

## **Psychiatric Morbidity and Psychosocial Stressors among 16 To 18-year-old Students with Self-Harm in Two Colleges of Dhaka City**

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### **Abstract**

**Background:** Self-harm is a complex and multidimensionally neglected public health problem, which poses a significant risk for 40-50% of people who commit suicide. Since this problem is common in Bangladesh, specifically among students, but there is a severe scarcity of data about its prevalence and pattern among them.

**Objective:** This study aimed to find out the prevalence of self-harm among 16 to 18-year-old students in Dhaka city and its relation to psychosocial stressors and psychiatric co-morbidities.

**Methods and Materials:** This cross-sectional study was conducted in the Department of Psychiatry, BSMMU, Dhaka. The sampling sites areas were St. Joseph Higher Secondary School and College and Mohammadpur Preparatory Girls' High School and College. All data were collected over the phone in two phases using the students' numbers with the college authorities' permission. In the first phase, the students were selected by random sampling from all sections throughout both colleges and they completed the self-reported harm inventory scale and the Dhaka stress scale for adolescents. In the second phase of the study, students with a history of self-harm were given the development and well-being assessment scale to assess their psychiatric co-morbidity. The mean, median, percentage and frequency were analyzed using SPSS version 24 and a paired t-test was done to measure the significance level.

**Results:** The study revealed that 15.87% of respondents had a history of deliberate self-harm, which was more common among female students (18.57%) in comparison to male students. The assessment scale for development and well-being determined that 70% of the students who had deliberated self-harm had at least one psychiatric illness. The most comorbid condition was GAD (34.0%). With the Dhaka Stress Scale for adolescents, it was found that 73.0% of students had severe stress levels. A significant difference in stress levels was observed when comparing deliberate self-harm with the non-self-harm group ( $p < 0.0120$ ). The present study also found that co-morbidities and psychiatric disorders are evident among those who commit self-harm.

**Conclusions:** This study emphasizes the importance of qualified student counselors in the colleges of Dhaka city and the urgent need for holistic educational institute-based mental health initiatives.

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**Keywords:** Mortality, Morbidity, Perinatal asphyxia, Prematurity, Low birth weight

### **Introduction**

Self-harm is a common clinical problem and this is raising alarm day by day among college students, who are primarily adolescents. Self-harm is sometimes hard to differentiate from suicidal attempts or ideation. Although these terms are sometimes used interchangeably, they differ in many ways, such as intent, method, frequency, cognition and aftermath. Self-harm may have the intent to cope rather than take one's life<sup>1</sup>. The number of self-harm acts is rising both in

developed and developing countries. Due to the scarcity of reliable data on the true burden and prevalence of self-harm, its magnitude is often inferred from suicide statistics. Suicide was the second leading cause of death among individuals aged 15-29 years worldwide in 2012 and it is suggested that the incidence of self-harm is several times higher than that of completed suicide<sup>2</sup>. A recent community-based cross-sectional study among youths reported that fear arising from

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inadequate parental care and protection- leading to feelings of alienation from parents and the surrounding environment- was significantly associated with self-harm<sup>3</sup>. Self-harm, behaviors may further reflect underlying psychiatric comorbidities, such as mood disorders substance use disorders, personality Self-harm has been associated with multiple psychosocial stressors, including peer victimization, parental emotional neglect, childhood sexual abuse, insecure attachment, anxiety, depression, low self-esteem, body dissatisfaction, poor academic performance and substance use. Parenting style and family dysfunction have also been identified as significant risk factors for deliberate self-harm disorders and impulse control disorders<sup>4</sup>. Studies from developed countries indicate that self-harm is particularly prevalent among adolescents, with reported rates ranging from 6.0-8.0% to 12.0-20.0% among adolescents and young adults<sup>5</sup>. Self-harm is uncommon before puberty but increases markedly during adolescence, with the average age of onset reported to be approximately 16 years in the United States<sup>6</sup>. In the contemporary context, adolescents face increasing challenges in coping with intense stress related to academic demands, family dynamics and peer relationships. Many youths experience overscheduling and heightened performance expectations imposed by parents and peers. Additionally, adolescents have become increasingly vulnerable to the pressures of a highly media-driven and psychologically demanding social environment, which may further exacerbate emotional distress and maladaptive coping behaviors such as self-harm. The adversities they face today are more likely to have an impact on their mental health. In Bangladesh, there is a lack of a comprehensive model that explains the association between self-harm and risk factors during the adolescent period. Exploring these factors would help healthcare professionals to predict the outcome of self-harm among college students. Considering all those stated before, this study aims to justify the existing data and add new information regarding the association of psychosocial stressors and psychiatric comorbidities in self-harm. It will further look into the stressor burden and how it varies between students with and without a history of self-harm and also variations of risk factors according to socio-demography. Exploring personal accounts of self-harm and associated risk factors can enhance health professionals' understanding of the sensitivities and

