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Epidemiological patterns and psychosocial risk factors of suicide among university students in Bangladesh revealed by a retrospective news content analysis

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Abstract

Background Suicide has become a public health concern among university students in Bangladesh. However, there is a lack of systematic evidence because of the lack of national surveillance on suicide.

Objectives This study aimed to analyze the epidemiology, methods, socio-demographic risk factors, and temporal trends of university student's suicide in Bangladesh using a retrospective content analysis of online news reports.

Methods A retrospective observational study was used. From January 2015 to May 2026, a total of 100 student suicides were found in 10 online news portals (5 English-language and 5 Bangla-language outlets) in Bangladesh. Gender, age, academic level, type of institution, location of the institution, suicide method, psychosocial risk factors, suicide notes, social media activity, mental health diagnosis, and other key classifications were included as variables. The data obtained were analyzed descriptively using SPSS 25.0 and Microsoft Excel.

Results Among the 100 included cases, 63% were male, with the mean age being around 23.1 years (range 18–31) among the 45 cases (45.0%) for which age was reported. The students of public universities experienced the highest number of suicide cases, mainly from the University of Dhaka, which contributed 27% of the incidents. There was a marked rise in cases from 2022 onward, with the highest number of cases in 2023 ($n=17$). The most common method was hanging (80%), primarily by ceiling fans in private, indoor locations (84%). Depression (17%), relationship problems (16%), and academic stress or failure (14%) were the most common psychosocial risk factors. Only 19% of cases had a confirmed mental health diagnosis. In 16% of cases, a suicide note was reported, and in 9% of cases, there was a pre-mortem communication via social media.

Conclusions Male students at public universities are at the greatest risk of suicide due to various risk factors and mental health issues. Given that a confirmed mental health diagnosis was documented in only 19% of cases, alongside the prominence

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of relationship distress, academic pressure, and familial or financial stress as reported precipitants, this study recommends improving mental health services on university campuses in Bangladesh as one of several complementary measures. Additionally, it also highlights the need for resilience workshops, training programs, and stronger public awareness through digital media.

Keywords Suicide, Psychosocial risks, Mental health, Academic stress, University students

1 Introduction

Suicide is a global, serious, and preventable public health problem and a quintessential part of the continuum of suicidal behaviors. According to the World Health Organization, over 720,000 individuals die by suicide each year, making it one of the top ten causes of death worldwide and the third leading cause of death for the age group 15–29 years, in addition, 73% of global suicides occur in low- and middle-income countries [1]. Moreover, the crude suicide rate was 10.1 in Southeast Asia compared with 9.2 globally per 100,000 population [2].

In Bangladesh, from 2020 to 2024, about 73,597 people died by suicide, averaging around 40 deaths per day, and between January and November 2025, 13,491 people died by suicide, which was about 41 deaths per day [3]. Globally, both suicide mortality and years of life lost (YLLs) among adolescents and young adults declined from 1990 to 2021, with YLLs dropping from 684.3 per 100,000 people to 419.4 per 100,000 people, but there is considerable regional variation [4], as for example, for Bangladesh this rate was 4.81 per 100,000 population in 2000 to 2.81 per 100,000 population in 2021 [5]. Moreover, the suicide mortality rate in Bangladesh increased from 7.68 per 100,000 population in 2015 to 8.27 per 100,000 population in 2024 [6]. It should be noted that the 4.81–2.81 figures are WHO-modeled estimates, whereas the 7.68–8.27 figures are derived from Bangladesh Police-recorded data; the two data sources are known to diverge substantially in Bangladesh, and the higher, rising police-recorded figures likely reflect improving case ascertainment and reporting over time rather than a true divergence from the WHO-modeled decline [6].

University students are a particularly important group of people to be concerned about suicide prevention because they are going through developmental, academic, social, and economic changes all at once [7]. University students often face depression (69.5%) and anxiety (61%) [8], due to various risk factors, for instance, academic environment, family pressure and expectations, financial worry, and interpersonal relationship problems, stigma and others, moreover, these are deeply associated with mental illness and suicide [7, 9, 10].

