



Academic Stress and Students' Mental Health: Insights from Private University Students in Bangladesh

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Research Article

Abstract

The mental health of students is an issue of concern worldwide. At the tertiary level, students face several stresses, including academic stress. Frequent changes in curriculum and examination systems put pressure on students' mental health. In this study, we aim to explore the relationship between mental health and academic stress. The study is conducted on the students of six private universities located in Dhaka and Chattogram. An adopted questionnaire is used to measure the academic stress and mental health of the students. A Google form questionnaire designed in a five-point Likert scale is sent to the students by using convenient sampling techniques. SPSS version 23 is used for statistical analysis. A total of 297 responses are considered for statistical analysis. Multiple Regression Models are used to analyze the data. The study finds a positive significant correlation between four dimensions of academic stress and the mental health of the respondents. The finding provides educational institutions with an insight into creating mechanisms through which actual and potential mental health issues among students can be addressed. The study includes a small sample size and is conducted only on business students of private universities. Further research may be conducted on the students of other disciplines of both public and private universities and a larger sample.

Keywords: Mental health, Academic Stress, Frustration, Pressure, Change, University Students

1. Introduction

In the modern age, students are facing various challenges. At the university level, students must cope with different situations that are different from the early stages of their education. Individuals equipped with knowledge and skills can significantly advance a nation's aim of achieving development goals (Zulkefly & Baharudin, 2010). After graduation from higher secondary school, students may face numerous challenges like dormitory life away from family, study stress, time management, poor eating habits, sleeping disorders, smoking, and sedentary behavior in their new academic setting (Mohammad et al., 2018).

Students are emotionally and mentally more strained at the university stage than almost any other stage of education. They face huge pressure and challenges including, physical, social, and emotional complexities (Rodgers & Tennison, 2009). University students deal with developmental challenges, while some battle with more complex and persistent ones. Mood disorders, harsh behaviors, interpersonal problems, and destruction of self-concept (Grayson, 1989) are more familiar problems for university students. Stress and strain cause major mental problems in students as well. Such circumstances expose students to worry, mental disorders, and sleeping disorders. Research by Field et al. (2012) found that 86% of U.S. colleges

and universities reported seeing an increase in student depression. Students with depressive symptoms had lower GPAs and were more likely to have anxiety, intrusive thoughts, managing intrusive thoughts, sleep disruptions, and other mental health difficulties.

Having access to methods for relieving stress is crucial. Sharoff (2004) argues that people need time to recover after experiencing stress. Counselors and psychologists have historically taken the lead in developing and studying psychological therapies for modifying dysfunctional patterns of behavior (Keogh, Bond & Flaxman, 2006; Lazarus & Folkman, 1984; Meichenbaum, 1986; Palmer & Dryden, 1995).

University students worldwide, including Bangladesh, have significant rates of psychological illness, including sadness and anxiety (Bayram & Bilgel, 2008). According to the National Mental Health Survey 2019 in Bangladesh, common mental illnesses like depression and anxiety disorders were 6.7% and 4.7%, respectively, with a high treatment gap of 91% for mental disorders. According to the World Health Organization (2022), these pervasive mental health disorders are frequently untreated, which might affect academic performance. An increasing number of students are presenting with more severe problems at university counseling facilities in the UK and the USA (Novotney, 2014, Flatt, 2013). Several mental health crises (for example, suicidal attempts or suicide) have occurred in numerous Bangladeshi universities in recent years (Mamun, Hossain & Griffiths, 2022). About 61% of Bangladeshi suicide cases were under 30 years old, according to previous studies (Shah et al., 2017).

If we want to enhance university students' mental health and well-being, we need to understand better the challenges they face and the variables that contribute to their problems. This is the main motivation for conducting studies in this area because few such studies have been conducted in Bangladesh. Thus the study aims to explore the impact of academic stress on the mental health of private university students in Bangladesh. According to earlier research findings, academic stressors are frustration, pressure, change, and self-imposed academic targets of students. Therefore, another objective of the study is to find out the relationship between frustration, pressure, change, and self-imposed academic targets with mental health of university students.

Exploring the main academic stressors is essential to understanding students' challenges and providing appropriate counseling to the students. Therefore, examining the relationship between academic stress and mental health is a significant area of investigation.

