiring tailored prevention strategies. The findings underscore the urgent need for multifaceted approaches combining mental health support, economic empowerment, and means restriction in Bangladesh's suicide prevention efforts. Policymakers should implement community-based mental health programs, economic support initiatives, and means restriction policies targeting high-risk groups identified in this study to reduce suicide rates in Bangladesh.

## References

1. Alicandro G, Malvezzi M, Gallus S, La Vecchia C, Negri E, Bertuccio P. Worldwide trends in suicide mortality from 1990 to 2015 with a focus on the global recession time frame. *Int J Public Health*. 2019;64(5):785-95.

2. Naghavi M; Global Burden of Disease Self-Harm Collaborators. Global, regional, and national burden of suicide mortality 1990 to 2016: systematic analysis for the Global Burden of Disease Study 2016. *BMJ*. 2019;364:194.
3. Arafat SMY. Suicide in Bangladesh: a mini review. *J Behav Health*. 2017;6(1):66-9.
4. Arafat SMY, Hussain F, Jakaria KM, Itu ZT, Islam MA. Empirical studies on suicide in Bangladesh in a decade (2011-2020). *Glob Psychiatry*. 2021;4(1):109-22.
5. Zalsman G, Hawton K, Wasserman D, van Heeringen K, Arensman E, Sarchiapone M, et al. Suicide prevention strategies revisited: 10-year systematic review. *Lancet Psychiatry*. 2016;3(7):646-59.
6. Hawton K, Casañas I Comabella C, Haw C, Saunders K. Risk factors for suicide in individuals with depression: a systematic review. *J Affect Disord*. 2013;147(1-3):17-28.
7. Naveed S, Waqas A, Chaudhary AMD, Kumar S, Abbas N, Amin R, et al. Prevalence of common mental disorders in South Asia: a systematic review and meta-regression analysis. *Front Psychiatry*. 2020;11:573150.
8. Khan AR, Arendse N, Ratele K. Intimate relationships and suicidal behaviour of men in Bangladesh. *Mortality*. 2023;28(1):106-25.
9. Doty B, Bass J, Ryan T, Zhang A, Wilcox H. Systematic review of suicide prevention studies with data on youth and young adults living in low-income and middle-income countries. *BMJ Open*. 2022;12(9):e055000.
10. De Schrijver L, De Buyser S, Uzieblo K, Vandeviver C, Keygnaert I. Mental health and domestic violence in LGB+ persons during lockdown measures in Belgium. *Tijdschrift voor Genderstudies*. 2021;24(2):143-60.
11. Gunnell D, Eddleston M, Phillips MR, Konradsen F. The global distribution of fatal pesticide self-poisoning: systematic review. *BMC Public Health*. 2007;7:357.
12. Kabir R, Hasan MR, Arafat SMY. Epidemiology of Suicide and Data Quality in Bangladesh. In: Arafat SMY, Khan MM. eds. *Suicide in Bangladesh: Epidemiology, Risk Factors, and Prevention*. Singapore: Springer; 2023.
13. Vijayakumar L, Ray S, Fernandes TN, Pathare S. A descriptive mapping review of suicide in vulnerable populations in low and middle countries. *Asia Pac Psychiatry*. 2021;13(3):e12472.
14. Canetto SS, Menger-Ogle AD, Subba UK. Studying scripts of women, men and suicide: qualitative-method development and findings from Nepal. *Int J Environ Res Public Health*. 2023;20(11):6032.
15. Stack S, Scourfield J. Recency of divorce, depression, and suicide risk. *J Fam Issues*. 2015;36(6):695-715.
16. Jordans M, Rathod S, Fekadu A, Medhin G, Kigozi F, Kohrt B, et al. Suicidal ideation and behaviour among community and health care seeking populations in five low- and middle-income countries: a cross-sectional study. *Epidemiol Psychiatr Sci*. 2018;27(4):393-402.
17. Al Ubaidi BA. Cost of growing up in dysfunctional family. *J Fam Med Dis Prev*. 2017;3(3):59.
18. Bashar K, Tuno N. Seasonal abundance of Anopheles mosquitoes and their association with meteorological factors and malaria incidence in Bangladesh. *Parasit Vectors*. 2014;7:442.
19. Fountoulakis KN, Fountoulakis NK. Climate rather than economic variables might have caused increase in US homicide but not suicide rates during the Great Depression. *Psychiatry Res*. 2022;309:114378.
20. Carleton TA. Crop-damaging temperatures increase suicide rates in India. *Proc Natl Acad Sci USA*. 2017;114(33):8746-51.
21. Andriessen K, Reifels L, Krysinska K, Robinson J, Dempster G, Pirkis J. Dealing with Ethical Concerns in Suicide Research: A Survey of Australian Researchers. *Int J Environ Res Public Health*. 2019;16(7):1094.