complexities involved in obtaining information during clinical assessments and therapeutic interventions. The findings of this study may also raise awareness of the key risk factors contributing to self-harm among young people, thereby supporting early identification and targeted prevention strategies.

## Methods

### *Study design*

The study was conducted in two phases. In the first phase, these colleges had students in the 11th and 12th grades (first and second year of college) and most were between 16 and 18 years old. In this phase, students were selected randomly from all sections throughout the entire college. The selected students were given both the self-harm inventory scale and the Dhaka stress scale for adolescents, which were self-answered. It took a maximum of 15 minutes for the students to complete the self-harm to generate DSM-5 psychiatric diagnoses for 2 to 18-year-olds. It is a validated and internationally well-accepted research instrument for assessing psychiatric disorders, developed by Goodman et al. Mullick and Goodman adopt and validate it.

### *Data processing and analysis*

After collecting the data, it was checked for omissions, inconsistencies and improbabilities. The data were cleaned, coded and entered into the computer. According to the research objectives, data were analyzed using the Statistical Package for the Social Sciences (SPSS), version 24.0.

## Results

The researcher approached 65 students to participate in the study. However, two of them were unwilling to give consent. As a result, the study was conducted with 63 respondents, 35(55.6%) male and 28(44.4%) female; all of them were students and unmarried. The study revealed that 15.87% of respondents had a history of deliberate self-harm and the history of self-harm was more common among female students (18.57%) in comparison to male students (13.88%). The researcher attempted to find out the psychiatric disorders among these 10 students who had a history of deliberate self-harm using the valid Bengali DAWBA Scale and found that 70.0% of them had at least one psychiatric disorder. The different type of psychiatric disorders was assessed and it revealed general anxiety disorder was the most common comorbid

psychiatric disorder. The most comorbid conditions were GAD (34.0%), hyperactivity (17.0%) and OCD (17.0%), followed by troublesome behavior (8.0%), depression (8.0%), panic disorder (8.0%) and PTSD (8.0%) (Figure 1). The stress level of the students was assessed using the Dhaka Stress Scale. The study revealed there was a significant impact of stress on self-harm. Table I showed a significant difference ( $p < 0.05$ ) of stress level between Deliberate Self-Harm (DHS) and non-self-harm group on paired t-test. To understand the impact of

gender on stress, male and female participants were compared. The most common stressors in both deliberate self-harm and no self-harm groups were parental pressure for study, increased study pressure, unexpected results in the study, mobile phone addiction, death of close family members, conflict with parents, harassment-related problems, etc. The methods of self-harm among the participants were excessive use of medication, consumption of alcohol or drugs, and engaging in bullying relationships.

