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Research paper

Mental Health Challenges and Their Impact on the Academic Performance of Undergraduate Social Work Students in Bangladesh: A Cross-Sectional Study

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ABSTRACT

Depression, anxiety, and stress can interfere with concentration, attendance, motivation, assignment completion, and academic persistence. Evidence focused specifically on undergraduate social work students in Bangladesh remains limited. To assess depression, anxiety, and stress and examine their associations with academic performance among undergraduate social work students in selected public universities of Bangladesh. Primary cross-sectional survey data were manually collected from 425 undergraduate Social Work or Social Welfare students across five public universities, with 85 respondents from each institution. The Bangla DASS-21 and demographic, socioeconomic, academic, lifestyle, support, field-placement, service-awareness, and help-seeking measures were analyzed in RGui 4.5.1 using descriptive statistics, reliability analysis, prevalence estimates with 95% confidence intervals, group comparisons, correlation, analysis of variance, multiple linear regression with HC3 robust standard errors, and binary logistic regression. Results: Internal consistency was good for depression (alpha=.825), anxiety (alpha=.819), and stress (alpha=.823), and excellent for the full DASS-21 (alpha=.900). Moderate-or-higher prevalence was 43.3% for depression, 54.6% for anxiety, and 29.9% for stress. CGPA was negatively correlated with depression (r=-.325), anxiety (r=-.362), and stress (r=-.277), all p<.001. In adjusted linear models, higher depression (B=-.00595), anxiety (B=-.00676), and stress (B=-.00471) scores were each associated with lower CGPA, all p<.001. Moderate-or-higher depression, anxiety, and stress were also associated with higher adjusted odds of academic-functioning risk (AOR=3.33, 4.67, and 5.21, respectively; all p<.001). Mental-health symptoms were common in this multi-university sample and were consistently associated with poorer academic performance and recent academic-functioning difficulties. The cross-sectional design supports association, not causal direction, but the findings identify modifiable student and institutional factors that warrant attention.

1. Introduction

Mental health is at the core of learning, social participation, career development, and quality of life. The transition from home to university is rigorous. It comes with a host of new challenges, including new teaching styles, competitive grading, altered relationships, financial independence, living on their own, and employment

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uncertainty. Such pressures do not necessarily cause mental-health issues, but if students are constantly subjected to such demands, it can overwhelm their coping mechanisms. Stress, anxiety, and depression can also drain your energy, focus your attention on worry, and disrupt sleep, attention, and emotional control. These processes can impact attendance, exam preparation, field experiences, assignment completion, and cumulative academic attainment (Auerbach et al., 2016; Sheldon et al., 2021).

The study conducted in Bangladesh indicates that the mental health condition of university students needs continuous attention. Islam et al. (2022) found high levels of moderate or higher depression and anxiety among first-year students of Jahangirnagar University, which was impacted by sleep dissatisfaction, limited exercise, and excessive internet use. Rabby et al. (2023) cross-sectionally examined depression, anxiety, and stress symptoms in 452 university admission seekers with the Bangla DASS-21. They concluded that depression, anxiety, and stress symptoms were prevalent, with differences in symptoms among males and females, poor and rich people, different types of universities, and previous health history. Recently, Al-Amin et al. (2025) found that anxiety and depression exist in a multi-university sample in Bangladesh and correlated the outcomes with gender, personal income, BMI, screen time, and diet. The studies, despite using different instruments and sampling methods, all indicated that students' problems were socially and academically patterned, and not randomly distributed, across the studies; comparable Bangladeshi evidence has been reported, using DASS, GHQ, and pandemic-response measures (Hossain et al., 2022; Islam et al., 2020; Kamruzzaman et al., 2024; Ovi et al., 2024).

The educational implications are not to be overlooked, either. While academic performance is captured by CGPA, performance also encompasses attendance, concentration, timely submission, classroom engagement, progression, and retention. Talib and Zia-ur-Rehman (2012) also revealed that there is a negative correlation between perceived stress and GPA among university students in Pakistan. The study conducted by Zada et al. (2021) also showed that mental-health problems were negatively related to academic performance, considering personal and family factors. The findings from medical education research in Bangladesh also suggest that anxiety can differ by the gender of the students and by academic phase, and can be related to examination performance (Rahman et al., 2025). Such relationships have been found in previous longitudinal and cross-sectional research on academic productivity, functioning, and persistence (Andrews & Wilding, 2004; Awadalla et al., 2020; Bruffaerts et al., 2018; Hysenbegasi et al., 2005; Sinval et al., 2025; Zhang et al., 2024).

There may be extra stresses for social work students. They are educated in challenging sociological issues, course material that can be upsetting, moral choices, reflective learning, community services, and experiential learning. In international social work literature, the double burden of studying, earning a living, caring for family members, transport, placement costs, and extended unpaid fieldwork is described (Cox et al., 2022). Beddoe et al. (2024) discovered that many social work students who reported significant distress were not asking for assistance and that factors such as costs, limited access, stigma, and a risk of professional consequences were significant barriers. Students may think that their disclosure will make the teacher or placement supervisor think that they are not fit to practice. This tension is particularly important for a profession that promotes supporting others and may make students feel unsafe to receive support themselves (Crutchfield et al. 2020; Gair & Baglow, 2018a, 2018b).

However, there is no such evidence base for undergraduate social work students in Bangladesh yet. General university studies are insufficient to address the needs of visits to the field, learning through case studies, community practice, emotionally challenging material, and developing professional identity. There is a need for a discipline-specific study to define symptom level, vulnerable groups, associations with academic performance, and to inform the appropriate institutional response.

The present study adopted a cross-sectional design in the 5 public universities in 4 divisions. The term impact as used in the title is not synonymous with causality and is instead a statistical correlation between mental-health symptoms and academic performance adjusted for the presence of these symptoms. Poor mental health can lead to academic issues, academic issues can worsen mental health, and financial stressors, sleep issues, family conflict, workload, and lack of support can all lead to poor mental health. The associations found will be reported, therefore, and interpreted with caution.

2. Statement of the Research Problem

Depression, anxiety, stress, and psychological distress are prevalent among Bangladeshi university students, confirmed by research. But most of the studies available target mixed academic disciplines, medical students, first-year classes, applicants for admission, or online convenience samples. They give a sense of the national context but are not able to tell whether there is a unique pattern of risk related to the interplay between general university stress factors and professional education.

