

## Research Article

# Mental Health-Seeking Behaviour of University Students in Bangladesh: A Cross-Sectional Study

Md Monjurul Alam Rahi<sup>1</sup>, Mohammad Shahangir Biswas<sup>2</sup>, Mehedi Hasan Emon<sup>3</sup>, Nahida Shaulin<sup>4</sup>, Mubin Khan Afridi<sup>5</sup>, Susmita Halder<sup>6</sup>, Raziul Islam<sup>7</sup>, Iffat Binta Shamsuddin<sup>8</sup>, Md. Shohedullah Sheak Akash<sup>9</sup>, Md. Tanbir Hossain<sup>10</sup>, Tilottama Roy<sup>11</sup>, Md. Ibrahim Azad<sup>12</sup>, Safayet Jamil<sup>13</sup>

1. Department of Sociology, Noakhali Science and Technology University, Bangladesh; 2. Department of Biochemistry and Biotechnology, University of Science and Technology Chittagong, Bangladesh; 3. Department of Marketing, Patuakhali Science and Technology University, Bangladesh; 4. Department of Public Administration, Bangladesh University of Professionals, Bangladesh; 5. Regional Cooperation Policy Studies, Kobe University, Japan; 6. School of Business and Economics, North South University, Bangladesh; 7. Army Medical College Cumilla, Bangladesh; 8. Department of Statistics and Data Science, Jahangirnagar University, Bangladesh; 9. Diabetic Association Medical College, Bangladesh; 10. Sir Salimullah Medical College and Hospital, Bangladesh; 11. Gonoshasthaya Samajvittik Medical College Hospital, Bangladesh; 12. Department of Journalism and Media Communication, Green University of Bangladesh, Bangladesh; 13. Department of Public and Community Health, Frontier University, Somalia

The mental health-seeking behavior of university students has been less researched in Bangladesh context. This cross-sectional study aimed to investigate the mental health-seeking behaviors of university students in Bangladesh. Data were collected from 420 participants using a self-administered questionnaire. Participants were selected using convenience sampling technique. Among the participants, 37.4% sought help for mental health issues in the past year. More than one-third of the participants sought help for mental health issues in the past year. The majority of participants turned to informal sources for support, such as friends, family, and online resources. This study found that participants' gender (odds ratio (OR): 1.552, 95% confidence interval (CI): 1.042 to 2.312), depressive symptoms (OR: 1.837, 95% CI: 1.230 to 2.745), and anxiety (OR: 1.923, 95% CI: 1.214 to 3.047) were significantly associated with their mental health-seeking behaviors. The findings of this study may help university authorities understand the resources their students use to address mental health concerns and can also guide future research.

Corresponding author: Md Monjurul Alam Rahi, [monjurulalam.rahi@gmail.com](mailto:monjurulalam.rahi@gmail.com)

## Introduction

Mental health problems represent significant disturbances in an individual's life, which affect their thinking, emotions, and behaviors. Individuals can experience different types of mental health problems, such as depression, anxiety disorders, bipolar disorder, panic disorder, and substance use disorders<sup>[1][2]</sup>. In recent years, mental health has become a major public health concern, particularly for young adults, like those in universities. University students often experience a range of mental health disorders, such as depressive symptoms, anxiety, substance use disorders, and suicidal behaviors<sup>[3][4][5][6]</sup>. Research indicates an increase in the prevalence of mental health problems among university students during the past few years. In the United States, among different mental health problems, the highest prevalence was identified in eating disorders, ranging from 19% to 48%, followed by depression (22%), posttraumatic stress disorder (8%), sleep disorders (9.4% to 36%), and compulsive disorders (2% to 12.27%) among undergraduate university students<sup>[7]</sup>. A systematic review and meta-analysis found that the overall prevalence of depression and suicide-related outcomes among undergraduate university students was 21%<sup>[8]</sup>. Another systematic review and meta-analysis reported the following median point prevalence rates for university students in Southeastern Asia: 29.4% for depression, 42.4% for anxiety, 16.4% for stress, 13.9% for disordered eating, and between 7% and 8% for suicidality<sup>[9]</sup>. The prevalence of mental health problems among university students is higher in low-and middle-income countries, where almost one-fourth (24.4%) have depressive symptoms<sup>[10]</sup>.