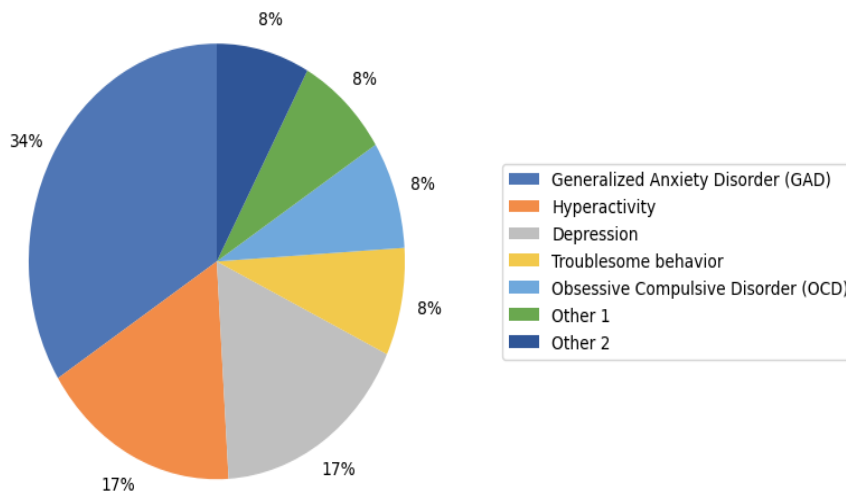


Figure 1: Types of psychiatric disorders among students who had deliberate self-harm

Table I: Difference of stress level based on deliberate self-harm on paired t-test

	Stress level			
	M	SD	T	P
Deliberate self-harm (n=10)	618.20	186.548	2.945	0.012
No deliberate self-harm (n=53)	431.19	171.040		

Table II: Difference in stress level by sex (Independent samples t-test)

	Stress level			
	M	SD	T	P
Male (n=63)	476.50	179.764	0.835	0.408
Female (n=27)	436.22	196.612		

Table III: Types of stressors among participants

Types of stressors	DSH present (n)	DSH absent (%)
Prenatal pressure for study	80	49.2
Increased study pressure	40	62.3
Unexpected academic result	50	24.5
Internet/mobile addiction	60	60.4
Death of a close family member	30	41.5
Conflict with parents	70	28.3
Harassment-related problems	40	15.1
Parental conflict	40	65.6
Conflict with classmates	80	22.6
Punitive behavior of teachers	40	30.2
Alteration of personal habits (sleep, appetite, etc)	50	47.2
Alteration of family roles and responsibilities	50	32.1

\*DSH=Deliberate Self-Harm

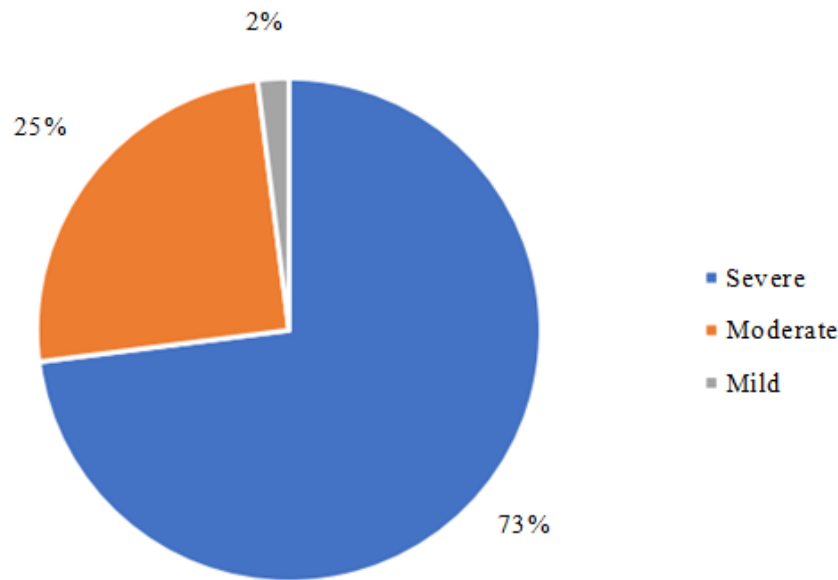


Figure 2: Distribution of severity of stress among the students

Table IV: Pattern of self-harm among the participant

Variable	Present (%)	Absent (%)
Excessive use of medication	1.6	98.4
Consumption of alcohol/drugs	1.6	98.4
Indiscriminate sexual relationships	0.0	100.0
Engaging in a bullying relationship emotionally	1.6	98.4
Engaging in a sexually harassing relationship	0.0	100.0

Table V: Major stress among the participants

Variable	Present (%)	Absent (%)
Excessive pressure for study by the parents	54.0	46.0
Excessive study pressure	58.7	41.3
Addiction to mobile/internet	60.3	39.7
Death of significant family member	39.7	60.3
Conflict with parents	34.9	65.1
Conflict among parents	54.0	46.0
Low attendance to school	47.6	52.4

The top stressors among participants were excessive pressure for study by the parents, excessive study pressure, addiction to mobile/internet, death of a significant family member, conflict among parents, low attendance to school and conflict with parents. Female outnumbered male in different significant stressors

such as excessive pressure for study by the parents, excessive study pressure, addiction to mobile/internet, death of significant family member and conflict among parents. The Dhaka Stress Scale was applied to find the stress among the students and 73% of students reported severe levels of stress.