2.0 Literature Review

2.1 Theoretical Background

The main psychological theories are behavioral, cognitive, humanistic, psychodynamic, and biological. Psychologists, counselors, and therapists use behavioral, cognitive, psychodynamic, and humanistic approaches in psychotherapy. Of them, Psychodynamic theories look at the unconscious notions that influence our emotions, attitudes, and personalities. Mental health is defined as a set of subjective characteristics such as thoughts, emotions, and beliefs that, when positive, result in improved functioning and functional contextual adaption capacity in an individual. Psychodynamic techniques attempt to identify the underlying causes of unconscious behavior. Based on psychodynamic theory, this study seeks to determine the relationship between various educational stresses and mental health.

2.2 Academic Stress

University students recognize academic life as traumatic and challenging and report experiencing disturbing and cognitive reactions to this stress, mainly due to outside pressures and self-imposed outlook (Aherne, 2001; Hicks & Miller, 2006). University students frequently report stress, anxiety, depressive symptoms, eating disorders, and other psychological concerns that have a substantial detrimental influence on their academic performance and mental health (Tosevski, Milovancevic, & Gajic, 2010; Cooley, Toray, Valdez, & Tee, 2007). Academic stress occurs when a student's demands on their time and energy in the classroom surpass their capacity for coping (Alsulami et al., 2018). The first factor of academic stress identified by

Flatt (2013) was academic pressure, which increases stress and can lead to mental health problems like stress, anxiety, and depression because students do not know how to deal with academic problems at university and find it hard to get the high grades they want. Students at universities are being subjected to an unhealthy level of pressure and are more likely to suffer from serious mental illness (Hossain et al., 2022). The academic setting is an extremely stressful one due to the pressure to perform well on examinations and tests as well as the time constraints (Erkutlu, 2006). Frustration, pressure, changes, and expectations placed on oneself all contribute to academic stress (Gadzella, 1994). According to Khan and Ayyub (2013), students experience academic stress due to factors including the difficulty of course material, the fear of failure, a lack of preparation, a fear of public speaking or public examination, a fear of long periods of lecture time, and concerns about their academic ability. Workload, too many tests, Cumulative Grade Point Average (CGPA), course difficulty, and professor personality were the top five most frequently cited academic stressors (Ong & Cheong, 2009).

2.3 Mental Health

Many cultures, groups, and societies have different definitions and conceptualizations of mental health (Saleem, Mahmood, & Naz, 2013). The World Health Organization (WHO) (1999) defined mental health as a condition of well-being in which every person fulfills his or her potential, can cope with the usual demands of life, can work creatively and fruitfully, and can contribute to his or her community. The word mental health refers to an individual's capacity to "successfully execute mental processes in terms of cognition, emotion, and behavior that results in productive activities, rewarding relationships with others, and the capacity to adjust, modify, and cope with difficulties" (Sadock et al., 2009). Many studies have shown an uptick and widespread occurrence of mental health issues among university students. Depression and anxiety in university students have been linked to lower GPAs, higher rates of self-injury, and dropping out of school (Oswalt et al., 2018), and social phobia is also common among this population (Pedrelli et al., 2014). Half of the students attending universities in Bangladesh were affected by mental health issues like depression and anxiety (Hossain et al., 2022). Young individuals have a higher risk of suffering from mental health conditions than older people, and they are more susceptible to the negative consequences of social isolation, including the closing of educational institutions (Panchal et al., 2021).

2.4 Academic Stress and Mental Health: Development of Hypotheses

The well-being and mental health of university students, along with other problems such as stress, are significant issues in higher education. A significant proportion of university students indicate elevated levels of stress, depressive symptoms, or anxiety due to various stressors. Hosseinkhani et al. (2020) identified a relationship between mental health issues and academic stress among adolescents in Iran. Academic stress exhibited a positive correlation with anxiety and depression among Chinese adolescents, which were negatively connected with physical activity and sleep (Zhu et al., 2021). The research conducted by Ahorsu et al. (2023) indicated that high school students in Ghana experienced elevated levels of academic stress, depression, and suicidal thoughts and employed a greater variety of coping mechanisms than university students. Steare et al. (2023) identified a favorable correlation between academic pressure and the mental health of adolescents in their comprehensive analysis of 22 research articles. Multiple regression analyses indicated that anxiety and depressive symptoms were significantly associated with elevated perceived academic stress, as well as diminished mindful awareness, self-compassion, and psychological flexibility among international university students in America (Koppenborg et al., 2022). Academic stress was a more significant predictor of mental health impairment in female students than in male students (Rubach et al., 2022). In Bangladesh, there is a paucity of research regarding the academic stress and mental health challenges faced by university students. This study is undertaken to examine the association between four

characteristics of academic stress and mental health among university students in Bangladesh based on this constraint. Based on the literature review, the following hypotheses have been formulated for the study.