This lack of evidence for discipline-specific materials has implications in practice. Individual students who are struggling may be identified by social work departments, but there is no systematic data on prevalence, severity, factors, and Academic impacts. In the absence of this evidence, support could be informal, crisis-driven, or based on personal relationships. Students may not reach formal services because they do not want to be seen as being psychologically weak, or their future professional identity might be compromised by being identified as a psychologically challenged student. Similarly, university students report experiencing gaps between their psychological needs and seeking formal services due to fear of stigma or potential damage to future professional identity (Hunt & Eisenberg, 2010; Lipson et al., 2019).

The second issue is that there is not a lot of integration between mental health measures and academic outcomes. In several studies, academic pressure has been found to predict distress, while fewer studies investigate the independent relationship between depression and anxiety and the academic performance of students, in terms of CGPA, attendance, late work, concentration, and perceived academic decline. This is important because interventions should have a positive impact on wellbeing and participation in education.

The research problem is thus the dearth of probability-based multi-university evidence of mental-health issues and academic performance among the undergraduate social work students in Bangladesh. The study attempts to solve this problem by using a validated Bangla scale, equal institutional strata, random selection within academic years, and an analysis plan that takes the demographic, socioeconomic, lifestyle, academic, field-placement, and support variables into consideration.

3. Literature Review

3.1 Mental-health challenges among university students in Bangladesh

The studies on mental health of students in Bangladesh are varied in terms of population, instrument, recruitment, and period. Using the Kessler-10 scale, medical students in the study were found to have a high level of psychological distress, and study pressure had a significant relationship with moderate-severe distress (Sultana, 2011). Islam et al. (2022) surveyed 400 first-year students with the PHQ-9 and GAD-7 and concluded that the factors of first-year transition, poor sleep, limited exercise, and internet use were important concerns. The results of this study show that vulnerability could start early during university life.

Rabby et al. (2023) extended the evidence to youths applying for undergraduate admission. 57.7%, 61.4%, and 44.6% of the respondents suffered from moderate to severe depression, anxiety, and stress, respectively. Female students, students from lower-income brackets, students who aspired to attend a public university, and students who had prior mental health issues were found to be more susceptible. The study found that the Bangla DASS-21 demonstrated good internal consistency as a measure that could be used in studies of Bangladeshi students.

Al-Amin et al. (2025) conducted a study involving 410 students from multiple universities in Bangladesh and administered questionnaires (PHQ-9 & GAD-7). The research correlated anxiety and depression with income, screen time, BMI, diet, and other lifestyle factors. Its findings highlight the connection between the mental health of the students and material and behavioral conditions. Inferences about social work students are, however, limited by the convenience recruitment and the mixed-discipline population.

Rahman et al. (2025) evaluated 1,921 undergraduate medical students in five colleges. Women and students in the first academic phase had higher anxiety levels, and academic performance was associated with anxiety categories. While the large sample provides valuable evidence for the Bangladeshi context, the convenience sampling, medical population, and single mental-health domain limit the transferability of the findings to the social work education context.

National studies combined indicate a substantial burden as well as considerable variability in prevalence estimates. These estimates vary with thresholds, instruments, academic periods, populations, and recruitment methods. The present study therefore used a defined undergraduate social work population, a multi-university stratified sample, the validated Bangla DASS-21, and clearly specified severity rules rather than assuming a previous prevalence estimate as the expected result.

3.2 Academic stress and educational performance

Academic stress is the feeling that education requirements intrude upon the student's available time, ability, support, and control. Examinations, course load, deadlines, presentations, attendance, competitive grading, and career uncertainty can act as stressors. The time available for study and recovery may be affected by financial and family concerns. Poor sleep and excessive screen time can additionally make it tough to focus and regulate oneself. Reviews also associate high academic stress with decreased learning, sleep, drive, and psychological health (Pascoe et al., 2020).

Talib and Zia-ur-Rehman (2012) found a significant negative correlation between perceived stress and GPA. There was a significantly higher mean stress score among students with lower GPAs, with course load, sleep problems, and social activities being significant factors influencing stress. The same association was found by Khan and Shamama-Tus-Sabah (2020) between perceived stress and positive mental health and academic outcomes in university students. Their findings suggest that the association can be complex, as some stress may accompany effort and achievement, and longer duration of stress may be associated with less functioning.

A study conducted by Banu et al. (2015) revealed that the academic stress of female students, humanities and social science students, second-semester students, and students who have done well in the previous semester was higher. This latter finding is relevant because high-performing students might feel pressure to sustain performance. Thus, it is possible that the relationship is not direct, with every increase in stress leading to a corresponding drop in grades. The outcome depends on factors such as duration, severity, coping, motivation, and support.

Zada et al. (2021) investigated academic performance and mental health issues among 540 university students in Pakistan, and their results indicated that mental health issues negatively correlated with academic performance when the effects of family and personal characteristics were controlled. The study validates the use of contextual covariates. Symptoms are not the sole cause of academic performance; family income, family relationships, leisure resources, physical health, and social resources can influence mental health and educational outcomes.

CGPA was taken as the main indicator of academic performance, together with recent academic-functioning measures including classes missed, late assignments, concentration difficulty, perceived academic decline, course repetition or failure, and intention to delay or discontinue study. This broader approach recognizes that recent symptoms may disrupt day-to-day academic functioning before a substantial change becomes visible in cumulative CGPA.

3.3 Social work education, hardship, placement, and stigma

Social work education is an integration of academic knowledge, values of the profession, and application. Students speak about poverty, violence, abuse, disability, illness, discrimination, and institutional injustice. This learning can be useful and meaningful, but if the material is emotionally sensitive, it can trigger relevant personal experiences or strain in relation to feelings of compassion. Pupils need to be taught to handle boundaries and uncertainty and to be confident in their working roles.

Cox et al. (2022) reviewed literature related to social work student hardship and came across financial hardship, debt, caring responsibilities, health, inequality, and placement demands as recurring themes. Placements that are unpaid or require a lot of resources may also limit paid work hours and/or require more transport, clothing, food, and childcare costs. Pupils can try to mix location, work, study, and family responsibilities, which can result in overexertion and less time for study. Though not necessarily applicable to Bangladesh directly, these international results can provide variables for testing in Bangladesh.

The most relevant empirical evidence comes from Beddoe et al. 2024. They conducted mixed methods research with 353 survey respondents and 31 interviews. Over half had been in contact with medical help

regarding mental health issues whilst studying social work, but only 60% of those with high anxiety, stress, or depression had not received medical help. Twenty-eight per cent said stigma or fear of career consequences was a barrier. Workload, content sensitivity, placement pressure, financial difficulties, decreased motivation, and burnout were described.