Prior studies confirm the existence of an emotional epidemiological curve, suggesting a considerable probability of an increase in the burden of mental well-being concerns related to a marked rise in suicidal behavior and ideation [11, 12]. The factors behind the suicidal incidents are diverse, which include the complex interactions between psychological, social, economic, and cultural factors. In Bangladesh, suicide rates have been rising, especially among young adults and females, with unique risk profiles compared to global trends [13–15]. Depression, anxiety, stress, previous history of suicidal ideation or attempts, family history of suicide, tobacco use, sleep disturbance, campus ragging, and living in an urban area have been identified as risk factors in previous studies [9,

10, 15–17]. Students from the public universities in Bangladesh also confirm academic stress, perfectionism, family conflict, relationship dissolution, lack of social support, and financial stress [15, 18, 19]. Among the cases of suicide, hanging is the most common method [11, 20, 21], and poisoning is the second most common method [22, 23].

Bangladeshi university students are considered highly suicide-prone compared to other populations [24], and epidemiological studies assessing suicidality remain very scarce. Very little research has examined documented university student suicide cases in relation to demographic characteristics, suicide methods, and reported precipitating factors. However, almost no studies have specifically examined epidemiological patterns and psychosocial risk factors of suicide among university students, which reveals an important gap in understanding this suicide risk profile of university students.

To bridge this, the objective of this study is to examine the epidemiological patterns and psychosocial risk factors of suicide among university students in Bangladesh through retrospective news content analysis.

2 Methods

2.1 Study design

This is a retrospective observational study of systematic online news content analysis. This technique has been successfully applied in previous suicide research in Bangladesh [23, 25] and is known to be a reliable method for obtaining epidemiological suicide data in countries where official data is either incomplete or unavailable [26, 27].

2.2 Data collection

The data were gathered from 10 news websites (5 English-language and 5 Bangla-language outlets), namely The Daily Star, Dhaka Tribune, bdnews24, Prothom Alo, The Financial Express, The Business Standard, UNB (United News of Bangladesh), The Daily Campus, Rising BD, and Jugantor. The terms used to search for the cases included 'university student suicide Bangladesh', 'student hanging Bangladesh', 'student found dead', and all other related topics. For the more recent cases (2024 to May 2026), sources were accessed, and for the older cases (2015 to 2023), these were collected by locating them in archived news reports and by searching backward.

The cases included were required to satisfy the following criteria: (a) official police or medical authorities categorized the death as either a suicide or suspected suicide at the time of death; (b) the death had been reported by at least one of the online news sources that the study relied on; and (c) the deceased was registered as a university student at the time of their death, or had completed their degree within the preceding six months and the news report explicitly identified them as a recent graduate of that university. The following cases were excluded: (a) cases concerning secondary/higher-secondary (school-level) students who were not yet enrolled at a university; (b) cases where the death was considered murder in the absence of abetment to suicide; and (c) cases where there was not enough information to confirm University enrollment.

2.3 Variables coded

The following variables were extracted and coded from each news report: (1) gender, (2) age at death, (3) academic level, (4) the type and name of the university, (5) location of incident, (6) setting of incidents, (7) method of suicide, (8) suspected contributing

risk factors, (9) presence of a suicide note, (10) presence of social media communication before death, (11) confirmed mental health diagnosis, (12) official classification of incident and (13) year of incident. A case was coded as an 'official' suicide when the police or medical authority's report/inquest as cited in the news source explicitly confirmed suicide as the manner of death, and as a 'suspected' suicide when the news source reported the death as an apparent or probable suicide pending police/medical confirmation, formal inquest, or post-mortem findings at the time of reporting. If no value was reported in any of the available sources for a particular case, it was not assumed, but rather coded as 'not reported'. Multiple risk factors could be coded for a single case. Vague cases in both directions or from multiple sources were cross-referenced, and the classification given in the official police or medical statements was given the highest priority.