University students are increasingly facing mental health problems, which are mostly driven by factors, such as academic pressure, financial worries, adjustments to university life, and significant life transitions<sup>[11][8]</sup>. The impact of the COVID-19 pandemic has intensified these concerns<sup>[11]</sup>, making it crucial for universities to prioritize mental well-being and provide necessary support for their students. Mental health problem can have serious consequences, not only affecting students' physical health but also their academic success. Poor mental health is associated with poor academic performance, higher rates of absenteeism, and increased dropout rates, and in extreme case suicidal thoughts or self-harm<sup>[12]</sup><sup>[5][13]</sup>. Research further highlights the importance of extended mental health or counselling services for university students<sup>[5][8]</sup>.

Mental health-seeking behavior, which refers to actions taken by individuals to address the mental health problems they encounter, is crucial for individuals' overall well-being. It includes seeking help from mental health professionals (e.g., therapists, counselors, or psychologists), reaching out to support

networks (family, or friends), and utilizing online resources or social support programs. Seeking help for mental health problems is important for university students as it allows them to address the mental health problems they encounter, thus helping them to develop skills needed to cope with the new university environment, reducing stress, and improving emotional resilience. It also fosters a sense of community and connectedness and impacts their academic performance positively. Encouraging mental health-seeking behavior not only helps individuals cope better but also promotes a campus culture of support, reducing stigma and normalizing conversations around mental well-being.

Bangladesh is a middle-income country located in South Asia, with a population of approximately 180 million people. Like many other middle-income countries, the prevalence of mental health problems such as depression, anxiety, stress, and internet addiction has significantly increased over the past few years. A cross-sectional study involving 590 undergraduate university students in Bangladesh found that the prevalence rates of moderate to extremely severe levels of depression, anxiety, and stress were 52.2%, 58.1%, and 24.9%, respectively<sup>[14]</sup>. Another study, which included 573 university students, reported that around 24% of students in Bangladesh experienced problematic internet addiction<sup>[15]</sup>. Additionally, a study with 407 university students indicated that approximately 14% of participants had experienced suicidal ideation in the past year<sup>[5]</sup>. Another study focusing on university students in Bangladesh reported the prevalence of past-year suicidal ideation, lifetime suicide plans, and suicide attempts as 13.4%, 6.0%, and 4.4%, respectively<sup>[16]</sup>. The higher burden of mental health issues highlights the critical need for mental health counseling services for university students, as suggested by previous research<sup>[5]</sup><sup>[8]</sup>. While the prevalence of mental health problems among Bangladeshi university students has been frequently reported in the literature, their mental health-seeking behavior has been less researched to date. Therefore, the present study aimed to investigate the mental health-seeking behavior of university students in Bangladesh. More specifically, this study aimed to address the following three aims: (1) determine the proportion of participants who sought mental health services/counseling during the past year, (2) determine the source of mental health services/counseling, and (3) identify the socio-demographic variables associated with mental health seeking behavior.

## Methods

### *Study design and population*

This cross-sectional study was conducted among students from two universities in Dhaka, Bangladesh. The inclusion criteria were: (1) age 18 years or more, (2) current university student, and (3) interested in participating voluntarily. Participants who did not give their consent and were physically and mentally incompetent to participate were not included in the study.

### *Sample size and sampling method*

The sample size of this study was calculated using the following formula<sup>[17]</sup>, used in cross-sectional studies and for qualitative variable (proportion).

$$n = \frac{Z^2 * p * (1 - p)}{e^2}$$

where,

- n = desired sample size,
- Z = standard normal variate (it is 1.96 at 5% type-1 error),
- p = estimated proportion reported in the previous study, and
- e = margin of error (it is usually set at 0.05).

This study assumed the proportion of mental health-seeking behaviors among university students in Bangladesh as 50%. Considering this, the required sample was 384. To increase the power of the study, a total of 420 participants were included. Participants were selected using the convenience sampling technique.

### *Data collection tool*

A semi-structured questionnaire was used to collect data from study participants, which was developed by extensive literature searches. The initial questionnaire was developed in English and then translated into Bengali (the native language of Bangladesh) by an expert, who had good knowledge of both languages. The questionnaire was pretested among a small group of students (n=25) to understand if participants could understand the content of the questionnaire clearly and appropriately. The final questionnaire had the following sections:

*Socio-demographics:* Participants' socio-demographic variables included in this study were age, gender, monthly family income, academic level, faculty/department, living status, and smoking habit.

