



Research article

Risk factors of suicide among public university students of Bangladesh: A qualitative exploration

Salma Akter Urme^{a,*}, Md. Syful Islam^b, Hasena Begum^c, N.M. Rabiul Awal Chowdhury^c^a BRAC James P Grant School of Public Health, BRAC University, Dhaka, Bangladesh^b Department of Population Science, Jatiya Kabi Kazi Nazrul Islam University, Trishal, Mymensingh, Bangladesh^c Department of Anthropology, Comilla University, Comilla, Bangladesh

ARTICLE INFO

Keywords:

Depression
Qualitative
Risk
Stress
Social support
Suicide

ABSTRACT

Introduction: Suicidal deaths among the students have increased worldwide where Bangladesh is not an exception and the reasons are not well documented.**Objective:** Revealing the common risk factors of suicide among the public university students of Bangladesh was the aim of this study.**Methods:** This study utilized a qualitative research design and data was collected from five public universities of Bangladesh where suicidal death found prevailing. Guidelines containing open ended questions were used to conduct in-depth interviews and key informant interviews among thirty public university students and five university professionals respectively. Both purposive and snowball sampling was used to select respondents. Data of this study was analyzed thematically.**Results:** Findings of this study suggest most of the public university students, committed suicide shows a history of depression, hopelessness, perfectionism, family conflicts, relationship break-up, lack of social support, financial crisis, and academic stress before their attempts.**Conclusion:** Arranging seminars, workshops, and awareness-raising campaigns are urgently needed to change suicidal behavior among the public university students of Bangladesh. A strong support system should be built with suggestions from mental health professionals, policymakers, researchers, and academicians to ensure good psychological well-being among the students.

1. Introduction

Suicide is a significant and preventable worldwide public health problem, which is often neglected by researchers, policymakers, gatekeepers, and clinicians (Arafat, 2016; Feroz et al., 2012; Shah et al., 2017; Suicide, 2021), especially in lower-income countries like Bangladesh (Begum et al., 2017). Globally about 1 million people kill themselves every year, which represents a mortality rate of 16 per 100,000; and worldwide one death occurs in every 40 s from suicide (Feroz et al., 2012; Hannah et al., 2015; Khan et al., 2021). Consequently, suicide is declared as the world's 3rd leading cause of death among 15–44 years old people (Arafat, 2016; Feroz et al., 2012; Khan et al., 2021; Shah et al., 2017), whereas 77% of suicides occur in Lower and Middle-Income Countries (LMICs) in 2019 (Suicide, 2021).

Currently, suicide has become a daily event in Bangladesh (Ara et al., 2016). According to the data from Police Headquarters, in 2017 around

11095 people committed suicide in Bangladesh, which means every day on an average 30 people kill themselves (Ferdous and Alam, 2021; Roney, 2018). Moreover, Bangladesh ranks 10th in the list of high suicide-prone countries, 8 out of every 1 *lakh* (100 thousand) people in Bangladesh are taking their own lives (Hasan and Rabbi, 2018; Sadek et al., 2019).

Globally, the high prevalence of depression, stress, and anxiety among university students is an increasing concern (Bayram and Bilgel, 2008). Suicide is the 2nd leading cause of death among the university students (Owusu-Ansah et al., 2020). The tendency of committing suicide has been increasing at an alarming rate among the public university students of Bangladesh. About 19 students from 5 public universities committed suicide in 2019, showing a rise in such incidents ("Alarming Suicide Rate at Public Universities," 2019; "Suicide Rates Rising among DU Students," 2018; "Suicide Tendency Rises among DU Students," 2018; Showon, 2018). In spite of this high rate of suicide among the

* Corresponding author.

E-mail address: salmaakterurme@gmail.com (S.A. Urme).<https://doi.org/10.1016/j.heliyon.2022.e09659>

Received 5 February 2022; Received in revised form 10 April 2022; Accepted 31 May 2022

2405-8440/© 2022 The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

public university students, there is a paucity of research and data on the reasons of suicidal ideation or behavior among these population (S. M. Y. Arafat and Al Mamun, 2019; Mamun et al., 2019; Pervin and Ferdowshi, 2016).

Mental illness especially depression is the major cause of suicide (Dyson and Renk, 2006; Garlow et al., 2008; Mackenzie et al., 2011), which is also found preventing with the suicidal ideation among university students worldwide (Santos et al., 2017; Wanyoike, 2015), and also true for the university students of Bangladesh (Pervin and Ferdowshi, 2016). Adaptation difficulties i.e., being comfortable with the new environments, making friends, staying away from home, and the transition from a school environment to university life are the risk factors creating depression among the university students (Al-Mahrooqi et al., 2015; Chong et al., 2009; Santos et al., 2017). Previous studies conducted among the university students of Brazil and Ethiopia showed that alcohol or substance abuse is one of the high or moderate risk factors of suicide (Dachew et al., 2018; Santos et al., 2017). Suicidal ideation is also related to the hopelessness and loneliness of graduate students (Garcia-Williams et al., 2014).