Stigma is a key concept in social work education. Students can help users of services think, but may be afraid that their sadness is being seen as weakness, instability, or not being suited for the job. This can be associated with felt stigma, secrecy, and delayed help-seeking. Support systems must therefore be confidential and distinct from punitive academic decision-making, unless immediate action for safety or for reasons of professional conduct is truly warranted.

Programs of social work in Bangladesh are conducted in different economic, cultural, and institutional settings from those in New Zealand or Australia. Families may have high expectations of local students, limited counselling resources, limited accommodation, long commutes, and being part-time tutored or employed. Expectations for local students, limited counselling, limited accommodation, long commutes, part-time tutoring or work, and uncertainty about employment are factors that can impact local students' families. The analytical framework examined factors other than those drawn from the literature elsewhere, but instead was informed by the local context.

4. Research Gap

Three gaps and two developments were identified from the literature. First, no Bangladesh-based study was identified with a specific focus on undergraduate social work students. Most national research combines disciplines or focuses on medical students, first-year students, or admission seekers. Second, many studies rely on online or convenience recruitment, which can reduce representativeness. The present study addressed this limitation through a geographically distributed, university-stratified sample. Third, social work-specific stressors such as field placement, emotionally sensitive learning, professional identity, and fears of fitness-to-practice judgement have not been measured systematically in Bangladesh. Although their importance has been demonstrated elsewhere, local evidence is required. Fourth, academic outcomes are often treated only as stressors rather than outcomes that may also be affected by mental-health symptoms. In this study, DASS-21 scores were therefore examined in relation to CGPA and recent academic-functioning indicators. Fifth, relatively few studies combine individual risks with institutional and social resources. A social work perspective requires attention to the interaction between students and their environments. Financial strain, living conditions, workload, field experience, sleep, physical activity, social support, service awareness, and help-seeking barriers were therefore examined alongside mental-health and academic outcomes. The study contributes discipline-specific, geographically distributed evidence to inform student support and institutional reform.

5. Theoretical and Conceptual Framework

The study is based on the Person-in-Environment perspective and the Transactional Model of Stress and Coping (Lazarus & Folkman, 1984). Person-in-Environment is a key social work perspective that views wellbeing as the interplay between people and their social, economic, cultural, academic, and institutional environments. It helps to stave off the study's simplistic view of distress as a personal failing.

The Transactional Model explains student appraisal of demands and coping resources. The academic load, placement, financial stress, family expectations, transportation, and career concerns may be considered tolerable, difficult, or hazardous. Perceived control, past experiences, health, income, social supports, and access to services influence the appraisal. If the demands are recurring and the resources seem to be insufficient, there may be an increase in symptoms of depression, anxiety, and stress.

The symptoms of mental illness can impact academic performance in several ways, such as a decrease in motivation, fatigue, sleep issues, avoidance, worry, attentional control, and an increase in confidence. A reciprocal relationship exists between academic difficulties and symptoms, as well: academic difficulties can exacerbate symptoms. The cross-sectional design assesses this relationship at a single time point and is unable to determine the direction of time.

Demographic and contextual variables affect outcomes of DASS-21 and academic achievement conceptually. The main explanatory variables for academic outcomes are depression, anxiety, and stress. Family support, peer support, teacher availability, supportive supervision, healthy sleep, physical activity, and service awareness are potential protective factors. The framework can be used to adjust and make recommendations at the policy, university, department, and student levels, in a multi-variable way.

6. Objectives of the Study

6.1 General objective

To assess mental health challenges and examine their association with academic performance among undergraduate social work students in selected public universities of Bangladesh.

6.2 Specific objectives

1. To estimate the prevalence and severity of depression, anxiety, and stress symptoms using the Bangla DASS-21.
2. To compare depression, anxiety, and stress across age, gender, university, and academic year.
3. To identify demographic, socioeconomic, academic, lifestyle, field-placement, support, and help-seeking factors associated with moderate-or-higher symptoms.
4. To examine associations between DASS-21 scores and CGPA, attendance, assignment completion, concentration, and perceived academic decline.
5. To propose evidence-based mental-health, academic, field-education, and referral responses for social work students.

7. Hypotheses

• H1: Higher depression scores are associated with lower CGPA and poorer academic-functioning indicators.
• H2: Higher anxiety scores are associated with lower CGPA and poorer academic-functioning indicators after adjustment for relevant covariates.
• H3: Higher stress scores are associated with lower CGPA and poorer academic-functioning indicators.
• H4: Moderate-or-higher depression, anxiety, and stress differ significantly across age and gender groups.
• H5: Financial strain, poor sleep, low social support, high workload, difficult field-placement experiences, and limited service access increase the odds of moderate-or-higher symptoms.

8. Materials and Methods

8.1 Research design

This study used an institution-based analytical cross-sectional design to examine mental-health symptoms and academic outcomes at a single point in time among undergraduate social work students. Primary participant data were manually collected and analyzed. Because exposure and outcome measures were assessed cross-sectionally, the term impact in the title is interpreted as statistical association rather than proof of temporal or causal effect. Reporting of the completed observational study was aligned with the STROBE recommendations for cross-sectional research (von Elm et al., 2007).

8.2 Study area and population

The study included undergraduate students of Social Work or Social Welfare from five public universities across four administrative divisions: University of Dhaka and Jagannath University in Dhaka Division, University of Barishal in Barishal Division, Noakhali Science and Technology University in Chattogram Division, and Jamalpur Science and Technology University in Mymensingh Division. The final analytical sample

comprised 425 students aged 18 to 23 years. Each university contributed 85 respondents. Academic-year representation was also near-even, with 105 students in each of Years 1, 2, and 3 and 110 students in Year 4.

8.3 Sample size and sampling strategy

Sample size was estimated using Cochran's (1977) formula for a single population proportion, n0=Z^2p(1-p)/d^2. With Z=1.96 for 95% confidence, p=.50 to maximize variance, and d=.05 precision, the base minimum was 384.16. Under the conventional adjustment n=n0/(1-r), a 10% anticipated non-response rate would produce a target of approximately 427. The achieved dataset contained 425 complete responses, which remained above the unadjusted Cochran minimum. Equal institutional allocation yielded 85 respondents from each university. The final sample retained the planned stratified structure by university and academic year. Each of the five universities contributed an equal institutional stratum of 85 respondents, while the four academic years were represented in approximately equal numbers. This design supported pooled analysis while avoiding concentration of the sample in one institution or year group. University and academic year were retained as contextual variables in adjusted models.

