



Original Article

# Relationship between Academic Stress, Coping and Engagement Strategies among Adolescents

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## Abstract

*The purpose of this study was to investigate the relationship between adolescent students' academic stress, coping, and engagement strategies. In order to look at how these characteristics interact; the study narrowed its attention to a particular group. In this cross-sectional study, 200 students were selected based on convenient sampling technique to evaluate gender-based disparities. Questionnaires, consent forms, and demographic sheets were used to gather data. The present study found a correlation between coping and engagement strategies, furthermore a significant relationship between coping and academic stress was also found. The gender based disparities were also found, particularly in several areas of student involvement. These findings illustrate the significant relationship between coping strategies and academic stress, emphasizing the need of stress management for encouraging involvement in academic endeavours for both male and female students. The study's findings explain the role of academic stress on coping and engagement strategies, enabling students to enhance productivity in their academic careers. However, limited generalizability due to a small sample size should be considered. The study's conclusions can help institutions to promote a supportive academic atmosphere by easing student burdens and encouraging the appropriate use of coping mechanisms.*

**Keywords:** Academic stress, Adolescents, Coping mechanisms, Coping strategies

## INTRODUCTION

For a long time, academics have assumed that students were least impacted by stress or difficulties (Reddy, et al., 2018), However, recent student surveys have found a strong association between the student body and academic stress. The growing awareness of how stress affects students' lives must be acknowledged. Contrary to long-held beliefs, recent research contradicts the notion that students are less vulnerable to stress than other groups (Wong & Chapman, 2022). Academic stress is, by definition, when expectations are placed on students that are greater than their capacity for adjustment and coping. This incidence is widespread; research shows that a sizable percentage of students encounter academic stress at some time during their academic careers. The research findings show how academic stress is becoming increasingly recognized as a problem that students frequently face. Ten to thirty percent of students experience this type of stress at some point during their academic careers (Chandra, 2021). Academic stress has repercussions that go beyond the classroom and affect students' general health and well-being. The increased chance of contracting chronic non-communicable diseases is one noticeable effect. The negative impacts of stress on students' levels of physical activity and engagement in healthy behaviours can be used to explain the link between academic stress and these health issues (Pascoe, et al., 2020). The consequences of academic stress can have a significant impact on students' life that makes it imperative to address this problem early.

Numerous studies on the topic of academic stress have shown how seriously it affects students' mental health. According to a significant study, academic stress can have negative impacts that can be particularly severe when it comes to depression and anxiety. Another important discovery strengthened the connection between academic stress and unpleasant feelings and established academic stress as a critical component of psychological growth. Stress is a crucial factor in psychological growth, which must be acknowledged. The body of research indisputably demonstrates the relationship between academic stress, which is now more often known as academic pressure, and unpleasant emotions including anxiety and depression. To create a supportive and healthy academic environment, it is crucial to handle academic stress and its potential consequences (McCarthy, et al., 2018).

Students are battling the difficulties presented by sudden shifts in modern learning environments, which increases tension and stress (Chandra, 2021; Asim, et al., 2015). Recent scholarly research has centred on confirming the DASS-21 questionnaire's effectiveness in assessing students' mental health in the context of the ongoing epidemic and the resulting academic difficulties. The results of the study illuminate the considerable effect of these stresses by showing that students exhibit mild to severe signs of stress and anxiety. An alarming finding from the survey is that 50% of students are suffering from severe depression, highlighting the condition's significant prevalence among the student population (Lan, et al., 2020). Academic stress has been linked to health problems and a drop in IQ, both of which can have a big impact on how well students perform in classrooms. Self-control, self-efficacy, coping mechanisms, personality qualities, and difficulties with mental health are only a few of the inherent elements that students' stress has been attributed to (McCarthy, et al., 2018). It is imperative to address students' engagement skills in order to

mitigate the harmful impacts of academic stress. It is critical to execute a plan for student involvement that is well-balanced. Students' levels of involvement can increase as a result of lessened academic stress, which eventually improves learning outcomes (Böke, et al., 2019).

Student engagement relates to their degree of interest and curiosity, as well as their optimism and joy, when studying or receiving education. It is often assumed that when students are fascinated, engaged, or inspired, their learning will be boosted, but when they are bored, stressed out, dissatisfied, or otherwise "detached," their learning would be adversely affected. A big number of students are affected because of the pandemic situation. Research indicates that Due to a variety of factors, students have been subjected to academic pressure ever since E-learning is said to be hindered by technology, people, families, institutions, and communities, with only 41 percent of students believing they are physically and intellectually capable of participating (Chandra, 2021). The focus of this study is to see the relationship of students' academic engagement and coping strategies which are badly affected because of the pandemic situation.

## **LITERATURE REVIEW**

Academic stress is remained a hot topic in the recent. Academic stress has differential type of negative effects on the mental health of students (Casuso-Holgado, et al., 2019), which also effect the coping and engagement strategies among students. Research was conducted to see the relationship of academic stress and coping stress among the students. The results of this study state a high linkage between academic stress and coping strategies; which indicate that the students who were mentally healthy used problem focused strategies however the students suffering from stress were using avoidance coping strategies (Gustems-Carnicer, et al., 2019). Academic related stress can affect one's performance because of the lack of coping or engagement strategies. A study was conducted to study the relationship of coping and engagement strategies with academic performance. The results of this study indicate that adaptive coping, academic engagement aspects, and academic achievement were all found to be positively associated with each other (Vizoso, et al., 2018). According to research on adolescents, optimism and positive adaptation go hand in hand. Researchers showed that optimism increases teenage happiness by helping them cope with stress and engaging in good actions (Huan, et al., 2006).