*Life satisfaction:* Life satisfaction was assessed by asking “Do you happy with your life?”, and responses were recorded on a 5-point Likert scale (1 = Strongly disagree to 5 = Strongly agree).

*Patient Health Questionnaire:* This study used the 9-item patient health questionnaire (PHQ-9) for screening depression of study participants<sup>[18]</sup>. The PHQ-9 assesses depression of participants based on the experiences of mental health challenges during the previous two weeks. The score of the PHQ-9 scale ranges from: “0 not at all” to “3 early every day”. Therefore, this scale provides a maximum score of 27 and a minimum of 0. A score of 10 or more is widely used to determine the presence of depressive symptoms among participants<sup>[19]</sup>. The PHQ-9 has been validated for Bangladeshi adults<sup>[19]</sup>. The reliability statistics (Cronbach's alpha for) of the PHQ-9 in this study was determined at  $\alpha = 0.81$ .

*Generalized Anxiety Disorder:* Anxiety was assessed by using the 7-item generalized anxiety disorder (GAD-7)<sup>[20]</sup>. The GAD-7 assesses anxiety of participants based on experiences of anxiety-related challenges during the previous two weeks. The scoring of the GAD-7 is similar to the PHQ-9, ranging from: “0 not at all” to “3 = early every day”. The maximum score of is 21. The cut-off score of 10 or more was used to evaluate the presence of anxiety among participants<sup>[21]</sup>. The GAD-7 has been validated for screening anxiety among general populations in Bangladesh<sup>[21]</sup>. The Cronbach's alpha of the GAD-7 was found to be ( $\alpha .89$ ) in the present study. In this study, the reliability statistics (Cronbach's alpha for) of the GAD-7 was found to 0.91.

*Mental health-seeking behavior:* Mental health-seeking behavior of study participants was evaluated by asking “Did you seek any help for mental health-related problems during the past 12 months?”, with response options: “Yes” vs. No. Those who responded “Yes”, further asked about the sources from where they sought help for their mental health issues.

### *Data collection*

Data was collected from May to July 2024. Participants were invited to participate in the study by word of mouth. After disclosing the study's objectives and obtaining consent, the questionnaire was administered to the participants. After completing the questionnaire, the data collectors thanked the participants and collected the completed questionnaire form. It took approximately 30 minutes to complete the questionnaire. Participants were not provided any incentive for participating in the study.

### *Ethical considerations*

The ethics approval of this study protocol was granted by the ethical committee of the Khwaja Yunis Ali University, Bangladesh (Ref No: KYAU/DEAN/EGC/2024/010). Throughout the study period, this study adhered to the guidelines of Helsinki declarations for research involving human subjects. Data was collected anonymously and used only for research purposes. Participants hold the right to withdraw from the study at any time.

### *Data analysis*

The data analyses of this study included both descriptive and inferential statistics. Continuous variable, such as participants' age was reported as mean  $\pm$  standard deviation. Most of the variables of this study were categorical, which were reported as frequency and percentage. The differences in the proportion of mental health-seeking behavior by gender, academic level, and studying faculty or department, depressive symptoms and anxiety were evaluated using Pearson's Chi-square test. Further, the binary logistic regression was employed to determine factors associated with mental health-seeking behavior among participants. The results of the logistic regression analysis were reported as odds ratio with 95% confidence intervals. Association between variables was considered statistically significant if the corresponding p-value was found less than or equal to 0.05. The Statistical Package for Social Sciences (SPSS IBM Statistics) was used for data analysis purposes.