8.4 Instruments and measures

The structured questionnaire included administrative and consent information, demographic and socioeconomic characteristics, academic performance and functioning, lifestyle and support measures, field-placement and service-awareness items, help-seeking variables, and the validated Bangla Depression Anxiety Stress Scale-21 (DASS-21). The DASS-21 contains seven items each for depression, anxiety, and stress, rated from 0 to 3 for experiences during the previous week. Subscale totals were multiplied by two before conventional severity classification. These categories represent symptom severity and are not clinical diagnoses. Current CGPA was the primary academic outcome. Secondary academic indicators included classes missed in the previous four weeks, late assignments, concentration difficulty, perceived academic decline, repeated or failed courses, delay or dropout intention, and a derived academic-functioning-risk indicator.

8.5 Variables

Mental-health variables included continuous depression, anxiety, and stress scores; five-level severity categories; and binary moderate-or-higher indicators for each DASS-21 domain. Academic outcomes included current CGPA, low CGPA below 3.00, an academic-risk indicator count, and a binary academic-functioning-risk flag derived from the pre-specified recent academic-functioning indicators. The risk composite used academic variables rather than DASS symptom items, limiting direct item overlap between the mental-health predictors and the academic outcome. Explanatory and adjustment variables included age, gender, academic year, university, permanent residence, current living arrangement, family type, family-income band, financial strain, paid work, study hours, sleep duration and quality, physical activity, screen time, social support, teacher-support access, workload difficulty, service awareness, previous professional help, perceived stigma, and field-placement exposure and difficulty where applicable.

8.6 Data collection and data analysis

Primary responses were manually collected using the structured study instrument and entered into a respondent-level dataset. Each record used an anonymous respondent code, and the source file contained eligibility, age, enrolment, and consent fields. Before analysis, the dataset was checked for duplicate IDs, missing respondent IDs, out-of-range values, structural missingness, and consistency of derived variables. The final data-quality audit retained 425 records, found no duplicate or missing respondent IDs, confirmed valid ranges for all 21 DASS-21 items, all 12 MSPSS items, and all 5 SSRPH items, and found no discrepancies in recomputed depression, anxiety, stress, moderate-or-higher, low-CGPA, academic-risk-count, or academic-functioning-risk variables. Analysis was performed in RGui version 4.5.1. Categorical variables were summarized using frequencies and percentages, and continuous variables using means, standard deviations, medians, ranges, and

distributional summaries. Internal consistency was assessed with Cronbach's alpha. DASS-21 severity was reported in five categories and as moderate-or-higher prevalence with Wilson 95% confidence intervals. Age and gender comparisons used Fisher's exact test with Monte Carlo p-values when sparse expected cells made the Pearson chi-square approximation unsuitable; university and academic-year comparisons used Pearson chi-square tests where assumptions were met. Pearson and Spearman correlations assessed associations between DASS-21 scores, CGPA, and academic-functioning measures. Mean CGPA across severity categories was examined using one-way ANOVA, with Welch and Levene diagnostics available as sensitivity checks. Separate multiple linear regression models estimated the adjusted association of depression, anxiety, and stress scores with CGPA using HC3 robust standard errors. Binary logistic regression examined factors associated with moderate-or-higher symptoms and estimated adjusted associations with low CGPA and academic-functioning risk. Model evaluation included convergence, adjusted variance-inflation factors, residual diagnostics, Breusch-Pagan and Shapiro-Wilk tests for linear models, and AUC and Hosmer-Lemeshow calibration for logistic models. Two-sided $p<.05$ was considered statistically significant. Four respondents identifying as non-binary or another identity were retained in descriptive and unadjusted analyses but were not included in models requiring the binary female-versus-male covariate, giving N=421 for those adjusted models.

8.7 Reliability and validity

Internal consistency was assessed separately for the depression, anxiety, and stress subscales, the full DASS-21, the Multidimensional Scale of Perceived Social Support (MSPSS), and the perceived-public-stigma scale (SSRPH). Cronbach's alpha values of .70 or above were treated as acceptable. Use of established scale structures, the validated Bangla DASS-21, a pre-specified variable dictionary, range checks, independent recomputation of scale scores and binary flags, and consistency checks between source and derived variables supported measurement and data-processing validity.

8.8 Ethical considerations

Participation was voluntary, and the study instrument included eligibility and consent screening before the substantive questionnaire. Anonymous respondent codes were used in the analytical dataset, and no direct personal identifiers were included in the analysis outputs. We maintained respondents' confidentiality and privacy throughout the study. The ethical principles outlined in the Declaration of Helsinki were followed throughout the study. In addition, the acquired information was not falsified, and the data were provided as acquired.

9. Findings and Results

All 425 records passed the data-quality checks and were retained for descriptive and unadjusted analyses. Each university contributed 85 students. Mean age was 20.25 years (SD=1.30; range 18-23). The sample included 238 females (56.0%), 183 males (43.1%), and 4 respondents identifying as non-binary or another identity (0.9%). Permanent residence was rural for 59.1% and urban for 40.9%. Current living arrangement was analyzed separately: 35.5% lived in a mess or shared accommodation, 32.0% in a university hall, 21.4% with family, 8.2% in a rented room alone, and 2.8% in another arrangement. Paid work was reported by 21.4%, field-placement exposure by 40.0%, awareness of support services by 48.5%, and previous professional help by 37.9%. Mean weekly study time was 23.82 hours (SD=5.40), mean sleep duration was 7.27 hours per night (SD=.73), and mean current CGPA was 3.27 (SD=.27). Low CGPA below 3.00 was present in 15.1%, and 43.5% met the derived academic-functioning-risk criterion.

Table 1. Institutional distribution and selected participant characteristics

Characteristic	Category	n	%	Mean (SD)
University	Each of five universities	85 each	20.0 each	-
Academic year	Years 1 / 2 / 3 / 4	105 / 105 / 105 / 110	24.7 / 24.7 / 24.7 / 25.9	-
Gender	Female	238	56.0	-

Characteristic	Category	n	%	Mean (SD)
Gender	Male	183	43.1	-
Gender	Non-binary or another identity	4	0.9	-
Permanent residence	Rural	251	59.1	-
Current living arrangement	Mess/shared accommodation	151	35.5	-
Current living arrangement	University hall	136	32.0	-
Paid work	Yes	91	21.4	-
Field placement	Yes	170	40.0	-
Previous professional help	Yes	161	37.9	-
Age	Years	425	-	20.25 (1.30)
Current CGPA	0-4 scale	425	-	3.27 (0.27)

9.1 Reliability and symptom severity

Internal consistency was good for the three DASS-21 subscales and excellent for the full scale: depression alpha=.825, anxiety alpha=.819, stress alpha=.823, and full DASS-21 alpha=.900. Moderate-or-higher depression was present in 184 students (43.3%, 95% CI 38.7%-48.0%), anxiety in 232 (54.6%, 95% CI 49.8%-59.3%), and stress in 127 (29.9%, 95% CI 25.7%-34.4%). Anxiety therefore had the highest moderate-or-higher prevalence. By severity category, 41.9% were normal for depression, 36.2% for anxiety, and 61.2% for stress. Extremely severe symptoms were observed in 10.8% for depression, 27.1% for anxiety, and 4.0% for stress.