Though a mini-review on the suicide of overall Bangladesh revealed that economic crisis, discord with family, chronic diseases, failure in love, family history of suicide, drug addiction, unwanted pregnancy, misfortune, loss of property, criminality, and mental illness are the common risk factors of suicide, but the risk factors are not explored in the context of university students (S. M. Arafat, 2016). Even there is no qualitative study conducted with the university students of Bangladesh to explore the factors associated with their suicidal behavior. Pervin & Ferdowshi (2016), found the association between loneliness, hopelessness, and depression with suicidal ideation through a cross-sectional study among the students of the University of Dhaka, but they did not focus on suicide attempts or completed suicide and the study population was limited to a single university student. So, this current study is a justified attempt to identify the common risk factors associated with suicide among public university students of Bangladesh. The expected outcome of this research will help diverse stakeholders i.e., governments, university authorities, and policymakers to develop proper policy and intervention programs to enhance the support services to prevent suicide among the public university students of Bangladesh.

2. Methods and materials

2.1. Study design, area, and sample

This study adopted an explorative qualitative method to reveal the risk factors increasing the suicidal tendency among public university students of Bangladesh. The study sites five public universities of Bangladesh; Dhaka University (DU), Jahangirnagar University (JU), Jagannath University (JnU), Shahjalal University of Science and Technology (SUST), and Comilla University (CoU) were selected based on the reported suicide case revealed from the newspapers. At the beginning of the data collection, the researcher sent email to the registrar offices of each selected university to know the prevalence of suicide among the students. But no reply was found from any of the registrars and the hope to receive data about the suicide rate of these universities was failed. Then the researcher decided to conduct the research based on available data on print and social media. We conducted this study adopting qualitative research methods- In-depth Interviews (IDIs) and Key Informant Interviews (KIIs). Since there is a long distance between the study sites, the data collection took about 3 months starting on 14th May, 2019 and ended on 10th August 2019.

This research used both purposive and snowball sampling methods for the identification of study participants. The snowball sampling method was used to find out the deceased student's (who committed suicide) close friends, roommates, and teachers from the department where the deceased student was studying. The sample size was achieved based on the saturation of data. In this regard, this study developed two

different semi-structured guidelines for collecting qualitative data through IDIs and KIIs. These guidelines were pre-tested to find inconsistencies and make these guidelines holistic. To find out the inconsistencies of the IDI and KII guideline, 3 in-depth interviews and 2 KIIs were conducted with the students and teachers of Comilla University, respectively. After the interview the authors revised/modified the guidelines based on the pre-test findings. The interview conduction time was selected based on the students' and professors' communication aspiration and availability.

The inclusion criteria for IDIs were, 1) current university students who had spent at least one year at the selected universities. 2) Respondent's age must at least 18 years old. While for KIIs the inclusion criteria were current teachers of selected universities and suicide case was reported at their department. The exclusion criteria were respondent below 18 years old, unwillingness to participate in the study etc. After introducing and explaining the aim of the study to the participants, researchers spend quality time for rapport buildup and the interview was started only after the respondents seemed comfortable. Each interview began with some ice-breaking questions such as 'What is your understanding about suicide?' or 'How do you explain this?'. On an average, each interview lasted for 50–60 min excluding the time needed for the rapport build-up. All the interviews were conducted in respondent's native language, Bengali. All interviews were conducted in person. Initially, the interviewer scheduled a convenient time and preferred location for the interview by consulting with the respondents over phone and then conducted the interview in person at the scheduled time and place. As the study design was qualitative in nature, so only 2 people (the interviewer and the respondent) were present during the interview. The interviewer conducted face to face interview. All interviews were recorded with consent from the respondents.

2.1.1. In-depth interviews (IDIs)

The sensitivity of the topic demands in-depth interviews to understand students' perceptions and attitudes towards suicide and also gripping their expressions regarding this unnatural and avoidable death. 30 IDIs (DU-10, JU- 5, JNU- 5, SUST- 5 and CoU- 5) were conducted by this study (Table 1). Among the thirty participants, there were 5 close friends and classmates of the deceased students, who were selected by analyzing print media data on suicidal death. Initially, most of the students were not interested to talk about this type of sensitive issue, they were afraid about being exposed in the newspaper or media. But gradually, the researchers became able to make them understand and through good rapport build-up, they became able to conduct their interview. Most of the interviews were conducted in the campus area preferred by the respondents. A few of the interviews were conducted in their home/residence or public spaces based on the respondents' opinion and comfort. Data saturation was reached when the researcher felt no new codes were emerging after 10 to 12 IDIs were conducted. Then the remaining interviews were conducted for better understanding of the study objectives.