## **Results**

A total of 420 university students participated in this study. investigation. The mean age of the participants is 22.44 years [standard deviation: 1.81]. Out of the 420 participants, 49.5% were male and 50.5% were female. The monthly income distribution was as follows: 25.2% earned up to 30,000 BDT, while 74.8% earned above 30,000 BDT. The academic levels of the participants included: 29.2% were first-year students, 16.2% were second-year students, 24.3% were third-year students, 19.5% were fourth-year students, and 10.2% were master's students. Regarding their academic backgrounds, 41.2% of the participants had a social science background, 21.7% were from business studies, 10.5% were in engineering and technology, 8.6% were in biological sciences, and 18.1% were from agriculture. Among the participants, a majority (76.7%) lived apart from their families, while only 23.3% lived with their families. This study found that 67.1% of participants were non-smokers, while 32.9% were smokers. Only 18.6% of the participants strongly agreed that they were satisfied with their lives. According to the PHQ-9

and GAD-7 assessment, 41.7% of the participants had depressive symptoms and 23.1% had anxiety (Table 1).

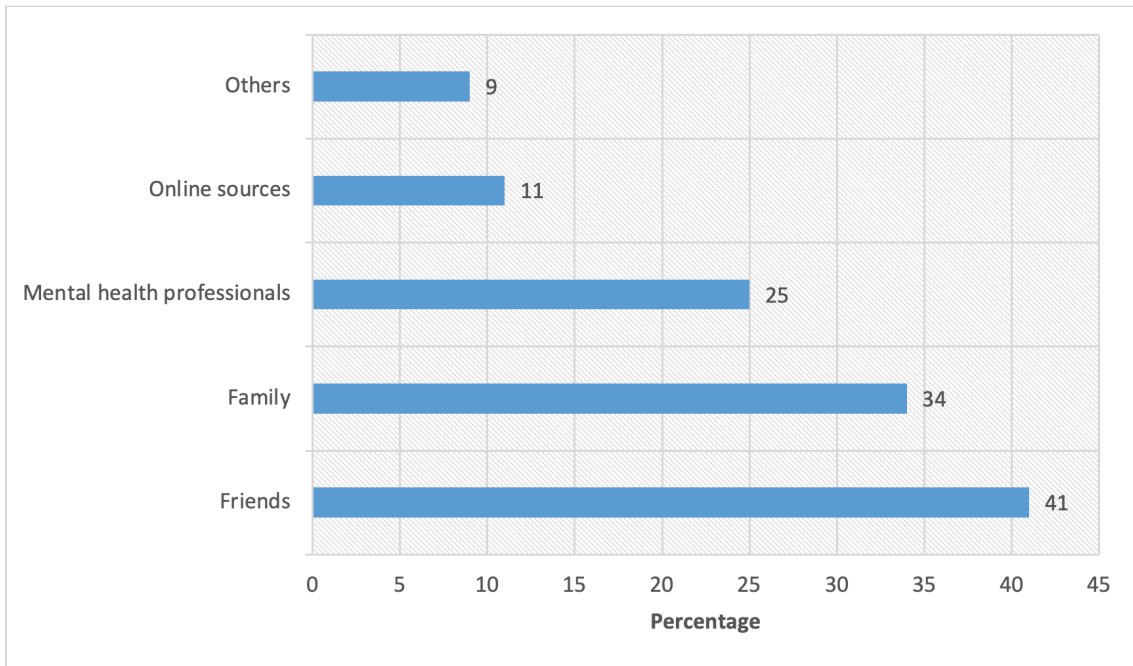
Characteristics		Frequency	Percentage
Age (Mean ± SD)			22.44 ± 1.81
Gender	Male	208	49.5%
	Female	212	50.5%
Monthly family income	Up to 30,000 BDT	106	25.2%
	>30,000 BDT	314	74.8%
Academic level	1 <sup>st</sup> year	125	29.8%
	2 <sup>nd</sup> year	68	16.2%
	3 <sup>rd</sup> year	102	24.3%
	4 <sup>th</sup> year	82	19.5%
	Masters	43	10.2%
Study faculty/department	Social sciences	173	41.2%
	Business studies	91	21.7%
	Engineering & technology	44	10.5%
	Biological sciences	36	8.6%
	Agriculture	76	18.1%
Living status	Apart from family	322	76.7%
	With family	98	23.3%
Smoking habit	No	282	67.1%
	Yes	138	32.9%
Life satisfaction	Strongly agree	78	18.6%
	Somewhat agree	126	30.0%
	Neutral	74	17.6%
	Disagree	101	24.0%
	Strongly disagree	41	9.8%