Table VI: Gender variation in stress among the participants

Variable	Male (%)	Female (%)
Excessive pressure for study by the parents	48.6	59.3
Excessive study pressure	40.0	85.2
Addiction to mobile/internet	54.3	70.4
Death of significant family member	37.1	44.4
Conflict among parents	48.6	59.3
Low attendance to school	48.6	48.1

## Discussion

As hypothesized, the result shows a significant difference in stress levels between self-harm and non-self-harm groups. Students with self-harm have reported higher levels of stressor burden than the non-self-harm group. Though there were no differences in the severity of stress, 73.0% of students reported severe levels of stress. Between male and female students, more female students have a history of DSH than male students; the result is consistent with other studies on DSH<sup>9</sup>. The results have also shown a relation between DSH and its associations with psychiatric disorders. In the self-harm group, 70.0% had a comorbid condition and 30.0% did not have any comorbid condition, with generalized anxiety disorder being more common. Females outnumbered males in

different major stressors such as excessive pressure for study by the parents, excessive study pressure, addiction to mobile/internet, death of a significant family member and conflict among parents. The most common stressors in all students were parental pressure to study, increased study pressure, unexpected results in the study, mobile phone addiction, death of close family members, conflict with parents, harassment-related problems, etc. A study conducted by Mullick et al. in 2019 showed that 16.0% of the subjects who were adolescent population in Bangladesh had severe levels of stress. It can be assumed that this proportion of the adolescent population is the risk population group and has a strong possibility of having psychiatric problems. This rate simulates the prevalence of psychiatric disorders among children and

adolescents, especially during a pandemic where the stressor burden is higher than usual. In developed countries, the prevalence of psychiatric disorders among adolescents ranges from 11.0 to 27.0% and in developing countries, it is 13.00-20%<sup>8</sup>. Deliberate self-harm (DSH) is increasingly prevalent, particularly among college students and remains a major risk factor and predictor of suicide. DSH arises from multiple causes, with psychiatric disorders playing a crucial role. Therefore, individuals with a history of DSH should be carefully assessed for underlying psychiatric conditions, as overlooking this history may increase the risk of future suicidal behavior. Haw et al. reported that among 150 patients with DSH, psychiatric disorders were identified in 138 cases (92.0%), with affective disorders being the most common diagnosis (72.0%)<sup>9</sup>. Similarly, students engaging in DSH frequently exhibit psychiatric morbidities such as generalized anxiety, hyperactivity, depression and obsessive-compulsive disorder. Among females, factors associated with DSH include recent self-harm by friends, self-harm among family members, substance misuse, depression, anxiety, impulsivity and low self-esteem. In males, contributory factors include suicidal behavior among peers and family members, substance use and low self-esteem<sup>5</sup>. Consistent with these findings, the present study identified generalized anxiety, hyperactivity, behavioral problems, depression, obsessions and compulsions, post-traumatic stress disorder and panic disorder among students with DSH.

### Conclusion

Based on the findings of the study, it could be concluded that self-harm is a common finding among the adolescent population, with prevalence being more common in females than in males. Psychiatric co-morbidities and stressors play an important role in self-harm among the adolescent population. As self-harm is a common problem and most prevalent among the adolescent population, it should not be ignored and adolescents with self-harm should be assessed for psychiatric disorders and brought to the attention of medical care. Suicide remains a leading cause of mortality among adolescents and repeated self-harm should not be overlooked by either the general population

or general physicians, who are often the first responders to self-harm cases in hospital settings. College-based mental health initiatives are therefore essential, including programs to raise awareness about mental health issues and to screen students at risk.

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