Hypothesis 1: There is a positive relationship between frustration and the mental health of university students

Hypothesis 2: There is a positive relationship between Pressure and mental health of the university students

Hypothesis 3: There is a positive relationship between changes and the mental health of university students

Hypothesis 4: There is a positive relationship between self-imposed targets and the mental health of university students.

2.5 Research Framework

The dimensions of academic stress are considered independent variables. Mental health is considered a dependent variable in the hypothetical model of this study.

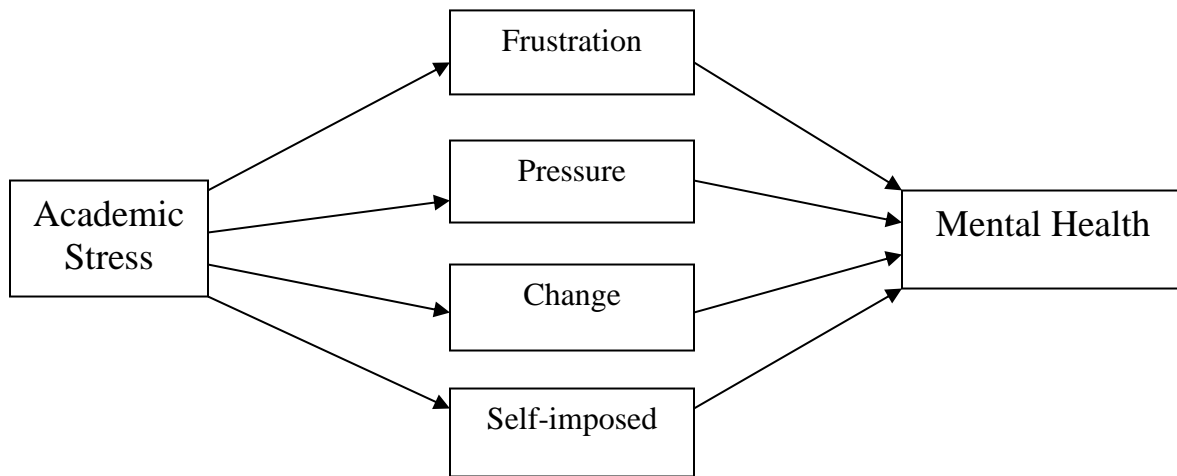


Fig.1: Research Framework

3. Research Methods

3.1. Research Design and Data

This is a quantitative study based on survey data. A digital questionnaire was prepared by using Google Forms. The form was sent to respondents through familiar faculties and class representatives of six private university students in Chattogram and Dhaka by using WhatsApp and Messenger. It was assured that all responses would be kept confidential. Respondents' names and university names were not collected to maintain privacy. A total of 297 responses were collected.

3.2. Model Formulation

In order to evaluate mental health, a multiple linear regression model is proposed to find the relationship measuring the impact of academic stress variables on the mental health of the private university students of Bangladesh. SPSS version 23 is used to analyze the multiple linear regressions in this study. A multiple linear regression model representing the academic stress variables is anticipated as follows:

$$MH = \beta_0 + \beta_1 (FRT) + \beta_2 (PRS) + \beta_3 (CHG) + \beta_4 (SI) + e$$

In the above regression equation, β_0 denotes a constant numeric value, β_i (I for 1, 2, 3, and 4) refers to the regression coefficients of respective independent academic stress variables, and e represents residual error.

3.3 Questionnaire Development for Data Collection

The questionnaire for measuring mental health and academic stress is adopted from Thuraiselvam & Thang, (2015). The study by Thuraiselvam and Thang (2015) was conducted on graduate students of

Malaysian University. So, it is a valid tool to measure the impact of academic stress on students' mental health in a university. Google Form questionnaires were administered. A 5-point Likert scale ranging from 5 (strongly agree) to 1 (strongly disagree) was used to measure the responses. This study adopts the following variables to collect the responses from the respondents.