The main interview questions posed to the in-depth interview guideline are the following: Share your perception about suicide? In your understanding why students are committing suicide? Do you think that are students influenced by other students' suicidal death, please explain? What do you think what are the main factors of suicide? Please share some reasons why the rate of suicide is increasing among the public university students (Probe: personal, family, social or institutional reasons)? What do you think is there any gender difference between suicide, explain? If yes, then what are the reasons behind this? In your personal experience what do you think is there any prior symptoms by which anyone can understand one is going to commit suicide? Is any of your friend share he/she wants to commit suicide? Did he/she seek support from you in this regard? If yes, did you support his/her? Have you ever felt that it is better to die than to live? If so, why did you think that and what did you do then? Share us some recommendations what can be followed to reduce the tendency of suicide among the public university

students of Bangladesh? Who can take the responsibility (Probe: University authority, department, teachers, peer groups, researchers or media)?

2.1.2. Key informant interviews (KIIs)

Key Informant Interviews were conducted to find out the reasons behind committing suicide by the university students. The KIIs included professionals from academia. Five KIIs were conducted from three different public universities of Bangladesh. The KII participants' list of this study is presented in Table 2. For conducting KIIs the researchers sent an email to the teacher and asked them for a schedule, but few of them showed interest to talk, this phase was time-consuming and challenging as the researchers had to wait for more than a month to get the schedule from the KIIs. All the key informant interviews were conducted in their office. Even two KIIs did not permit to record their interviews due to the sensitivity of the research topic.

The main interview questions posed to the key-informant interview guideline are the following: Share your understanding about suicide? How we can differ suicide with normal death? Do you think that suicidal tendencies are contagious in any ways? In your personal understanding/interactions with the deceased one what do you think was suicide the only solution for those who commit suicide? Explain some reasons university students are committing suicide? Could you please share reasons, students are losing their interest to live? From your practical experience what do you think what type of students are more prone to commit suicide? Explain some problems that make suicide compulsory for the students (Probe: family, friends, environment, academic crisis)? From your practical experience could you please share some prior symptoms of suicide by which anyone can understand one is going to commit suicide (Probe: loneliness, hopelessness, depression)? With whom, the students share their mental health illness? What's your experiences do students prefer to seek help from the psychiatrist? If not, why? Explain some way to prevent suicide? Who can take the initiatives to reduce the rate of suicide (Probe: family, friends, department, university authority, media, or mental health professionals)? Does your university or department have any mental health service center?

2.2. Data analysis

The recorded interviews were listened to several times to find out the inconsistency and identifying themes. All audio interviews were transcribed into Bengali and later translated in English in a Word Document for importing into the computer-aided qualitative data analysis software (CAQDAS) named NVivo version 8. Then we minutely examined the data to identify the emerging patterns and themes by following three steps (open, axial, and selective) of coding for analyzing the qualitative data. Firstly, by open coding, we divided the data into several parts and assigned "a priori" codes to the multiple themes including (1) Demographic factors, (2) Psychiatric or Psychological issues (3) Academic persecution, (4) Social problems, and (5) Previous suicide attempt history as the causes of suicide. Then, we developed several sub-themes under a broad theme based on similarities and content by following

Table 1. IDI participants' list of this study.

Name of the University	Number of IDIs	Male	Female
Dhaka University (DU)	10	4	6
Jahangirnagar University (JU)	05	3	2
Jagannath University (JNU)	05	4	1
Shahjalal University of Science & Technology (SUST)	05	2	3
Comilla University (CoU)	05	4	1
Total	30	17	13

Table 2. KII participants' list of this study.

Name of the University or Organization	Designation
University of Dhaka	Associate Professor
University of Dhaka	Assistant Professor
Jagannath University	Assistant Professor
Shahjalal University of Science and Technology	Professor
Nasirullah Psychotherapy Unit (NPU)	Clinical Psychologist

axial and selective coding. Finally, the themes were illustrated with verbatim quotes and explained by reviewing existing literature.

2.3. Ethical clearance

This study received ethical approval from the Higher Degree Academic Research Approval Committee, Department of Anthropology, Comilla University, Bangladesh. The approval number of this study is ANP_MSS_2018:01. A written consent was read out to the participants and a sign was collected in the consent form before starting the interview. Participants' permission was also sought for audio-recording and withdrawal from the interview at any time was allowed.

3. Findings

Results of the thematic analysis identified five major themes along with few sub-themes (Table 3), describe the factors that increase suicidal thoughts among the students, and force them to act on those thoughts.

The factors affecting suicide and the way they act are graphically presented in Figure 1 based on the data of this study.

These marked themes and sub-themes are described separately as follows.

3.1. Demographic factors

Qualitative participants' statement represented that socio-demographic characteristics especially gender and economic condition of students are related to the suicidal ideation, behavior, or attempts of the deceased person.

3.1.1. Gender

One of the most common factors of committing suicide among the public university students of Bangladesh is gender. Male students are more likely to commit suicide, while female students make attempts more often than the man revealed by this qualitative study. Male students are less expressive than their counterparts and cannot express their

Table 3. Summary of themes and subthemes.