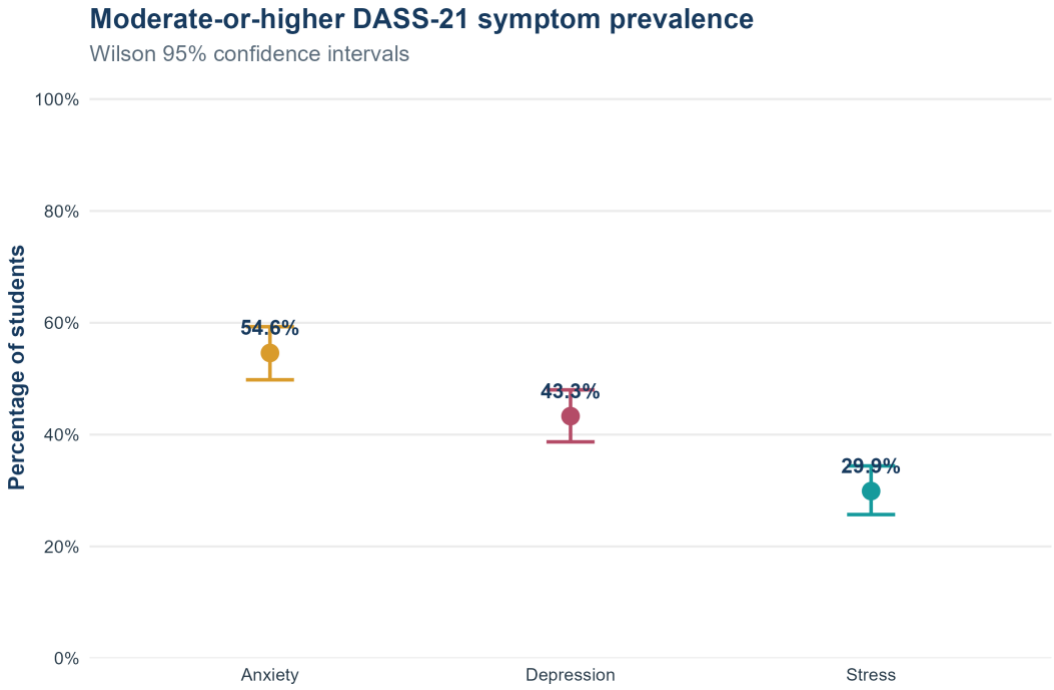

Figure 1. Moderate-or-higher DASS-21 symptom prevalence with 95% confidence intervals.

Table 2. DASS-21 symptom severity and moderate-or-higher prevalence

Domain	Normal n (%)	Mild n (%)	Moderate n (%)	Severe/extreme n (%)	Moderate+ n (%) [95% CI]
Depression	178 (41.9)	63 (14.8)	95 (22.4)	89 (20.9)	184 (43.3) [38.7-48.0]
Anxiety	154 (36.2)	39 (9.2)	85 (20.0)	147 (34.6)	232 (54.6) [49.8-59.3]
Stress	260 (61.2)	38 (8.9)	69 (16.2)	58 (13.6)	127 (29.9) [25.7-34.4]

9.2 Age and gender comparisons

Moderate-or-higher depression was present in 43.3% of students aged 18-20, 43.0% aged 21-22, and 50.0% aged 23 years or older. Anxiety prevalence across the same age groups was 58.4%, 49.4%, and 50.0%, while stress prevalence was 30.2%, 29.1%, and 37.5%. Because the oldest age group was small, Fisher's exact tests with Monte Carlo p-values were used; no age-group association was significant for depression (p=.935,

Cramer's V=.019), anxiety (p=.184, V=.089), or stress (p=.809, V=.026). Gender comparisons were also non-significant: depression was 45.9% among males, 41.2% among females, and 50.0% among the four respondents in the non-binary/another-identity category (p=.593); anxiety was 60.1%, 50.0%, and 75.0%, respectively (p=.079); and stress was 32.8%, 27.3%, and 50.0% (p=.255). Fisher's exact tests were retained for gender because of sparse cells in the smallest category.

Table 3. Group comparisons of moderate-or-higher symptoms by age and gender

Outcome	Grouping	Moderate+ percentages	p	V
Depression	Age: 18-20 / 21-22 / 23+	43.3 / 43.0 / 50.0	.935	.019
Anxiety	Age: 18-20 / 21-22 / 23+	58.4 / 49.4 / 50.0	.184	.089
Stress	Age: 18-20 / 21-22 / 23+	30.2 / 29.1 / 37.5	.809	.026
Depression	Gender: M / F / Other	45.9 / 41.2 / 50.0	.593	.049
Anxiety	Gender: M / F / Other	60.1 / 50.0 / 75.0	.079	.108
Stress	Gender: M / F / Other	32.8 / 27.3 / 50.0	.255	.073

9.3 Factors associated with depression, anxiety, and stress

In adjusted logistic regression models (N=421), financial strain was a consistent risk factor for moderate-or-higher depression (AOR=1.61, 95% CI 1.26-2.05), anxiety (AOR=1.62, 95% CI 1.27-2.07), and stress (AOR=1.66, 95% CI 1.26-2.18), all p<.001. Better sleep quality was protective for depression (AOR=.77, p=.002), anxiety (AOR=.81, p=.015), and stress (AOR=.81, p=.023), as was greater social support (AOR=.79, .72, and .71, respectively; all p<=.020). Workload difficulty was associated with depression (AOR=1.28, p=.013) and anxiety (AOR=1.24, p=.033), but not stress. Screen time was independently associated with depression only (AOR=1.17 per additional hour/day, p=.041). Placement difficulty was not statistically significant at the .05 level, although the stress estimate was elevated (AOR=2.32, 95% CI .99-5.43, p=.052). Age and binary gender were not independent significant factors. All three symptom models converged, had AUC values of approximately .75-.76, Hosmer-Lemeshow p-values from .051 to .826, and maximum adjusted VIF values near 2.0, indicating acceptable discrimination, calibration, and collinearity.