3.3.1 Academic Stress

Sixteen items are adopted from the academic stress scale of Thuraiselvam & Thang (2015). Sample items of the AS scale are "I have experienced frustrations due to delays in reaching my academic goals", "I feel I was denied of opportunities despite my qualifications", "I have experienced failures in accomplishing the goals that I set". The reliability of the AS scale in this study was 0.874.

3.3.2 Mental health

To measure Mental Health (MH), eight items are adopted from the mental health scale of Thuraiselvam & Thang (2015). The sample items of MH are "I feel sad/depressed due to academic stress", "I do drink more coffee/alcohol/energy drink due to academic stress" "I do smoke more than usual due to academic stress", "I attempted to kill myself due to academic stress". The reliability of MH on this scale is 0.800.

3.4 Reliability of Scales and Validity of Data

The stability and consistency of the instruments are explained by the reliability of the measure, and it aids in evaluating the goodness of a measure (Sekaran, 2000). Cronbach Alpha is used in this study. The value of Cronbach Alpha varies from 0 to 1, but a value of more than 0.6 is required to be reliable (Cronbach, 1951; Malhotra, 2002). In this study (Table 1), Cronbach Alpha of AS and MH are 0.874 and 0.800. Hence, the reliability of this survey instrument is very high. The Dimensions of AS used in this study are Frustration (FRS), Pressure (PRS), Change (CHG), and Self-imposed (SI). The reliability of FRS, PRS, CHG, and SI is 0.756, 0.686, 0.697, and 0.703 which indicate a good reliability of the instruments.

Table 1: Reliability of the Scale

Variables	Cronbach's Alpha	No. of Item
Academic Stress	0.874	16
Frustration	0.756	5
Pressure	0.686	4
Changes	0.697	3
Self-Imposed	0.703	4
Mental Health	0.800	8

4. Results and Discussion

4.1 Demographic Data of Participants

Among 297 respondents, the age varied from 18 to 26 years. The percentage of respondents age - 18-20 years is 3 %, 21-23 years is 70.4 %, and 24 - 26 years is 26.6%. The number of male students is 229 (77.1%), and the number of female students is 68 (22.9%). Married students are 19(6.4%), and single students are 278 (93.6%). The response is collected from the students of 2nd year to 4th year and MBA students of business schools of different private universities. The number of respondents with frequencies are- 2nd year 18(6.06 %), 3rd year 99(33.33%), 4th year 100(33.67%), and MBA 80(26.94%). The academic results also collected as per the university grading system as like as 2.50- 2.75(16.2% of total respondents), 2.76-3.00 (19.1%), 3.01- 3.25 (22.1%), 3.26- 3.50 (21.7%), 3.51- 3.75 (13.2%) and 3.76- 4.00 (7.7%).

4.2 Correlations

Correlations between the variables MH, FRT, PRS, CHG, and SI are presented in Table 2.

Table 2: Correlations

Variables / Components	1	2	3	4	5
1. HP	1.000				
2. FRT	0.557	1.000			
3. PRS	0.444	0.676	1.000		
4. CHG	0.436	0.620	0.606	1.000	
5. SI	0.198	0.475	0.378	0.461	1.000

**Correlation is significant at the 0.01% level: N= 235; MH= Mental Health; FRT= Frustration; PRS= Pressure; CHG= Change; SI= Self-imposed Target

There is a significant positive correlation ($r= 0.557$, $p< 0.01$) between FRT and MH. The correlation between PRS and MH is $r= 0.444$, $p<0.01$, which is positively significant. There is also a significant positive correlation ($r= 0.436$, $p< 0.01$). However, there is a positive significant weak correlation ($r= 0.198$, $p<0.01$) between SI and MH. Thus it shows that all the hypotheses are supported by the results.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			Sig. Change	F	Durbin-Watson
					R Square Change	F Change	df1			
1	0.581 ^a	0.338	0.329	0.66617	0.338	37.287	4	292	0.000	1.774