Theme	Subtheme
Demographic factors	Gender
	Economic condition
Psychiatric and psychological issues	Depression
	Perfectionism
	Alcohol and Substance use
	Adaptation problem
Academic Persecution/Stress	Bullying or ragging
Social problems	Social isolation
	Unwillingness to seek help due to stigma concerns
	Lack of Counseling Center/Service
Previous history of suicide attempts	Former suicide attempts
	Suicide is contagious

mental health condition to the consultant properly. In this regard, an IDI participant stated:

“the male students are more likely to commit suicide compared to female students as female has more tolerance power. The male student easily loses their mental strength. The pressure to take the responsibility of their family also increases their weakness.” (IDI, Male student, SUST, 29.05.19).

Most of the participants believed that the reasons of suicide for male students are mainly being worried about economic downturn or getting a job, while problem in relationship is the main reason for female students. One of the participants described her notion about this issue,

“For a male student, the reason may be the financial crisis or unemployment, but for a female student break up of a relationship is the main reason for committing suicide.” (IDI, Female student, DU, 14.05.19).

3.1.2. Economic condition

The public university students of Bangladesh face an economic crisis because most of them belong to lower-middle-class families. It is necessary for students to remain tension-free/stress-free, which helps them to concentrate on their studies. But being a child of a lower-income family and failing to get a job after completing their study make them frustrated. One IDI participant mentioned:

“A few days ago, one of our elder brothers who was doing MBA jumped from the 6th floor for committing suicide due to unemployment. This is not the only case every day we are getting similar kinds of news.” (IDI, Male student, DU, 09.06.19).

In addition, the correlation between socio-economic class and suicidal ideation were also illustrated by the KII participants of this research,

“Most of the public university students do not get enough financial support to bear their livelihood and tuition expenses. Because of this they are not able to manage their life well, and gradually their frustration increases a lot. Thus, one day he finds no way to overcome their frustration and commit suicide.” (KII, Male, Assistant Professor, DU).

3.2. Psychiatric and psychological issues

Suicidal behavior is closely related to psychiatric disorders such as depression, substance use disorders, adaptation problems, and perfectionism.

3.2.1. Depression

Depression has been identified as a major cause of suicide and some of the negative life experiences i.e., feeling helpless, death of a closed one, break-up, conflicts with the family or friends, failure in examination, economic crisis, intense emotional pain, unemployment, and bullying. One IDI participant identified it as a cause of suicide,

“When a student studies well but does not achieve the expected results, s/he becomes depressed. Moreover, students who fail to get a job with good academic results are also responsible for causing frustration and enabling them to attempt suicide. Other causes of suicide may include relationship problems, family problems or personal problems.” (IDI, Female student, SUST, 05.06.19)

Apart from that, negative relationships with peers such as not having any friends, lack of interaction with friends, and not being accepted by friends can also trigger depression in teenagers. Several participants mentioned that each student goes through depression in their life and the risk of suicide is determined by the severity of depression.

3.2.2. Perfectionism

Personality traits including perfectionism and suicide are linked with each other, evolved from this study. The student who has high demands but fail to meet their expectations in life commits suicide. Most of the deceased students had perceived external pressure to be perfect in their whole life. This was supported by a key informant,

“Students who had committed suicide were known for having common characteristics of perfectionism i.e., expressing high demands and expectations. They were always thinking about how others were judging them and they simply could not accept their failure, and they always desired to be a perfectionist with a high standard of performance.” (KII, Female, Clinical Psychologist, NPU)

3.2.3. Alcohol and substance use

With the completion of college life, parental surveillance of their children has been decreased. Where new freedom and space from their parents makes them addicted. Moreover, they use this substance to avoid their academic, social or relationship stress. Most of the drug addicted students started taking drugs under the influence of their peers. Students with substance use disorder are at elevated risk of suicidal ideation and suicidal attempts found by this study. One of the participants reported that.

“Suicidal ideation is sometimes related to alcohol consumption because it increases their negative emotions such as sadness, depression, anxiety or guilty feeling and decreases the fear of death.” (KII, Male, Professor, SUST).

3.2.4. Adaptation problem

The university students encountered various difficulties in adapting to the new environment at the starting of their university life are revealed by this study. In the new life after getting admission to a university most of the students have to stay away from their parents, which increases their loneliness. The majority of the public university students move from rural or peri-urban areas to urban areas, for which they face a changing physical environment such as new location, population density, and urbanization with financial crises, cultural changes, and changes in social relationships. A KII participant entitled their experiencing culture shock as well:

“When a student comes from a periphery area to the center, s/he is shocked by the new culture or new environment and faces difficulties to interact and share their problems with their new peer groups. These adaptation problems cause depression and isolate them from society” (KII, Female, Assistant Professor, JNU).