2.4 Data analysis

Descriptive statistical analysis was used to analyze the data. All categorical variables were tabulated for frequencies and percentage values. For those data where age data were available, the mean, maximum, and minimum age were calculated. Year-wise trends were plotted for the purpose of revealing trends over time. Where applicable, comparisons between methods and between risk factors and gender were highlighted. Data from these analyses were analyzed using SPSS 25.0 and Microsoft Excel.

2.5 Ethical considerations

The information in this study is from publicly available news reports. No information other than that already available to the public was gathered or utilized that would identify or relate to a person. This kind of secondary data analysis that was made available to the public did not need formal ethical clearance, as is done in similar previous studies [23, 25]. In the analytical tables, the names of the dead are not used.

3 Results

This study analyzed 100 confirmed suicide deaths among university students from 2015 to 2026 in Bangladesh. The cases were spread across at least 35 institutions covering all significant administrative divisions of the country, such as Dhaka, Rajshahi, Chittagong, Khulna, Barishal, Sylhet, and Rangpur, and were not limited to any one region or institutional type.

3.1 Demographic characteristics

Table 1 shows the full demographic picture of the 100 cases. Males accounted for 63% of the decedents and females accounted for 37%. Among the 45 cases (45.0% of the sample) for which age was reported, the mean age was around 23.1 years (range 18–31). Age was not reported for the remaining 55 cases (55.0%). The average age group was 21–25 years, which represented a developmental period when there is continuous academic and identity development, as well as the re-negotiation of family or peer relationships. 77% of them were undergraduate students, 9% were postgraduate, and 5% were medical students.

As far as institutional affiliation was concerned, the public institutions accounted for 82% of cases. The University of Dhaka included 27 cases (27%), followed by Rajshahi University (7%), the engineering institutions (BUET/RUET/CUET, 6%), Chittagong

Table 1 Demographic and institutional characteristics of university student suicides in Bangladesh ($n = 100$, 2015–2026)

Demographic variable	Category	Frequency ($n = 100$)	Percentage (%)
Gender	Male	63	63.0
	Female	37	37.0
Age at death	15–24	31	31.0
	25–34	14	14.0
	Not reported	55	55.0
	Mean age ($n = 45$)	23.1 years	—
	Minimum age ($n = 45$)	18 years	—
	Maximum age ($n = 45$)	31 years	—
University type	Public	82	82.0
	Private	18	18.0
Academic level	Undergraduate	77	77.0
	Postgraduate/Master's/MBA/LLB (Bachelor of Laws)	9	9.0
	Medical/MBBS (Bachelor of Medicine, Bachelor of Surgery)	5	5.0
	Not reported	9	9.0
Name of University	Dhaka University (DU)	27	27.0
	Rajshahi University (RU)	7	7.0
	Chittagong University (CU)	6	6.0
	Jahangirnagar University (JU)	4	4.0
	Jagannath University (JnU)	6	6.0
	BUET/RUET/CUET	6	6.0
	Other public universities	26	26.0
	Private universities	18	18.0

University (6%), and Jagannath University (6%), with Jahangirnagar University accounting for a further 4%. The remaining 18% was in private universities. The frequency of cases increased from 2022, with 2023 having the highest number ($n = 17$), 2025 ($n = 14$), and 2024 ($n = 11$). Given that 11 cases were reported in the first five months of 2026 alone, it is likely that the increase will continue and should be soundly addressed by the institutions.

As shown in Fig. 1, the student suicides reported by the universities in Bangladesh have witnessed a marked increase from 2015 to 2026 (2026 data include January–May only), although this apparent upward trend has not been formally tested with an inferential trend statistic and should be interpreted descriptively. Notably, the number of cases fell from 17 in 2023 to 11 in 2024 before rising again to 14 in 2025; this dip coincides with the period of the July 2024 mass uprising in Bangladesh, during which a significant decline in suicide-related reporting ($p = 0.009$) was documented using the same online-news-portal methodology used here, possibly reflecting a temporary shift in media and public attention away from routine suicide reporting during the unrest rather than a true reduction in incidence [38].

