Original Article

Demography, Methods and Associated Factors of Self-Harm: A Cross-sectional Study

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Abstract

Background: *Self-harm is a complex behavior with multifaceted causes, including psychological, social, and demographic factors. Understanding the patterns and motivations behind self-harm is essential for developing targeted prevention and intervention strategies. We aimed to see the demography, methods, and associated factors of self-harm in a tertiary care hospital of Bangladesh.* ***Materials and Methods:*** *A cross-sectional study was conducted on 47 patients who presented with self-harm attempet at Enam Medical College and Hospital. Data were collected using a semi-structured questionnaire assessing sociodemographic profiles, psychiatric history, methods used, and underlying reasons. Descriptive statistics were used for data analysis.* ***Results:*** *The majority of self-harm attempters were female (66%) with a mean age of 22.3 years. Most were in the 19-35 years age group (55.3%), with students (46.8%) and housewives and unemployed (40.4%) being the most affected occupational groups. Hanging (38.3%) and overdose (27.7%) were the most common methods. Intent to die was reported by 51.1% of participants, while 21.3% described the act as impulsive. Psychiatric disorders were present in 61.7% of individuals, and 48.9% had a history of previous attempts. Family conflict (37%) was the leading reason for self-harm.* ***Conclusion:*** *Young females with psychiatric comorbidities and exposure to familial and interpersonal stressors are at higher risk of self-harm. Interventions must focus on mental health awareness, early psychiatric support, and family-based counseling to effectively address this public health concern.*

Keywords: Self-harm, Suicide attempt, Psychiatric disorder, Life-event, Non-fatal attempt.

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Introduction

Self-harm has emerged as a silent but growing crisis in Bangladesh. The patterns and factors influencing self-harm differ greatly across the globe, but research on this topic remains limited, especially beyond a few high-income western nations. In recent years, low and middle-income countries (LMICs), such as Bangladesh, have witnessed a surge in academic attention. Despite its enduring presence, self-harm remains largely hidden behind stigma, cultural taboos, and a lack of mental health awareness.[1] Various terms like non-suicidal self-injury (NSSI), attempted suicide, deliberate self-poisoning, deliberate self-injury, and 'para-suicide' etc., have been used interchangeably to mean self-harm. It is commonly used to describe a wide range of behaviors and intentions, including attempted hanging, impulsive self-poisoning, and superficial cutting in response to intolerable tension. As a concept, NSSI is replacing self-harm, where suicidal intent has been considered as a demarcation. However, sometimes it is difficult to separate NSSI from self-harm, as some attempts without suicidal intent may cause death, whereas some attempts with suicidal intent may be aborted. NSSI is not confined to any one culture or community; it affects millions of people worldwide, particularly adolescents and young adults. One latest meta-analysis found that 17.7% of individuals aged 10 to 19 had engaged in non-suicidal self-injury(NSSI).[2] Another study found that prevalence rates varied between 11.5% and 33.8%.[3] Among nonclinical adolescents, those who had not sought medical care-the lifetime prevalence of NSSI was estimated at 22%.[4] In South Asia, lifetime prevalence among nonclinical samples ranged from 21% to 33%, while annual prevalence ranged from 3.2% to 44.8%. For clinical samples, the lifetime prevalence ranged from 2% to 27%, and the annual prevalence ranged from 5% to

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16.4% .[5]

Bangladesh, a densely populated low and middle-income country in South Asia with a population of approximately 170 million, has limited and low-quality data on suicidal behavior, suicide and self-harm. The country does not have a self-harm surveillance system or a nationwide study assessing the prevalence of self-harming behaviors.[6] Understanding the demographic characteristics, methods and risk factors of individuals who engage in self-harm is essential to designing prevention strategy.

Usually, self -harm results from psychological pain, which is an outcome of complex interaction among multiple factors like mental illness, negative life-events, and various social factors.[7] Likewise, the suicidal behavior, various aspects of self-harm like methods, socio-demographic variations, psychiatric morbidity, and previous attempts need to be explored to consider the preventive measures. We aimed to see the demography, methods, and associated factors of self-harm in a tertiary care hospital.