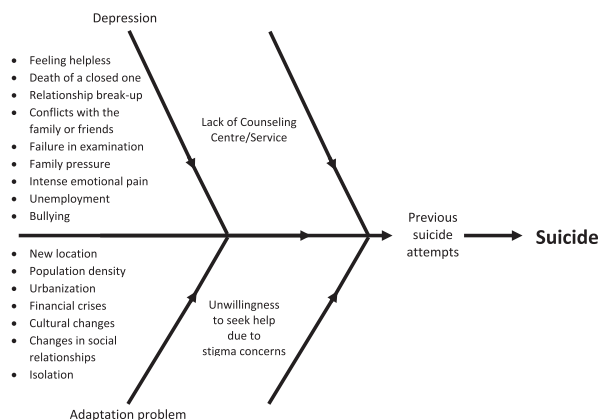


Figure 1. Causal relationship of different factors with suicide among the public university students of Bangladesh.

3.3. Academic persecution/stress

A closer analysis of qualitative data suggest that academic stress enhances depression among students, which leads them to commit suicide. Students coming from Bengali-medium and having to study in English-medium in the university found it tough to cope with the complete English version, and they were under academic pressure as they were not satisfied with their results. Study participants considered drop outs and admission to the next batch is also a reason for increased suicidal thoughts among the students. A close friend of a deceased student, who was from a Madrasah background mentioned:

"It turned out that with fewer hours of study where we (the other students) could make better results, he (the deceased) could not get the same result even after studying more. He had to study more compared to us because of weakness in English. He could not accept his dissatisfactory outcomes/results and thought that he is weaker than others, and this thought always made him depressed" (IDI, Male student, DU, 22. 09.19).

3.3.1. Bullying or ragging

Bullying is found as one of the common reasons for suicidal thoughts among the public university students of Bangladesh. In particular, first-year students are victims of bullying and ragging, which affects their academic background. During in-depth interviews one participant mentioned:

"At the very beginning of my first year, I was ragged by senior students. I was absent from class for a long time and I was so worried about my academic life. At that time my anxiety and frustration enforced me to take suicidal attempts." (IDI, Female student, CoU, 25.06.19).

3.4. Social problems

Social problems i.e., social isolation, existing social stigma, and lack of counseling centres are found as crucial cause of suicidal death. Social isolation is a common cause of mental illness among public university students. There are taboos and stigmas related to mental health illness in our society which create the feeling of hopelessness among the students and act as barriers to seek treatment by the mental health sufferers.

3.4.1. Social isolation

In the digital age, most university students are detached from social activities. Because of this, in times of trouble, they do not find anyone to share their problems. One of the study participants proposed:

"A self-centered life dependent on technology is one of the main causes behind depression, which prompts him to suicide later. Very much dependency on technology, makes us isolated from society." (KII, Male, Associate Professor, DU).

3.4.2. Unwillingness to seek help due to stigma concerns

Due to existing social stigma and taboo, most of the students do not seek support for mental illness. This study showed that a student having mental illness does not prefer to visit a psychiatrist or any counseling center because they are worried that people would consider them as mental patients/mentally ill. In this context, a student explained this as well:

"When we suffer from fever or other ailments, which means any physical illness, we go to doctors and take medicine. But no one wants to understand mental health problems as seriously as physical health problems, and it is badly criticized and bullied by our society." (IDI, Female student, DU, 11.06.19).

Consequently, social stigma impedes them from going to a psychiatrist for the necessary treatment.

3.4.3. Lack of counseling center/service

This study found that DU is only the public university of Bangladesh with three counseling centers for students. But DU students do not feel interest in going to the counseling centers and most of them do not even know about the counseling centers. To explain it well one participant narrated:

"We have three counseling centers in our campus but all are in named. Due to the lack of publicity, most students are unaware about the availability of these services. If we went to the psychology or clinical psychology department, we would have to pay their consultation fees, and it would take more than a month to get the senior counselor's serial, which make us very depressed and demotivated us to visit again or suggest others to visit these centers." (IDI, Male student, DU, 27.07.19).

Herewith, the unavailability of mental health care services and also the lack of support from the mental health professionals contribute to students' suicide attempts.

3.5. Previous history of suicide attempts

This theme represents the former suicide attempts and suicide contagion as the risk factors of suicidal behavior among the students. Sometimes a previous history of suicide attempts leads to suicidal thoughts among the students revealed by this qualitative study. Suicide contagion as a result of media reporting is also the exposure to suicidal attempts among them.

3.5.1. Former suicide attempts

Previous history of mental health disorders increases the risk of attempting suicide. Several participants proposed that students who previously taken suicidal attempts are more prone to commit suicide as they lost the fear of death and they are also often stigmatized by our society. One participant said:

"One of my friends (a university friend) committed suicide, even though she took attempt earlier and survived, it is same for others." (IDI, Male student, JU, 10.08.19).

However, after trying to commit suicide, when a student survived then no further actions are taken by the academic institution to improve the mental health condition which pushes them towards further suicidal attempts.