a. Predictors: (Constant), SI, PRS, CHG, FRT; b. Dependent Variable: MH

Table 3 shows the correlation between independent and dependent variables represented as R is 0.581. The coefficient of determination shows the deviation of variables from the straight, which is 0.338 represented as R Square. According to Hair et al. (2006), the percentage of the total variation of Y is explained by the coefficient of determination value through regression modeling consisting of X. So; it would be anticipated that 33.8 percent of the average mental health of university students is explained by frustration, change, pressure, self-imposed targets related to academic stress. The value of the adjusted R square is 0.329 is less than 0.8, which is significant. The model is significant at $p=0.000$. In this study, the Durbin- Watson value is 1.774 (standard value is 2 or near 2), which indicates that there is no issue of auto-correlation.

4.3 Regression Analysis

Table 4: Summary of Regression Analysis regarding MH (predictor), FRT, PRS, CHG, and SI

		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	1.165	0.200		5.824	0.000
	FRT	0.409	0.063	0.463	6.505	0.000
	PRS	0.078	0.064	0.083	1.215	0.225
	CHG	0.142	0.060	0.157	2.378	0.018
	SI	-0.123	0.055	-0.126	-2.253	0.025

a. Dependent Variable: HP

Table 4 shows the results of the regression analysis of the current study. The findings of the research by using multiple regression analysis are formulated as follows based on regression coefficients:

$$MH= 1.3165+ 0.409 \text{ FRT} + 0.078 \text{ PRS} + 0.142 \text{ CHG} - 0.123 \text{ SI}$$

4.4 Discussion

The findings of the research by using multiple regression analysis are formulated based on regression coefficients:

$$MH= 1.3165+ 0.409 \text{ FRT} + 0.078 \text{ PRS} + 0.142 \text{ CHG} - 0.123 \text{ SI}$$

β_1 , the regression coefficient for the independent variables – Frustration due to academic stress is 40.9 %, t- value is 6.505 smaller than the p-value at a 5% level of significance. It indicates that frustration due to academic stress has a significant impact on mental health problems among university students.

The co-efficient value of the academic pressure variable – β_3 is found to be 7.8 %, which indicates academic pressure influences the mental health of the students by 7.8 %. t-value of the variables is 1.215, which is significant at $p=0.225$. The mental health of students is also affected by academic changes. The co-efficient of β_3 is 14.2%, and t-value is 2.378, which is significant at $p=0.018$. The regression coefficient value of the self-imposed academic target is -0.123 and the t-value is -2.253 , which is significant at $p=0.025$. It indicates that the mental health of university students is negatively influenced by their self-imposed academic targets.

5. Implications

Specific steps that universities can take to improve mental health and decrease the number of students who drop out and the students who do not have good ways to deal with problems or their mental health is not good enough. These include counseling services, help with classwork and special arrangements for the university. Mental health counselors can relate to pupils who suffer from psychological problems and help them manage stress and enhance academic achievement. As the principal environment in which students spend most of their time while they are enrolled in formal education, educational institutions have a responsibility to create mechanisms through which actual and potential mental health issues among young people can be addressed.

5.1 Limitation

The present study has some limitations though there are positive implications for the tertiary level educators. Convenience Sampling techniques restrict the generalizability of findings. Besides that, the whole scenario of university students' mental health may not be represented through collected data from a few private universities of Dhaka and Chattogram. The sample size is also another limitation of the current study. Only 297 responses were collected from the selected private universities, to investigate the further relationships among the variables, a larger sample size is required. Finally, only academic stress is considered to find out the relationship between the mental health problems of university students; there are also many other reasons for hampering the mental health issues of students.

5.2 Limitations and Directions for Future Research

In the current study, the relationship between university students', mental health and academic stress is measured only. Many other important factors may affect the mental health of students, like financial crisis, relationship complexity, socio-economic condition, career anxiety, and coping with an uncomfortable institutional environment. Further research may be conducted on this factor. Besides this, the study may include public universities and private universities of Bangladesh to measure a large sample size analysis.

Authors' Contribution: Rozina Akter and Dhiman Barua developed the idea. Rozina Akter collected the data, wrote the methodology, and performed data analysis. Dhiman Barua wrote the introduction and the literature review part, while Rozina Akter edited and revised the draft.

Conflict of Interest: The authors declare no competing interests.

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