Characteristics		Frequency	Percentage
Depressive symptoms	No	245	58.3%
	Yes	175	41.7%
Anxiety	No	323	76.9
	Yes	97	23.1

**Table 1.** Characteristics of study participants (n=420)

Among the participants, 37.4% sought help for mental health issues in the past year. The sources of health-seeking for mental health among study participants are illustrated in Figure 1. It can be observed that 41% of participants seek mental health support from friends, while 34% receive help from family. Only 25% consult medical professionals, 11% access online resources, and 9% rely on other sources such as academic books, media advertisements, and self-treatment (Figure 1). Among those who sought help for mental health issues, 42.7% were male and 57.3% were female. The difference in the proportion of mental health-seeking behavior between males and females was statistically significant (Chi-square: 4.704, p: 0.030). This study also found that there was a statistically significant difference in the proportion of mental health-seeking behavior between individuals with depressive symptoms and those without (51% vs. 49%; Chi-square: 8.900, p: 0.003), and between those with anxiety and those without (30.6% vs. 69.4%; Chi-square: 7.894, p: 0.005) (Table 2).



**Figure 1.** Sources of mental health-seeking among study participants (n=157)

Characteristics	Sought help for mental health				Chi-square value (p-value)
	No (n= 263, 62.6%)		Yes (n=157, 37.4%)		
	Frequency	Percentage	Frequency	Percentage	
Gender					
Male	141	53.6%	67	42.7%	4.704 (0.030)
Female	122	46.4%	90	57.3%	
Academic level					
1 <sup>st</sup> year	79	30.0%	46	29.3%	3.007 (0.557)
2 <sup>nd</sup> year	42	16.0%	26	16.6%	
3 <sup>rd</sup> year	66	25.1%	36	22.9%	
4 <sup>th</sup> year	54	20.5%	28	17.8%	
Master's	22	8.4%	21	13.4%	
Study faculty/department					
Social sciences	109	41.4%	64	40.8%	2.237 (0.692)
Business studies	62	23.6%	29	18.5%	
Engineering and technology	25	9.5%	19	12.1%	
Biological sciences	22	8.4%	14	8.9%	
Agriculture	45	17.1%	31	19.7%	
Depressive symptoms					
No	168	63.9%	77	49.0%	8.900 (0.003)
Yes	95	36.1%	80	51.0%	
Anxiety					
No	214	81.4%	109	69.4%	7.894 (0.005)
Yes	49	18.6%	48	30.6%	

**Table 2.** Difference in the proportion of mental health-seeking behavior among study participants

*Note: SD: standard deviation*

The results of the binary logistic regression analyses regarding the factors associated with mental health-seeking behavior are presented in Table 3. The findings indicate that females have significantly higher odds of seeking help for mental health compared to males, with an odds ratio (OR) of 1.552 and a 95% confidence interval (CI) of 1.042 to 2.312. Additionally, the study found that depressive symptoms and anxiety are significantly associated with higher odds of mental health-seeking behaviors: for depression, the OR is 1.837 (95% CI: 1.230 to 2.745), and for anxiety, the OR is 1.923 (95% CI: 1.214 to 3.047).

Characteristics	OR	95% CL	P-value
Age	1.049	0.941-1.171	0.388
Gender			
Male	1		
Female	1.552	1.042-2.312	0.030
Monthly family income			
Up to 30,000 BDT	1		
>30,000 BDT	0.79	0.505-1.242	0.310
Academic level			
1st year	1		
2nd year	1.063	0.578-1.955	0.844
3rd year	.937	0.543-1.616	0.814
4th year	.890	0.497-1.596	0.697
Masters	1.639	0.814-3.300	0.166
Study faculty/department			
Social sciences	1		
Business studies	0.797	0.465-1.365	0.408
Engineering & technology	1.294	0.661-2.534	0.451
Biological sciences	1.084	0.518-2.266	0.831
Agriculture	1.173	0.676-2.037	0.570
Living status			
Apart from family	1		
With family	1.350	0.852-2.139	0.201
Smoking habit			
No	1		
Yes	1.224	0.806-1.859	0.344