3.2 Incident setting

The vast majority of suicidal deaths in this sample occurred in an unverified private residential setting. The most prominent group ($n = 36$, 36.0%) was family or home residences, and the second largest group was off-campus rented accommodation, mess

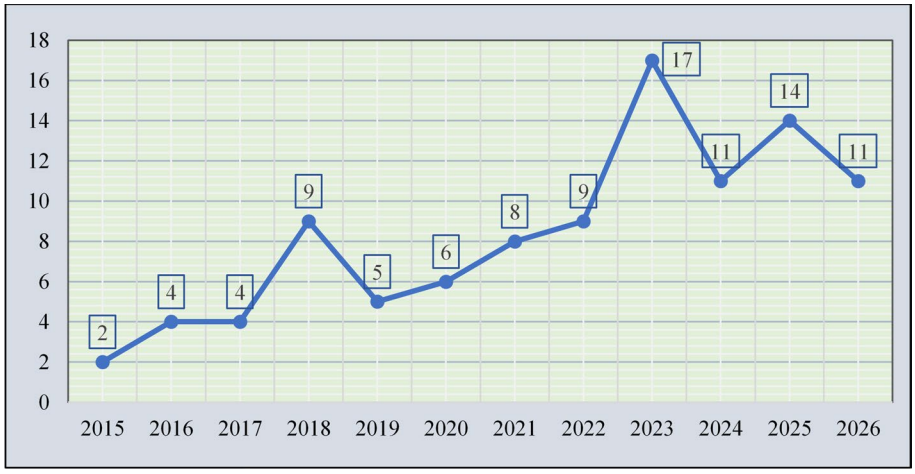


Fig. 1 Year-wise trend of university student suicides in Bangladesh 2015–2026

rooms, shared flats, and single-occupancy rooms at 30.0% ($n = 30$). On-campus dorms accounted for 18.0% ($n = 18$), and public spaces, such as rooftops or bridges, accounted for 16.0% ($n = 16$). Indoor private settings were the most frequent exposure setting, representing 84% of cases, consistent with prior research indicating the significance of physical separation and lack of bystanders in the immediate environment. For the context of university students of Bangladesh, the informal family monitoring that is usually present in rural areas is often lost when children move to urban settings for study, creating places of high vulnerability for suicide or related issues, especially in unshared residential areas.

3.3 Methods of suicide

Hanging was the most common method of suicide reported in 80 (80.0%) of 100 cases, which may be related to the prevalence of ceiling fans in the housing environment of students and the availability of ligatures of textiles in Bangladesh housing. The second most frequent method was jumping from height ($n = 9$, 9.0%), followed by poisoning ($n = 7$, 7.0%), including the use of rat poison, sedatives, and, in two medical student cases, self-administered drug injections associated with facilitated access to drugs occupationally. The other 4.0% were due to drowning or self-inflicted laceration. Although hanging was the predominant method overall, sex-specific differences in suicide methods could not be conclusively determined from the available data.

3.4 Risk factors

Multiple precipitants were often linked to a single case, which means that the frequencies do not show actual causal pathways. The most common factor was depression reported by peers and/or family members, but not clinically ($n = 17$, 17.0%), indicating underdiagnosis. Romantic or relationship-related distress was next ($n = 16$, 16.0%), including relationship dissolution, relationship conflict, and partner-family opposition. Academic failure or pressure accounted for 14 cases (14.0%), and family conflict or financial hardship and physical illness each had 13 cases (13.0%). An emergent risk domain (4 cases, 4.0%) received documentation, namely social media harassment, such as viral shaming and cyberbullying, preceding death. There were no identifiable risk

factors associated with 23 cases (23.0%), and this was more frequently related to death in locked rooms and/or deliberate family non-disclosure.