3.5.2. Suicide is contagious

In the context of university students, they are mostly influenced by other student's suicidal attempts/death. Many students lose the aptitude to live and decide to end their lives influenced by their friend's suicidal attempts/death. One of the participants narrated:

"When I was a 1st year student, one of our batchmates committed suicide. Then the other students used to think that the deceased person's pain has ended or the problem has been solved through his death." (IDI, Female student, DU, 10.07.19).

Seeing the death of others, they believe that they will also be able to get out from the pain of their life. So, the results of this research disclosed that like other illnesses suicide may be contagious. A key informant interviewee of this study explained that:

"The tendency of suicide is increased by seeing other's suicidal death. It is not biologically contagious but seeing/hearing about suicide somehow increases the suicidal tendency." (KII, Male, Associate Professor, DU)

4. Discussion

The risk factors associated with committing suicide among the public university students of Bangladesh were revealed through the qualitative analysis of participants' narratives. This study explored that most of the public university students' committed suicide shows a history of depression, hopelessness, perfectionism, family conflicts, relationship break-up, lack of social support, financial crisis, and academic stress before their attempts. Similarly, some previous studies conducted on the University of Dhaka, the University of Ethiopia, and the University of Fiji also found mental distress, anxiety, loneliness, hopelessness, substance use, and lack of social support as risk factors for suicide (Dachew et al., 2018; Muertigue and Naiker, 2018; Pervin and Ferdowshi, 2016).

Gender difference evolved as a predictor of depression and stress which poses a threat to suicide among university students. The reason behind this may be the family and community of our patriarchal societies have higher expectations from the male compared to the female. Also, the financial responsibility of the family depends on the male children. So, when a graduate male student fails to achieve a better position in their professional life, choose to eliminate their selves. In a similar setting study conducted in Pakistan also found similar findings that male students are more likely to commit suicide than female students (Shakil, 2019).

Financial constraint is another challenge the university students of Bangladesh are facing which was also found among the university students of Kenya (Wanyoike, 2015). The main aim of attending a university in Bangladesh is to achieve a higher degree and a better job in future. But after graduation when the students did not get any job, they feel hopelessness which drives them towards suicide. This study revealed that students who come from rural areas face many problems coping-up with the new urban environment. Shifting from Bangla medium to English medium study creates difficulties to understand their study. As a result, this academic impairment affects their results which makes them depressed. Similarly, some prior studies demonstrated that students from rural areas are more sufferers of academic stress (Bayram and Bilgel, 2008; Kamble and Minchekar, 2018), thus, students' diverse socio-economic background impacts on their academic growth (Shakil, 2019).

Additionally, social isolation was found associated with probable suicidal ideation for both male and female students. They struggle to make new friendships at the new place/campus, which may lead to poor psychological consequences such as loneliness. This finding is also in lined with a narrative review paper which found socially isolation from peers as a trigger of suicidal thought among the American adolescents (Calati et al., 2019). Moreover, Al-Mahrooqi et al. (2015) reported unrealistic expectations about university life, self-esteem and academic adjustment, social or emotional adjustment among the fresher of University in Oman, which negatively impacted students' adjustment to the new campus. Furthermore, alcohol consumption increases the anxiety and stress of university students give rise to suicidal tendencies. Correspondingly, earlier studies found that students who showed higher use of the substance may contribute to commit suicide (Dachew et al., 2018; Santos et al., 2017).

Utilizing an exploratory qualitative method, this study reported that lack of counselling center and existing stigma also work as a barrier to seek mental health care as the common risk factors of suicide among university students, this finding is in line with a previous study (Bazrafshan et al., 2016). The students always feel discomfort or insecure to discuss their problems with mental health professionals due to concerns about confidentiality. Attempting suicide by one student influences suicidal thoughts among others. Related to this, the prior studies suggested that a close family member's, relative's or friend's suicidal attempt impacts another person's suicidal thought (Ali et al., 2011; Bazrafshan et al., 2016; Santos et al., 2017).

There are scanty of studies to explore the risk factors of suicide among university students, this study will add a new dimension. Despite the

growing trend of suicidal death among students, the government, administration, or educational institutions have not yet taken any steps to reduce the suicidal rate. Considering these determinants, there is a need to establish suicide prevention strategies. As the prejudices and fear caused by stigma may even prevent students from seeking help. So, it is important changing the mindset of society and reduce myths and stigma regarding suicide and mental illness. Findings from this research will help the professionals and students to prevent suicidal death.

Although this research tried to find out the best possible insight about the study topic, still it is not free from some limitations. Due to budget constraints, this study collected only qualitative data without focusing on quantitative survey which represents a small sample size and unavoidable bias between the participants' and research's perspectives. Researchers also faced difficulties in data collection due to the sensitivity of the study topic. In addition, the close friends, department teachers and family members of the deceased students did not want to explore their death information. Finally, the absence of students' suicidal death databases in public universities disrupted to collect comprehensive data. Despite conducting the study among the students of 5 public universities, we acknowledge that our findings regarding risk factors of suicide among the university students require further exploration into a larger population-based survey.