Characteristics	OR	95% CL	P-value
Life satisfaction			
Strongly agree	1		
Somewhat agree	0.944	0.521-1.713	0.851
Neutral	1.288	0.667-2.487	0.451
Disagree	1.239	0.671-2.288	0.494
Strongly disagree	1.478	0.682-3.203	0.322
Depressive symptoms			
No	1		
Yes	1.837	1.230-2.745	0.003
Anxiety			
No	1		
Yes	1.923	1.214-3.047	0.005

**Table 3.** Binary logistic regression analyses for help seeking for mental health

*Note: OR: odds ratio, CI: confidence interval*

## Discussion

This study investigated the mental health-seeking behavior of university students in Bangladesh, which has received limited research attention to date. The findings revealed that more than one-third of the participants sought help for mental health issues in the past year. This significant proportion highlights the prevalence of mental health problems among this vulnerable population and underscores the need for mental health services for university students. The sources from which participants sought help included friends (41%), family (34%), mental health professionals (25%), online sources (11%), and other resources such as academic books, media advertisements, and self-treatment (9%). The majority of participants relied on informal sources, such as friends, family, and online platforms, to address their mental health concerns. While these sources can be helpful for individuals dealing with mental health

issues, there is also a risk of spreading misinformation, which may exacerbate their condition. This finding was consistent with a previous study which found that individuals with mental health problems are often hesitant to seek assistance from professional services. This reluctance is largely due to a fear of negative reactions from others if they pursue professional help.

The findings of this study indicate that gender has a significant influence on mental health-seeking behaviors, with females being more likely than males to seek help for mental health issues. This aligns with previous studies, which found that females are generally better at recognizing their mental health challenges and are more aware of their overall well-being<sup>[22][23]</sup>. Male students are considered a high-risk group because they tend to be less inclined to seek help for mental health concerns<sup>[23]</sup>. Various factors contribute to this trend, including societal beliefs about traditional male traits such as emotional restraint, independence, and limited emotional expression<sup>[24][23]</sup>. These factors can lead to hesitation among males when it comes to seeking assistance for mental health issues.

The findings indicate that gender significantly influences these behaviors, with females being more likely than males to seek mental health support. This finding aligns with other previous studies, which also found that females, compared to males, are better at recognizing their mental health issues and are more aware of their mental well-being<sup>[25][26]</sup>. This study found that students experiencing anxiety and depression are more willing to seek help for mental health support. This finding contradicts previous research, which indicated that individuals with anxiety and depression are rarely inclined to seek mental health assistance. Generally, those suffering from anxiety and depression view mental disorders as commonplace conditions that cannot be improved through professional help<sup>[25][27]</sup>. The possible explanation for this contradiction with previous research could be that the majority of the participants used informal sources to address mental health issues.

The findings of this study provide valuable insights into the mental health-seeking behaviors of university students in Bangladesh. This information can help university authorities understand the resources their students are using to address mental health concerns, especially as the prevalence of mental health issues among university students is notably increasing. The study also recommends further research to gain a deeper understanding of these behaviors by applying health behavior theory. It is essential to explore the disparities in perspectives, knowledge, and awareness regarding mental health issues among university students.

This study had several limitations. First, participants were selected using a convenience sampling technique, which is often prone to selection bias. This approach relies on a specific sample of the population at a single point in time, which may not accurately represent the entire population. Second, the study employed a single item to evaluate participants' mental health-seeking behavior, which could overlook important aspects of this behavior. Lastly, due to the cross-sectional nature of the study, it was unable to establish causal inferences between the variables.

## Conclusion

More than one-third of the participants sought help for mental health issues in the past year. The majority of participants turned to informal sources for support, such as friends, family, and online resources. This study found that participants' gender, depressive symptoms, and anxiety were significantly associated with their mental health-seeking behaviors. The findings of this study may help university authorities understand the resources their students use to address mental health concerns and can also guide future research.

## Statements and Declarations

### *Contribution*

- **Md Monjurul Alam Rahi:** Conceptualized and led the research, including study design, methodology, and data collection; performed data curation and formal analysis; contributed to the introduction, research methodology, and discussion; played a key role in manuscript development through original drafting, critical revisions, and final review.
- **Mehedi Hasan Emon:** Assisted in sampling and data collection; contributed to manuscript drafting, visualization, and revisions.
- **Nahida Shaulin:** Conducted descriptive statistical analysis and interpretation; contributed to manuscript drafting, visualization, and critical review.
- **Mubin Khan Afridi:** Conducted regression analysis and contributed to data interpretation.
- **Susmita Halder:** Provided critical input in conceptualizing and writing the background section.
- **Raziul Islam:** Conducted descriptive statistical analysis and contributed to data interpretation.
- **Iffat Binta Shamsuddin:** Conducted regression analysis and contributed to statistical data interpretation.