Among the 5 medical/MBBS student cases identified in this sample, poisoning via self-administered drug injection was reported in two cases, a proportion notably higher than in the overall sample, where such occupationally facilitated methods were otherwise absent; this pattern is consistent with occupational access to lethal means as a distinct risk pathway for medical students, discussed further below.

3.5 Suicide notes and social media

Suicide notes had been found in 16 cases (16.0%), a higher proportion than the approximately 8% reported among the general adult population in Bangladesh in earlier work, which may be related to the higher literacy rate among students. If disclosed, note content included hopelessness, self-blame, apology from a parent, and, in a few instances, an explicit statement of responsibility to a specific person (legal abetment). In 9 cases (9.0%), the student's pre-mortem social media posts and communications were recorded, including farewells and expressions of guilt, in addition to a lengthy public post that placed personal responsibility for the student's death.

3.6 Classification by authorities

There was a high level of medicolegal uncertainty, as only 41 cases (41.0%) were classified as 'official' suicides and 56 cases (56.0%) were classified as 'suspected' at the time of reporting. Finally, in 3 cases (3.0%), criminal action was taken for abetment. (Operational definitions of 'official' and 'suspected' classifications are provided in the Methods section.)

3.7 Confirmed mental health diagnosis

There were very few documented cases with formal mental health diagnostic information. Only 19 cases (19.0%) had a confirmed diagnosis of depression or psychiatric illness, and suspected psychological distress (implied through observations of behaviors by people other than clinicians) was seen in 14 cases (14.0%). In the remaining 67 cases (67.0%), no preexisting mental health concerns were identified, which may be due to underdiagnosis and structural factors limiting help-seeking within the health system, and not necessarily due to a lack of mental health wellness (Table 2).

4 Discussion

This systematic news content analysis study among university student suicide in Bangladesh shows that 100 university students have died by self-harm from 2015 to 2026 in 35 universities. The results show an increasing trend, as the year 2023 had the highest number ($n = 17$), the year 2025 had ($n = 14$), and the year 2024 had ($n = 11$). This 2024 dip, occurring between two years of higher counts, coincides with the period surrounding the July 2024 mass uprising in Bangladesh, during which a statistically significant decline in suicide-related news reporting was documented using a comparable Bangla online-news-portal methodology; this suggests the 2024 figure may partly reflect a temporary contraction in media coverage of routine suicide deaths during a period of national political unrest, rather than a genuine reduction in underlying incidence, and should be interpreted with this caveat rather than being absorbed uncritically into the overall

Table 2 Suicide variables: methods, risk factors, notes, and classification ($n = 100$)

Variable	Category	Frequency ($n = 100$)	Percentage (%)
Incident setting	Off-campus rented residence	30	30.0%
	On-campus dormitory/hostel	18	18.0%
	Family/home residence	36	36.0%
	Public space/rooftop/outdoor	16	16.0%
Method of suicide	Hanging	80	80.0%
	Jumping from a height/bridge	9	9.0%
	Poisoning/ingestion	7	7.0%
	Other methods	4	4.0%
Suicide notes present	Yes	16	16.0%
	No/not reported	84	84.0%
Social media post before death	Yes	9	9.0%
	No/not reported	91	91.0%
Classification by authorities	Confirmed suicide (*"official" see Methods for definition*)	41	41.0%
	Suspected suicide (*see Methods for definition*)	56	56.0%
	Abetment/instigated suicide (case filed)	3	3.0%
Confirmed Mental Health Diagnosis	Depression/Mental Illness Confirmed	19	19.0%
	Suspected Psychological Distress	14	14.0%
	None reported	67	67.0%
Suspected Risk Factors	Romantic/relationship distress	16	16.0%
	Depression (reported by peers/family)	17	17.0%
	Academic failure/pressure	14	14.0%
	Family conflict/financial stress	13	13.0%
	Social media harassment/public humiliation	4	4.0%
	Physical illness/chronic pain	13	13.0%
	Not mentioned/unknown	23	23.0%

Risk factor percentages were calculated based on the primary reported precipitating factor for each case from news sources at the time of publication

upward trend [38]. This overall pattern could plausibly reflect a cumulative impact of COVID-19 academic disruption, adjustment-related issues from the pandemic, and a lack of adequate campus mental health resources over the years, though, as noted above, this apparent trend was not evaluated with a formal inferential trend statistic and should be interpreted descriptively. By May 2026, the number of cases was already alarming, because 11 cases had been documented at that time, which shows the need for targeted and planned action by the institutions or authorities.