Materials and Methods

This was a cross-sectional study. Data were collected from August 2021 to November 2023 by face-to-face interviews among the patients of Psychiatry department of Enam Medical College and Hospital with a semi-structured instrument. Patients who attended for mental health services after a self-harm attempt were interviewed. Both indoor and outdoor patients were approached. Data were analyzed using Stata version 17.0 (Stata Corp, Texas, USA). Frequencies and percentages were used to describe the socio-demographic characteristics, psychiatric disorders, methods of self-harm, and intent of attempt. We used the chi-square test of independence to determine bivariate associations between categorical independent variables. If any of the categorical variables showed expected frequency less than 5 observations in any of the cells, Fisher's exact test was performed. All statistics were tested using a two-sided 't' test, and a p-value of <0.05 was considered statistically significant. The current study was reviewed and approved by the ethical review committee of Enam Medical College and Hospital. We collected informed written consent from the patients and their legal guardians in case of adolescents before conducting the interview for data collection.

Results

The mean(±SD) age of participants was 22.3(±7.3) years, the age ranged from 10-50 years. The majority (55.3%) of the participants was aged between 19 and 35 years, studied up to secondary school (59.6%), were married (51.1%), and student (46.8%) (Table I). Among the patients, 61.7% had psychiatric disorders, and about 49% had past self-harm attempts (Table I).

Among the methods, hanging was found in 38.3%, followed by medication overdose (27.7%), poisoning (8.5%), and jumping from a height (Table II). More than half of the participants (51.1%) had suicidal intent, followed by impulsivity (21.3%), getting out of the situation, controlling others' behaviors, and demand fulfillment (Table II; Figure 1). Among the vulnerable factors, family conflict was the leading reason (37%), followed by mental illness (19.6%), marital problems (15.2%), financial problems, premarital affair issues, and sexual harassment (Table II).

This cross-sectional study examined the demographic profile, methods, intent, and associated factors of self-harm among 47 individuals. The findings provide the complex interplay of socio-demographic, psychological, and contextual elements influencing self-harming behaviors in a vulnerable population.

The study found a higher prevalence of self-harm among females (66%) compared to males (34%). This gender disparity is consistent with global trends, where females are more likely to engage in

Table I: Basic characteristics of suicide attempters (n=47)

Variable	Category	*n*	%
Sex	Male	16	34.0
	Female	31	66.0
Age Mean (±SD), Range	22.3 (±7.29), 10 to 50 years		
Age group	≤18 years	19	40.4
	19 to 35 years	26	55.3
	>35 years	2	4.3
Level of education	Illiterate/Primary	10	21.3
	Secondary	28	59.6
	Higher secondary and above	9	19.1
Marital status	Ever married	24	51.1
	Single	23	48.9
Occupation	Student	22	46.8
	Housewife	19	40.4
	Employed	6	12.8
Smoking status	Smoker	12	25.5
	Non-smoker	35	74.5
Length of hospital stay Mean (±SD), Range	3 (1.9), 1 to 7 days		
Length of hospital stay	1 to 2 days	27	57.4
	≥3 days	20	42.6
Psychiatric disorder	Present	29	61.7
	Absent	18	38.3
Previous attempt	Yes	23	48.9
	No	24	51.1
Previous hospitalization	Yes	10	21.3
	No	37	78.7

Discussion

non-fatal self-harm.[8] Other studies from Bangladesh also revealed the female dominance.[7,9,11]

The mean age of participants was 22.3 years, with the majority (55.3%) falling in the 19-35-year age group, highlighting young adults as the most at-risk. Similar age distribution was noted in other studies of self-harm and suicide in Bangladesh.[1,6,7,12] Notably, 40.4% of participants were aged 18 or younger, emphasizing the need

Table II: Methods, intent, and reasons/purpose of self-harm among suicide attempters (n=47)

Variable	Category	*n*	%
Methods	Hanging	18	38.3
	Overdose	13	27.7
	Benzodiazepines	5	10.6
	Cutting	5	10.6
	Poisoning	4	8.5
	Jumping from a height	2	4.3
Intent	To die	24	51.1
	Impulsive act	10	21.3
	To get out of the situation	7	14.9
	To control others' behavior	3	6.4
	To control anger	2	4.3
	To fulfill the demand	1	2.1
Reason	Family conflict	17	37.0
	Psychiatric illness	9	19.6
	Marital problems	7	15.2
	Financial issue	5	10.9
	Problems with a boyfriend or girlfriend	5	10.9
	Premarital affair	3	6.5
	Sexual threat	1	2.2