- **Md. Shohedullah Sheak Akash:** Conducted descriptive statistical analysis and contributed to data interpretation.
- **Md. Tanbir Hossain:** Assisted in data collection.  
Tilottama Roy: Conducted an extensive literature review to contextualize the study within the existing body of knowledge.
- **Md. Ibrahim Azad:** Assisted in data collection and contributed to manuscript organization.

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Contributors to be Acknowledged (Not Listed as Co-Authors):

Abdullah Al Zubayer (ORCID iD: [0000-0003-3444-7727](https://orcid.org/0000-0003-3444-7727))

Department of Sociology, University of Barishal, Barishal, Bangladesh.

### *Conflicts of Interest*

There was no potential conflict of interest among the authors.

### *Funding*

None.

### *Data Availability*

Data will be available upon request.

## **References**

1. <sup>a</sup><sub>b</sub>Gustavson K, Knudsen AK, Nesvåg R, Knudsen GP, Vollset SE, Reichborn-Kjennerud T (2018). "Prevalence and stability of mental disorders among young adults: findings from a longitudinal study." *BMC psychiatry*. 18: 1-15.
2. <sup>Δ</sup>Patel V, Flisher AJ, Hetrick S, McGorry P (2007). "Mental health of young people: a global public-health challenge." *The Lancet*. 369(9569): 1302-1313.
3. <sup>Δ</sup>Arterberry BJ, Boyd CJ, West BT, Schepis TS, McCabe SE (2020). "DSM-5 substance use disorders among college-age young adults in the United States: Prevalence, remission and treatment." *Journal of American College Health*. 68(6): 650-657.

4. <sup>△</sup>Dias Lopes LF, Chaves BM, Fabrício A, Porto A, Machado de Almeida D, Obregon SL, Pimentel Lima M, Vieira da Silva W, Camargo ME, da Veiga CP (2020). "Analysis of well-being and anxiety among university students." *International journal of environmental research and public health*. 17(11): 3874.
5. <sup>△</sup>, <sup>△</sup>, <sup>△</sup>, <sup>△</sup>, <sup>△</sup>Rahman ME, Saiful Islam M, Mamun MA, Moonajilin MS, Yi S (2022). "Prevalence and factors associated with suicidal ideation among university students in Bangladesh." *Archives of suicide research*. 26(2): 975-984.
6. <sup>△</sup>Storrie K, Ahern K, Tuckett A (2010). "A systematic review: students with mental health problems—a growing problem." *International journal of nursing practice*. 16(1): 1-6.
7. <sup>△</sup>Kang HK, Rhodes C, Rivers E, Thornton CP, Rodney T (2021). "Prevalence of mental health disorders among undergraduate university students in the United States: A review." *Journal of Psychosocial Nursing and Mental Health Services*. 59(2): 17-24.
8. <sup>△</sup>, <sup>△</sup>, <sup>△</sup>, <sup>△</sup>Sheldon E, Simmonds-Buckley M, Bone C, Mascarenhas T, Chan N, Wincott M, Gleeson H, Sow K, Hind D, Barkham M (2021). "Prevalence and risk factors for mental health problems in university undergraduate students: A systematic review with meta-analysis." *Journal of affective disorders*. 287: 282-292.
9. <sup>△</sup>Dessauvagie AS, Dang H-M, Nguyen TAT, Groen G (2022). "Mental health of university students in southern Asia: a systematic review." *Asia Pacific Journal of Public Health*. 34(2-3): 172-181.
10. <sup>△</sup>Akhtar P, Ma L, Waqas A, Naveed S, Li Y, Rahman A, Wang Y (2020). "Prevalence of depression among university students in low and middle income countries (LMICs): a systematic review and meta-analysis." *Journal of affective disorders*. 274: 911-919.
11. <sup>△</sup>Islam MA, Barna SD, Raihan H, Khan MNA, Hossain MT (2020). "Depression and anxiety among university students during the COVID-19 pandemic in Bangladesh: A web-based cross-sectional survey." *PLoS One*. 15(8): e0238162.
12. <sup>△</sup>John A, Friedmann Y, DelPozo-Banos M, Frizzati A, Ford T, Thapar A (2022). "Association of school absence and exclusion with recorded neurodevelopmental disorders, mental disorders, or self-harm: a nationwide, retrospective, electronic cohort study of children and young people in Wales, UK." *The Lancet Psychiatry*. 9(1): 23-34.
13. <sup>△</sup>Tembo C, Burns S, Kalembo F (2017). "The association between levels of alcohol consumption and mental health problems and academic performance among young university students." *PLoS One*. 12(6): e0178142.
14. <sup>△</sup>Mamun MA, Hossain MS, Griffiths MD (2022). "Mental health problems and associated predictors among Bangladeshi students." *International Journal of Mental Health and Addiction*. 20(2): 657-671.