An interesting gender-based difference was observed in this study; male individuals outnumbered females in completed suicide (63:37), thus contrary to the national Bangladeshi completed suicide profile, which was also female-dominated [23, 29, 30]. This is in line with the global figures on suicides, where the suicide risk for men is four (04) times higher than women, and this rate have risen by 30% for men [31], and it is seen in all university populations across South Asian countries where there is more competition in academic studies, financial insecurity, and expectations of good performance at school among males. The mean age was close to 23.1 years (range 18–31 years, $n = 45$ cases with reported age) with a peak in the 21–25 age group, which is a period of time in which academic, relationship, and identity demands are all intense. 77% of cases were undergraduates, in line with other evidence that the early years of the university are a very vulnerable window globally.

The predominant method of hanging was 80%. This is much higher than the 60.9% reported by [22] in the general Bangladeshi population and the 61% reported by [23], likely because ceiling fans are ubiquitous in student housing and therefore are highly accessible lethal means. Jumping from height (9%) and poisoning (7%) were the next most common causes, with females more likely to hang and males more likely to poison or fall to death, a picture that was repeated when examining the international literature [32, 33]. More than 84% of the deaths occurred in private indoor settings (home residences, off-campus rented rooms, and on-campus dormitories), emphasizing the increased risk of social isolation and unsupervised environments.

The risk factor profile is consistent with the multifactorial stress-diathesis model. The top three precipitants were peer or family reports of depression (17%), romantic/relationship problems (16%), and academic pressure or failure (14%), and these findings are similar to those of Bangladeshi university surveys [34, 35] and South Asian contextual literature [28]. In 13% of cases, conflict within the family and financial problems were present, and in 13%, physical illness was present. There are novel domains of psychosocial risk, such as social media harassment and public shaming preceding death, reported in 4% of cases, which represents a new level of psychosocial vulnerability that needs to be addressed through specific institutional policy. In 23% of instances, no risk factor could be ascertained, in part because of the non-disclosure of risk factors among families and private residential settings.

A subgroup worth separate consideration is the 5% of cases ($n = 5$) involving medical/MBBS students. Although small in absolute number, two of these cases involved self-administered drug injection, a method that did not otherwise appear in the non-medical student cases, and which is consistent with the wider literature suggesting that occupational access to lethal means (e.g., through clinical training, pharmacy access, or knowledge of pharmacology) operates as a distinct risk pathway for medical students and physicians, separate from the general academic-pressure pathway seen in other undergraduates. This is consistent with a recent Bangladesh-specific media-content-analysis study of physician and medical student suicide, which similarly found variation in the factors associated with medical trainee suicide compared with the broader student population [39]. Given the small subgroup size in the present sample, this finding should be treated as hypothesis-generating rather than conclusive, but it nonetheless supports calling for medical-education-specific prevention measures, such as restricting easy access to injectable medications in training settings and embedding confidential mental health support within medical curricula.