5. The way forward

This study has revealed some suicide prevention strategies to reduce the suicidal tendency among public university students, should be followed:

- > Mental health issues should be addressed in the school curriculum to ensure sound knowledge growth regarding mental health from childhood.
- > Engaging university students with cultural activities to combat alienation from society.
- > Arranging seminars, workshops on life skills, problem-solving strategies, and communication skills by universities to develop a positive attitude among the students.
- > Parenting skills workshops are also necessary at the community level.
- > Taking initiatives by the mental health professionals, policymakers, researchers, and academicians together to promote the mental illness among the students.
- > Arranging financial support/soft loans for the poor students by the university administrations for keeping the students stress free which will also help them to concentrate on their studies.
- > Arranging follow-up care for the suicide attempt survivors.
- > Increasing awareness among general people about suicide through advertising or representing drama by mass media or social media, and delivering motivational speech based on academic study or career buildup for reducing the depression among the students about these issues.

6. Concluding remarks

Based on the students, teachers and other stakeholders' opinion, this study came to this concluding remark that suicide is a serious public health issue in Bangladesh, especially among the university students, that needs immediate action to control. The factors of suicide such as psychiatric disorders, family complexities, relationship problems, lack of social support, financial crisis, campus ragging and academic stress should be taken into account for developing suicide prevention programs. Additionally, this study suggests that the university authority should develop suicide prevention strategies, such as counselling and organizing follow-up care services for the suicide survivors to address the alarming situation. Finally, arranging awareness-building programs among the parents and students regarding mental health issues, can also help to reduce the existing social stigma regarding suicidal death is

recommended based on the present findings. A nationwide survey is strongly recommended to identify the prevalence of suicide among the public university students or adolescents.

Declarations

Author contribution statement

Salma Akter Urme, Md. Syful Islam: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

N. M. Rabiul Awal Chowdhury: Conceived and designed the experiments; Performed the experiments; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Hasena Begum: Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Funding statement

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Data availability statement

Data will be made available on request.

Declaration of interests statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

Acknowledgements

We would like to thank the participants of this study.