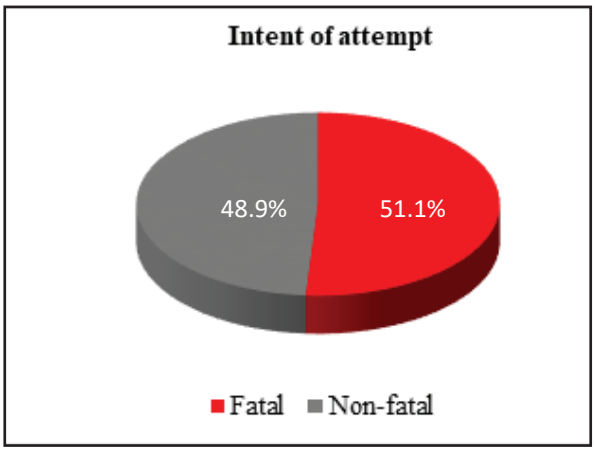

Figure 1: Intent of suicide among suicide attempters

for targeted mental health interventions in adolescents and young adults.

Educational background also showed notable patterns, with most individuals (59.6%) having secondary education and 21.3% being illiterate or

only educated up to the primary level. Usually, suicidal and self-harm behavior is more common among low socio-economic status and among persons with low educational attainment.[7,12] This suggests that limited education may be linked to poor coping mechanisms and a lack of awareness about mental health resources. Regarding marital status, the sample was nearly evenly split between ever-married (51.1%) and single individuals (48.9%), suggesting that marital status alone does not serve as a significant protective or risk factor.

Occupational status revealed that students (46.8%) and housewives or unemployed individuals (40.4%) were the most affected groups. Similar findings were noted among participants of previous studies in Bangladesh.[1,7,12] Students may experience stress due to academic pressure or relationship issues, while housewives and unemployed individuals may be burdened by isolation, financial dependence, or domestic problems. Smoking was also prevalent among 25.5% of participants, which could indicate an association with risky behaviors and psychological distress.

Psychiatric disorders were present in 61.7% of the participants, underscoring the critical role of mental illness in self-harm. However, only 21.3% had prior hospitalization, indicating a treatment gap and suggesting that many individuals may remain undiagnosed or untreated. Nearly half of the participants (48.9%) had previously attempted self-harm, further highlighting the importance of long-term follow-up and continuous psychological support. Previous studies conducted in Bangladesh revealed similar psychiatric morbidity among suicides and self-harm (61% and 71%).[7,13]

In terms of methods, hanging (38.3%) and overdose (27.7%) were the most frequently used, followed by benzodiazepine ingestion and cutting (each 10.6%). The choice of method often reflects accessibility and intent. Repeated studies in Bangladesh revealed hanging and poisoning as the dominant methods of suicide and self-harm.[7,12] The fact that 51.1% of individuals reported a genuine intent to die indicates the seriousness of these acts, whereas 21.3% were impulsive, reflecting a lack of emotional regulation and coping skills.

The most commonly reported reason for self-harm was family conflict (37%), followed by psychiatric illness (19.6%) and marital problems (15.2%). Other reasons included financial stress and issues with romantic relationships. These findings emphasize the significance of interpersonal and environmental stressors in triggering self-harm. Family conflict, relationship problems are revealed as risk factors in repeated studies in Bangladesh.[7,12,13]

Conclusion

This cross-sectional study reveals that self-harm is a critical socio-cultural and mental health issue, predominantly affecting young females, particularly students and unemployed individuals. Family conflict, psychiatric illness, and interpersonal problems emerged as the most common contributing factors. The use of lethal methods such as hanging and overdose, along with a high proportion of individuals expressing a genuine intent to die, highlights the seriousness of these attempts. These findings emphasize the urgent need for early screening, community awareness, and accessible mental health care. School-based counseling, family interventions, and destigmatization efforts should be prioritized. Strengthening these preventive strategies may reduce the incidence and recurrence of self-harming behaviors in high-risk populations.

Conflicts of interest: The authors declare no conflict of interest.

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