Table 4. Selected adjusted factors associated with moderate-or-higher symptoms

Predictor	Depression AOR (95% CI; p)	Anxiety AOR (95% CI; p)	Stress AOR (95% CI; p)
Financial strain	1.61 (1.26-2.05); p<.001	1.62 (1.27-2.07); p<.001	1.66 (1.26-2.18); p<.001
Sleep quality	.77 (.65-.91); p=.002	.81 (.69-.96); p=.015	.81 (.68-.97); p=.023
Screen time	1.17 (1.01-1.37); p=.041	1.15 (.98-1.34); p=.081	1.10 (.93-1.30); p=.258
Social support	.79 (.64-.96); p=.020	.72 (.59-.89); p=.002	.71 (.57-.88); p=.002
Workload difficulty	1.28 (1.05-1.57); p=.013	1.24 (1.02-1.51); p=.033	1.04 (.85-1.29); p=.683
Placement difficulty	1.31 (.64-2.70); p=.465	1.11 (.54-2.27); p=.777	2.32 (.99-5.43); p=.052

9.4 Mental-health symptoms and academic performance

Current CGPA was negatively correlated with depression (r=-.325, p<.001), anxiety (r=-.362, p<.001), and stress (r=-.277, p<.001). CGPA was positively correlated with weekly study hours (r=.373, p<.001), sleep quality (r=.329, p<.001), social support (r=.138, p=.004), and teacher-support access (r=.146, p=.003). Mean CGPA differed significantly across all three symptom-severity classifications. For depression, mean CGPA declined from 3.328 in the normal group to 3.074 in the extremely severe group, F(4,420)=11.64, p<.001, eta-squared=.100. For anxiety, the corresponding means were 3.349 and 3.123, F(4,420)=14.51, p<.001, eta-squared=.121. For stress, mean CGPA was 3.320 in the normal group and 3.162 in the extremely severe group, F(4,420)=6.73, p<.001, eta-squared=.060.

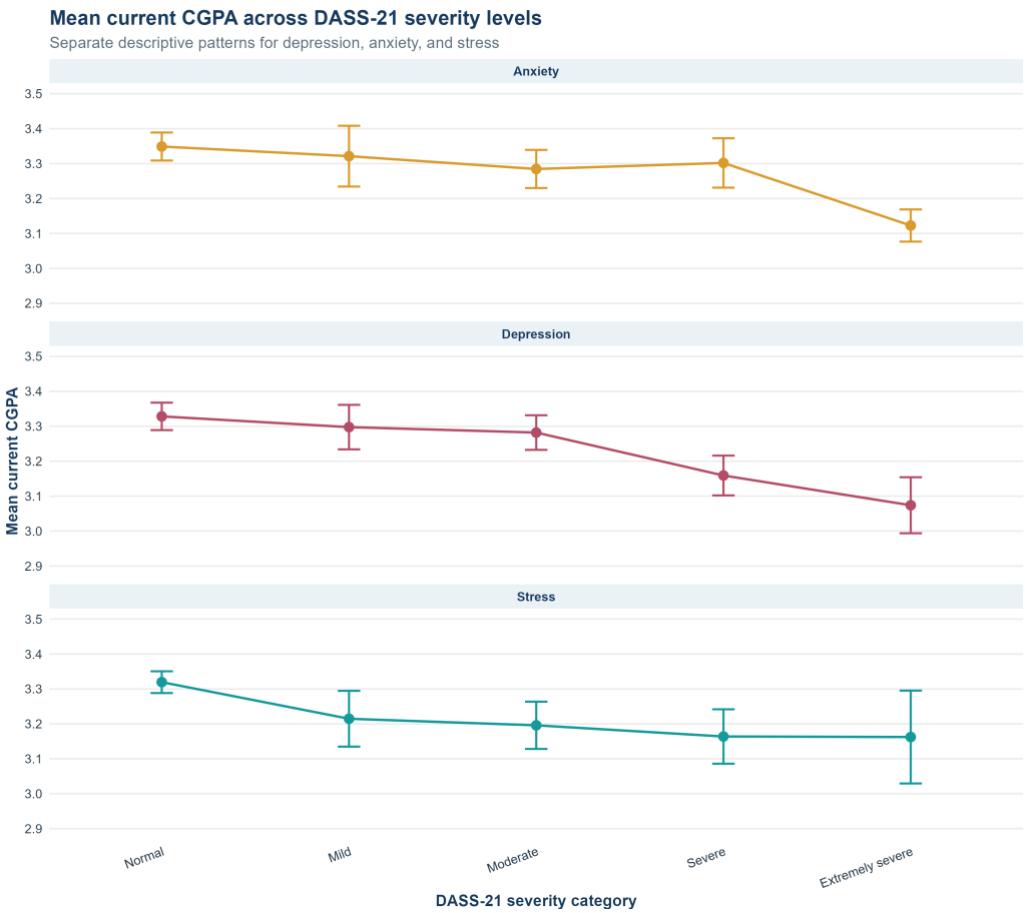

Figure 2. Mean CGPA by DASS-21 symptom-severity category.

In separate adjusted multiple linear regression models using HC3 robust standard errors (N=421), each one-point increase in depression score was associated with a .00595-point lower CGPA (B=-.00595, 95% CI -.00842 to -.00348, p<.001), anxiety with a .00676-point lower CGPA (B=-.00676, 95% CI -.00936 to -.00417, p<.001), and stress with a .00471-point lower CGPA (B=-.00471, 95% CI -.00735 to -.00207, p<.001). Adjusted R-squared values were .294, .303, and .278, respectively. Residual Shapiro-Wilk tests were non-significant (p=.745-.924), Breusch-Pagan tests were non-significant (p=.604-.971), and maximum adjusted VIF values were below 2.0. Study hours, sleep quality, social support, and teacher-support access showed positive adjusted associations with CGPA across the models.

For low CGPA below 3.00, moderate-or-higher depression was not independently associated with the outcome (AOR=1.24, 95% CI .66-2.33, p=.499), anxiety showed a positive but non-significant estimate (AOR=1.90, 95% CI .95-3.79, p=.069), and stress was associated with higher odds (AOR=1.99, 95% CI 1.04-3.81, p=.039). These low-CGPA models had only 64 events and approximately 4.6 events per parameter, so they were interpreted cautiously. Associations were stronger and more stable for academic-functioning risk: depression AOR=3.33 (95% CI 2.10-5.30), anxiety AOR=4.67 (95% CI 2.86-7.63), and stress AOR=5.21 (95% CI 3.06-8.87), all p<.001. The academic-risk models each had 184 events in the adjusted N=421 sample, converged successfully, produced AUC values of .799-.817, had Hosmer-Lemeshow p-values of .139-.407, and had maximum adjusted VIF values close to 2.0.