15. <sup>△</sup>Islam MA, Hossin MZ (2016). "Prevalence and risk factors of problematic internet use and the associated psychological distress among graduate students of Bangladesh." *Asian journal of gambling issues and public health*. 6: 1-14.
16. <sup>△</sup>Rasheduzzaman M, Al-Mamun F, Hosen I, Akter T, Hossain M, Griffiths MD, Mamun MA (2022). "Suicidal behaviors among Bangladeshi university students: Prevalence and risk factors." *PLoS One*. 17(1): e0262006.
17. <sup>△</sup>Charan J, Biswas T (2013). "How to calculate sample size for different study designs in medical research?" *Indian J Psychol Med*. 35(2): 121-126. doi:10.4103/0253-7176.116232
18. <sup>△</sup>Kroenke K, Spitzer RL, Williams JB (2001). "The PHQ-9: validity of a brief depression severity measure." *Journal of general internal medicine*. 16(9): 606-613.
19. <sup>△</sup><sup>‡</sup>Naher R, Rabby MRA, Sharif F (2021). "Validation of patient health questionnaire-9 for assessing depression of adults in Bangladesh." *Dhaka University Journal of Biological Sciences*. 30(2): 275-281.
20. <sup>△</sup>Spitzer RL, Kroenke K, Williams JB, Löwe B (2006). "A brief measure for assessing generalized anxiety disorder: the GAD-7." *Archives of internal medicine*. 166(10): 1092-1097.
21. <sup>△</sup><sup>‡</sup>Redwan A, Karim MR, Royle RKS, Chowdhury AR (2020). "Validation of Bangla generalized anxiety disorder 7 scale among general population." *Bangladesh Journal of Psychiatry*. 34(1): 3-8.
22. <sup>△</sup>Gibbons SW, Barnett SD, Hickling EJ, Herbig-Wall PL, Watts DD (2012). "Stress, coping, and mental health-seeking behaviors: gender differences in OEF/OIF health care providers." *Journal of traumatic stress*. 25(1): 115-119.
23. <sup>△</sup><sup>‡</sup><sup>§</sup>Wendt D, Shafer K (2016). "Gender and attitudes about mental health help seeking: results from national data." *Health & social work*. 41(1): e20-e28.
24. <sup>△</sup>Albizu-Garcia CE, Alegria M, Freeman D, Vera M (2001). "Gender and health services use for a mental health problem." *Social science & medicine*. 53(7): 865-878.
25. <sup>△</sup><sup>‡</sup>Biffittu BB, Takele WW, Guracho YD, Yehualashet FA (2018). "Depression and Its Help Seeking Behaviors: A Systematic Review and Meta-Analysis of Community Survey in Ethiopia." *Depression research and treatment*. 2018(1): 1592596.
26. <sup>△</sup>Boerema AM, Kleiboer A, Beekman AT, van Zoonen K, Dijkshoorn H, Cuijpers P (2016). "Determinants of help-seeking behavior in depression: a cross-sectional study." *BMC psychiatry*. 16: 1-9.
27. <sup>△</sup>Doblyte S, Jiménez-Mejías E (2017). "Understanding help-seeking behavior in depression: a qualitative synthesis of patients' experiences." *Qualitative health research*. 27(1): 100-113.

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