References

- Al-Mahrooqi, R., Denman, C.J., Ateeq, B.A., 2015. Adaptation and First-Year university Students in the Sultanate of Oman, pp. 60–82. Cambridge Scholars.
- Alarming Suicide Rate at Public Universities, 2019. *The Daily Star*. <https://www.thedailystar.net/editorial/news/alarming-suicide-rate-public-universities-1688422>.
- Ali, M., Dwyer, D., Rizzo, J., 2011. The social contagion effect of suicidal behavior in adolescents: does it really exist? *J. Ment. Health Pol. Econ.* 14 (1), 3–12.
- Ara, M., Uddin, M., Kabir, M., 2016. The causes of suicide and impact of society in Bangladesh. *Int. Res. J. Soc. Sci.* 5 (3), 25–35.
- Arafat, S.M., 2016. Suicide in Bangladesh: a mini review. *J. Behav. Health* 6, 66–69.
- Arafat, S.M.Y., Al Mamun, M.A., 2019. Repeated suicides in the university of Dhaka (November 2018): strategies to identify risky individuals. *Asian J. Psychiatr.* 39, 84–85.
- Bayram, N., Bilgel, N., 2008. The prevalence and socio-demographic correlations of depression, anxiety and stress among a group of university students. *Soc. Psychiatr. Psychiatr. Epidemiol.* 43 (8), 667–672.
- Bazrafshan, M.-R., Sharif, F., Molazem, Z., Mani, A., 2016. Exploring the risk factors contributing to suicide attempt among adolescents: a qualitative study. *Iran. J. Nurs. Midwifery Res.* 21 (1), 93–99.
- Begum, A., Rahman, A.K.M.F., Rahman, A., Soares, J., Reza Khankeh, H., Macassa, G., 2017. Prevalence of suicide ideation among adolescents and young adults in rural Bangladesh. *Int. J. Ment. Health* 46 (3), 177–187.
- Calati, R., Ferrari, C., Brittner, M., Oasi, O., Olié, E., Carvalho, A.F., Courtet, P., 2019. Suicidal thoughts and behaviors and social isolation: a narrative review of the literature. *J. Affect. Disord.* 245, 653–667.
- Chong, A.M., Elias, H., Mahyuddin, R., Uli, J., 2009. Adjustment amongst first year students in a Malaysian university. *Eur. J. Soc. Sci.* 8.
- Dachew, B.A., Biftu, B.B., Tiruneh, B.T., Anlay, D.Z., Wassie, M.A., 2018. Suicidal thoughts among university students in Ethiopia. *Ann. Gen. Psychiatr.* 17 (1), 1.
- Dyson, R., Renk, K., 2006. Freshmen adaptation to university life: depressive symptoms, stress, and coping. *J. Clin. Psychol.* 62 (10), 1231–1244.
- Ferdous, M.Z., Alam, A.S.M.M., 2021. Present situation of suicide in Bangladesh: a review. *medRxiv*.
- Feroz, A.H.M., Islam, S.M.N., Reza, S., Rahman, A.K.M.M., Sen, J., Mowla, M., Rahman, M.R., 2012. A Community survey on the prevalence of suicidal attempts and deaths in a selected rural area of Bangladesh. *J. Med.* 13 (1 SE-Original Articles), 3–9.
- Garcia-Williams, A.G., Moffitt, L., Kaslow, N.J., 2014. Mental health and suicidal behavior among graduate students. *Acad. Psychiatr.* 38 (5), 554–560.
- Garlow, S.J., Rosenberg, J., Moore, J.D., Haas, A.P., Koestner, B., Hendin, H., Nemeroff, C.B., 2008. Depression, desperation, and suicidal ideation in college students: results from the American foundation for suicide prevention college screening project at Emory university. *Depress. Anxiety* 25 (6), 482–488.
- Hannah, R., Roser, M., Ortiz-Ospina, E., 2015. *Suicide*. Our World in Data. <https://ourworldindata.org/suicide>.
- Hasan, K., Rabbi, A.R., 2018. Examining the Alarming Suicide Trends in Bangladesh. *Dhaka Tribune*. <https://www.dhakatribune.com/opinion/special/2018/05/08/examining-alarming-suicide-trends-bangladesh>.
- Kamble, R.G., Minchekar, V., 2018. Academic stress and depression among college students. *Int. J. Curr. Res.* 10 (12), 76429–76433.
- Khan, A.R., Arendse, N., Ratele, K., 2021. Suicide prevention in Bangladesh: the current state and the way forward. *Asian Soc. Work Pol. Rev.* 15 (1), 15–23.
- Mackenzie, S., Wiegel, J.R., Mundt, M., Brown, D., Saewyc, E., Heiligenstein, E., Harahan, B., Fleming, M., 2011. Depression and suicide ideation among students accessing campus health care. *Am. J. Orthopsychiatry* 81 (1), 101–107.
- Mamun, M.A., Hossain, M.S., Griffiths, M.D., 2019. Mental health problems and associated predictors among Bangladeshi students. *Int. J. Ment. Health Addiction*.
- Muertigue, R., Naiker, K., 2018. The perceived factors of student suicide in Fiji. *Edelweiss: Psychiat. Open Acc.* 9 (4), 21–24.
- Owusu-Ansah, F.E., Addae, A.A., Peasah, B.O., Oppong Asante, K., Osafo, J., 2020. Suicide among university students: prevalence, risks and protective factors. *Health Psychol. Behav. Med.* 8 (1), 220–233.
- Pervin, M.M., Ferdowshi, N., 2016. Suicidal ideation in relation to depression, loneliness and hopelessness among university students. *Dhaka Univ. J. Biol. Sci.* 25 (1 SE-Articles), 57–64.
- Roney, A.R., 2018. Suicide on the Rise in Bangladesh. *Dhaka Tribune*. <https://www.dhakatribune.com/bangladesh/nation/2018/03/27/suicide-rise-bangladesh>.
- Sadek, A., Anam, A.M.A., Rashid, M.S.A., Akber, E.B., Khan, N.T., 2019. Suicide kills more peoples than any form of violence. *Mediscope* 6, 87–92 (2 SE-Review Articles).
- Santos, H., Marcon, S., Baptista, M., Paulo, P., 2017. Factors associated with suicidal ideation among university students. *Rev. Latino-Am. Enferm.* 25.
- Shah, M.M.A., Ahmed, S., Arafat, S.M.Y., 2017. Demography and risk factors of suicide in Bangladesh: a six-month paper content analysis. *Psychiat. J.* 2017, 3047025.
- Shakil, M., 2019. A qualitative analysis of suicides committed by the students in Pakistan. *Pakistan J. Med. Res.* 58 (1), 35–40.
- Shovon, F.R., 2018. Alarming Rise in Suicides Among DU Students. *Dhaka Tribune*. <https://www.dhakatribune.com/bangladesh/education/2018/11/24/alarming-rise-in-suicides-among-du-students>.
- Suicide, 2021. *World Health Organization*. <https://www.who.int/news-room/fact-sheets/detail/suicide>.
- Suicide Rates Rising Among DU Students, 2018. *New Age*. <https://www.newagebd.net/article/57583/suicide-rates-rising-among-du-students>.
- Wanyoike, B.W., 2015. Suicide among university students in Kenya: causes, implications and interventions. *J. Lang. Technol. Entrepren. Africa* 6 (1), 35–53. <https://www.ajol.info/index.php/jolte/article/view/125003>.