Formal mental health diagnosis was confirmed for just 19%, while another 14% reported psychological distress through peer self-report, reflecting the high level of underdiagnosis likely due to stigma, few mental health counsellors on campus, and culturally divergent notions of what to seek help for [36, 37]. This underdiagnosis gap is arguably the most actionable finding of this study, since it points directly to a treatment and prevention gap rather than to an absence of underlying distress. A recent synthesis of twelve Bangladeshi stigma studies spanning medical students, healthcare providers, religious leaders, and the general public found that stigmatizing attitudes toward mental illness remain widespread and are compounded by a severe shortage of trained mental health professionals nationally, including psychiatrists and campus counsellors, which together constitute a structural barrier to help-seeking that operates independently of

individual willingness to disclose distress [40]. Addressing this gap on university campuses would plausibly require not only expanding counselling staff numbers but also structured anti-stigma programming, routine (rather than crisis-triggered) mental health screening, and referral pathways that do not require students to self-identify as unwell. In 16% of cases, suicide notes were found, which was higher than a previously reported figure among the general Bangladeshi population [22], as students have a higher literacy rate. Pre-mortem social media communications were reported in 9% of cases, indicating online communication may be a distress signal and also a harm-amplifying environment, which should be addressed by structured peer crisis literacy training on campus.

4.1 Limitations

There are a few restrictions in this study. The data from the news media are under-representative of the number of suicides, since many are not reported due to social stigma and family non-disclosure. Variability in reporting quality may lead to some inconsistencies in risk factor attribution. A significant number of reports did not provide information on age or academic year. However, these limitations do not detract from the fact that this comprehensive study of university student suicide in Bangladesh provides a baseline data set for evidence-based prevention policy. The need for future research is highlighted by the need for prospective institutional surveillance systems and multi-source cross-referencing.

5 Conclusion

This study reveals systematic evidence on university student suicide in Bangladesh using retrospective news content analysis and describes a pattern of increasing suicide cases from 2015 to 2026, albeit with a dip in 2024 discussed above, based on the 100 cases analyzed. The results suggest that male undergraduate students from public universities are more vulnerable, and hanging is the most common method because lethal methods are readily available in private residences. The factors that were identified as the main psychosocial risk factors, which demonstrated the multidimensional nature of suicidal behaviors in the university context, were depression, relationship conflict, academic pressure, family stress, and financial hardship. The prevalence of diagnosed psychiatric disorders is also low (19%), directly reflecting the underdiagnosis and structural mental-health service gaps identified in this sample. Consistent with these specific findings, the results point to the need for expanded mental health services and screening in institutions, together with early screening programs, crisis intervention, means restriction policies (particularly given the predominance of hanging by ceiling fan in private residences), and robust national monitoring of suicide.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12982-026-03105-4.

Supplementary Material 1.

Supplementary Material 2.

Supplementary Material 3.

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Ahsanul Haque Rifat: Conceptualisation, Methodology, Data Collection, Formal Analysis, Writing Original Draft, Review & Editing, Corresponding Author. M. M. Enamul Aziz: Supervision, Review & Editing. Md. Reazul Islam: Supervision, Review & Editing.Sonya Farhana Sony: Review & Editing. Saiful Islam: Review & Editing. Md. Golam Dostogir: Review & Editing. Mahamudul Hasan: Data Collection, Editing & Final Review. Sabina Sharmin: Final review & Editing.

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Data availability
All data generated or analysed during this study are at its supplementary information files (with a online available links of each cases), additionally, all the raw files and related are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate
This study used secondary data derived entirely from publicly available online news reports and did not involve direct contact with human participants, identifiable private data, or clinical records. In accordance with institutional and journal policy for this type of secondary, publicly available data analysis, and consistent with similar previously published studies using the same methodology [23, 25], formal ethical clearance was not required for this study. In addition, AI (artificial intelligence) tools were used in the preparation of this manuscript for language editing, grammar correction, and improving clarity and readability. The authors take full responsibility for the accuracy, originality, and integrity of the manuscript. Not applicable. This study did not involve direct recruitment of human participants; all data were extracted from publicly available secondary news sources, and no individual was contacted or asked to participate.

Consent for publication
Not applicable. No identifying images, names, or individual-level identifying information of any deceased person or their family is presented in this manuscript; all case data are reported only in aggregated, de-identified, tabular form.

Competing interests
The authors declare no competing interests.

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