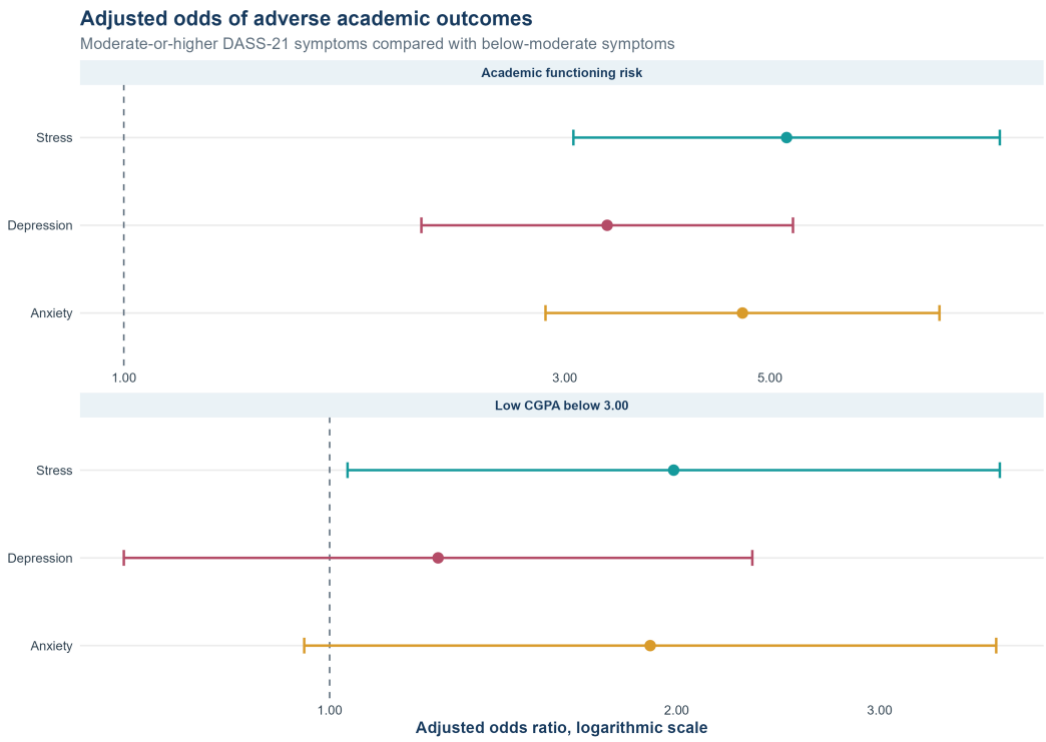

Figure 3. Adjusted odds ratios for low CGPA and academic-functioning risk.

Table 5. Associations between mental-health indicators and academic outcomes

Outcome/predictor	Adjusted result	Interpretation
CGPA: depression	B=-.00595 [95% CI -.0084 to -.0035], p<.001; Adj. R2=.294	Lower CGPA
CGPA: anxiety	B=-.00676 [95% CI -.0094 to -.0042], p<.001; Adj. R2=.303	Lower CGPA
CGPA: stress	B=-.00471 [95% CI -.0074 to -.0021], p<.001; Adj. R2=.278	Lower CGPA
Low CGPA: depression moderate+	AOR=1.24 [95% CI .66-2.33], p=.499; AUC=.755	Not significant
Low CGPA: anxiety moderate+	AOR=1.90 [95% CI .95-3.79], p=.069; AUC=.768	Not significant
Low CGPA: stress moderate+	AOR=1.99 [95% CI 1.04-3.81], p=.039; AUC=.766	Higher odds
Academic risk: depression moderate+	AOR=3.33 [95% CI 2.10-5.30], p<.001; AUC=.799	Higher odds
Academic risk: anxiety moderate+	AOR=4.67 [95% CI 2.86-7.63], p<.001; AUC=.817	Higher odds
Academic risk: stress moderate+	AOR=5.21 [95% CI 3.06-8.87], p<.001; AUC=.817	Higher odds

10. Discussion

The empirical findings indicate a substantial burden of mental-health symptoms among the sampled undergraduate social work students. Moderate-or-higher prevalence was 43.3% for depression, 54.6% for anxiety, and 29.9% for stress, with anxiety the most common domain. These estimates are lower than the moderate-to-severe depression, anxiety, and stress proportions reported among Bangladeshi admission seekers by Rabby et al. (2023), but direct comparison should be cautious because populations, timing, recruitment, and contextual pressures differ. Broader Bangladeshi studies likewise show that depression and anxiety are common among university students and vary with financial, behavioral, and lifestyle factors (Al-Amin et al., 2025; Islam et al., 2022). The present results extend that evidence to a social-work-specific, multi-university sample.

The reliability findings support the use of the DASS-21 in this sample. Cronbach's alpha was .825 for depression, .819 for anxiety, .823 for stress, and .900 for the full 21-item scale. These coefficients are consistent with satisfactory psychometric performance reported for the Bangla DASS-21 by Ahmed et al. (2022) and with previous Bangladeshi student applications such as Rabby et al. (2023). Reliability does not establish diagnostic validity, but the combination of established scale structure, complete item-level data, and internally consistent scoring strengthens confidence in the measurement process.

The negative associations with CGPA were consistent across all three symptom domains. Depression, anxiety, and stress correlated with CGPA at r=-.325, -.362, and -.277, respectively, and each remained a significant negative predictor after adjustment for demographic, institutional, academic, lifestyle, and support covariates. This pattern is theoretically plausible. The Transactional Model of Stress and Coping suggests that sustained demands can consume coping resources, while Attentional Control Theory proposes that anxiety redirects processing toward threat and worry, reducing efficiency in goal-directed tasks (Lazarus & Folkman, 1984; Eysenck et al., 2007). Fatigue, avoidance, sleep disruption, and reduced motivation can similarly affect preparation, attendance, concentration, and task completion before or alongside changes in grades (Andrews & Wilding, 2004; Awadalla et al., 2020; Hysenbegasi et al., 2005).

The distinction between cumulative CGPA and recent academic-functioning risk is important. Low-CGPA models were weaker and were based on only 64 low-CGPA events, whereas moderate-or-higher depression, anxiety, and stress were strongly associated with the academic-functioning-risk outcome, with adjusted odds ratios of 3.33, 4.67, and 5.21. The academic-risk composite was constructed from academic-functioning indicators rather than DASS symptom items, reducing the concern that the predictor and outcome simply repeated the same symptom content. This stronger association with current functioning is plausible because concentration problems, missed classes, late assignments, perceived decline, and intentions to delay study can emerge before cumulative CGPA changes substantially. The pattern is compatible with previous evidence linking stress and mental-health difficulties with academic performance and functioning (Talib & Zia-ur-Rehman, 2012; Zada et al., 2021).

Financial strain was the most consistent adjusted risk factor across the three moderate-or-higher symptom models. Each one-point increase was associated with approximately 1.61 times the odds of depression, 1.62 times the odds of anxiety, and 1.66 times the odds of stress. Financial strain may capture pressures that income bands alone do not, including debt, dependents, housing costs, transport, educational expenses, and loss of paid work time. These concerns are particularly relevant in social work education, where field placement can create travel and opportunity costs. Financial hardship, basic-needs insecurity, employment demands, and placement pressures have also been identified in social work education research (Cox et al., 2022; Crutchfield et al., 2020; Gair & Baglow, 2018b; Beddoe et al., 2024).

Better sleep quality and higher perceived social support were protective across depression, anxiety, and stress after adjustment. These findings are consistent with wider evidence linking student mental health with sleep and social or lifestyle conditions (Al-Amin et al., 2025; Islam et al., 2022; Mofatteh, 2021; Teuber et al., 2024). Screen time was independently associated with depression but not anxiety or stress in the adjusted models, suggesting that total screen exposure should not be treated as uniformly harmful because it may include studying, work, communication, or recreation. Workload difficulty was associated with depression and anxiety, reinforcing the relevance of academic demand, whereas its adjusted association with stress did not reach significance.

Field-placement difficulty did not reach the conventional .05 threshold in the adjusted symptom models, although the stress estimate was elevated and close to significance. This result does not remove the importance of field education, because international social work literature documents emotionally challenging cases, travel and cost pressures, supervision concerns, and fear of professional judgement (Beddoe et al., 2024; Gair & Baglow, 2018a, 2018b). The present findings instead suggest that placement effects should be interpreted alongside broader financial, workload, sleep, and support conditions. Confidential services remain important so that help-seeking is not automatically interpreted as professional unfitness, while genuine safety and conduct issues can still be managed through proportionate procedures.

Age-group and gender differences in moderate-or-higher symptoms were not statistically significant in the unadjusted comparisons, and binary gender was not an independent significant predictor in the adjusted symptom models. Fisher's exact tests were used for age and gender comparisons because the oldest age group and the non-binary/another-identity category were small. Anxiety showed the largest descriptive gender difference,

but the Monte Carlo p-value was .079. Previous empirical studies have reported mixed demographic patterns, including gender and academic-phase differences in some settings (Rahman et al., 2025). The absence of a significant group difference here should therefore not be interpreted as evidence that experiences, responsibilities, safety concerns, or willingness to disclose symptoms are identical across groups.

Overall, H1, H2, and H3 were supported: higher depression, anxiety, and stress scores were associated with lower CGPA and poorer academic functioning. H4 was not supported because moderate-or-higher symptoms did not differ significantly across the tested age and gender groups. H5 was partially supported. Financial strain showed consistent positive associations with all three symptom outcomes, while better sleep quality and social support were consistently protective; workload difficulty was associated with depression and anxiety, and screen time with depression. Placement difficulty and service-access variables were less consistent after multivariable adjustment. These results support a multi-level interpretation in which individual symptoms interact with academic, social, financial, and institutional conditions rather than operating as isolated personal characteristics.

11. Recommendations and Future Directions

- **Confidential counselling and referral:** A path to appropriate counselling and/or referral services must be advertised clearly at each participating university. Teacher or placement supervisor access to individual screening results is not to be allowed without permission, unless under an approved immediate-safety protocol.
- **Early, voluntary support:** Wellbeing checks may be available in departments on a confidential basis at entry, before significant placements and at the end of the year, when transitioning. Screening should be connected to available support and should not be used to diagnose or automatically assess fitness-to-practice.
- **Field-education reform:** The emotional needs, boundaries, safety, supervision, reflective practice, travel expenses, and reporting procedures should be covered during pre-placement orientation. Structured debriefing should be provided during and following challenging placements.
- **Academic flexibility:** Documented support can involve workload adjustments, attendance plans, temporary changes to workload and referral. Flexibility should allow for learning outcomes to be maintained and a brief time of distress not to become academic exclusion.
- **Financial and practical assistance:** Emergency funds, transportation support, cheap food, placement arrangements, and connection to student welfare should be evaluated at universities. Placement is particularly important when it comes to the loss of paid work.
- **Sleep and digital-health programs:** There are short-term programs for sleep habits, exam preparation, screen time, exercise, and realistic time management. These should be used in conjunction with structural changes, not to fall solely on the shoulders of students.
- **Anti-stigma education:** Support-seeking should not be considered incompatible with the professional development skills of students and staff. Lived experience with a mental-health issue should not be interpreted as an automatic indicator of professional unfitness.

12. Limitations of the Study

This study has some limitations. Firstly, its cross-sectional design does not allow us to establish a cause-and-effect relationship between mental health and academic performance. Secondly, the study was conducted among undergraduate social work students from selected public universities in Bangladesh, so the findings may not be generalizable to all university students. Thirdly, the study relied mainly on self-reported information, which may be affected by recall or response bias. Finally, other factors that may influence academic performance, such as family environment, personal experiences, and academic workload, may not have been fully captured.

13. Conclusion

This multi-university cross-sectional study provides empirical evidence on depression, anxiety, stress, and academic performance among 425 undergraduate social work students in Bangladesh. Moderate-or-higher symptoms affected 43.3% for depression, 54.6% for anxiety, and 29.9% for stress, and the DASS-21 showed good

to excellent internal consistency. Higher depression, anxiety, and stress scores were each associated with lower CGPA after adjustment, and moderate-or-higher symptoms were strongly associated with recent academic-functioning risk. Financial strain emerged as a consistent risk factor, while better sleep quality and social support were protective; workload and screen-time effects were more domain-specific. The cross-sectional design does not establish causal direction, and the low-CGPA logistic models should be interpreted cautiously because of the limited number of low-CGPA events. Nevertheless, the findings support confidential mental-health care, academic flexibility, accessible support, financial and practical assistance, attention to sleep and workload, and anti-stigma initiatives for social work students. Future longitudinal and intervention research should test temporal pathways and evaluate whether these institutional responses improve both wellbeing and academic functioning.

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Conflicts of Interest

The authors declare no conflict of interest.

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