A study was conducted in the pandemic era which studied the relationship of stress with coping mechanism in students. 5917 students were examined and the results showed that there is high negative correlation exist between academic stress and un-healthy coping (Böke, et al., 2019). Another research was conducted which studies the relationship of perceived stress, engagement strategies and self-determination among adolescent students. After running Pearson correlation, the result of this study reveals that there is a negative exist between academic stress and engagement strategies, however self-determination was acted as a mediator between these two (Raufelder, et al., 2014). Based on the previous literature, present study is anchored on the conceptualization and theoretical bases from which relevant variables were taken for this novel investigation. The formulation of theoretical foundations developed by the researcher with reference to the highlighted literature and previous empirical findings a theoretical framework of this study has been adopted from the Academic Stress Theory by Phillips, et al., (2020), which states that personal inadequacy, fear of failure, interpersonal difficulties with teachers, teacher-student relationships, and inadequate study facilities were concerns of academic stress.

Nevertheless, a few studies have been conducted in this context but no single study was found with the academic stress that has been conducted based on the premise of present study. Coping and engagement strategies are studied at once to reach conclusion. Therefore, the purpose of conducting this study is to examine that how academic stress is faced by adolescent students and how this academic stress is affecting the coping mechanism of the students. The other purpose is to see how the engagement strategies of students are affected because of their academic success. In addition, the study result can help the institutions to try to minimize the burden on students and let them help to use different coping strategies in a well-mannered way. Keeping in view of the aim of study and the existing literature, the hypotheses of the study are as follow:

- There is a relationship between academic stressors and coping strategies adopted among adolescents
- There is a relationship between academic stressors and student engagement strategies among adolescents.
- There is difference among gender in relationship between academic stressors, student engagement strategies and coping strategies.

## METHODOLOGY

This study's sample included 14–19-year-old adolescent students of both genders. The sample was of 200 students. This study excluded people with disabilities to avoid bias. After obtaining informed consent, the intended group was randomly sampled. A total of 200 adolescents between the ages of 14 and 19 were included in the study's sample via convenience sampling. The data for the study variables was gathered via the use of three questionnaires comprising on Perception of Academic Stress (PAS), Brief Coping Scale (BCS) and Student Engagement Raine (SER). The researcher collected data from various universities and institutions of Rawalpindi and Islamabad, Pakistan. Furthermore participants were informed regarding the research ethics and also assistance was provided in completing their questionnaires. They were told that their answers would be kept confidential and that they could leave at any time if they did not feel comfortable doing so. The data was maintained, evaluated using SPSS software, and findings were concluded by performing the statistical analysis for hypotheses testing via Pearson correlation method and independent samples t-test.

### Instruments

#### *Academic Stress*

Perception of Academic Stress (PAS) Scale was used to measure academic stress. This is a 5-point Likert scale with Cronbach alpha 0.83 with a confidence interval (C.I. =95%) from 0.79 to 0.85 (França & Dias, 2021).

#### *Coping Strategies*

The Brief Coping Scale (BCS) used to measure the coping strategies among adolescents. This scale is based on 28 items and comprises on3 overarching coping styles subscales. Higher scores imply more use of that coping mechanism. The total scores for each scale are computed by adding the elements for each scale (Walke, et al., 2018).

#### *Engagement Strategies*

Student Engagement Raine (SER) was used to measure student's engagement strategies. This scale is consisted of 3 subscales and showed good internal consistencies, .88 for emotional and behavioural, however the internal consistency was .83 for cognitive subscale. The scale showed good test-retest correlation coefficient which was.77 (Doğan, 2014).

## RESULTS & FINDINGS

**Table 1**

Demographic Details of the Sample (N=200)

Characteristics of participant	Frequency(f)	Percentage (%)
Gender		
Male	91	45.5
Female	109	54.5
Age		
14-15	39	19.5
16-17	100	50
18-19	61	30.5
Marital Status		
Married	6	3
Un-Married	194	97
Family System		
Nuclear	130	65
Joint	70	35
Job Status		
Working	13	6.5
Non-working	187	93.5

Descriptive statistics related to the demographic characteristics of the included sample is presented in

Table 1, which is showing higher proportion of female students than male students. Furthermore there were more participants who were not married and were having non-working job status and living in a nuclear family setup.

**Table 2**

Descriptive Statistics of the Subscales of Perceptions of Academic Stress, Student Engagement Strategies and Coping Mechanisms (N=200)

	Items	α	Range		M	SD	Skew
			Min	Max			
Stress related to academic expectations	4	.61	4	19	12.56	2.94	-.17
Stresses related to faulty work and examinations	8	.65	13	35	25.58	4.73	-.29
Stresses related to student's academic self-perceptions	6	.59	9	28	19.22	3.72	-.46
Higher Order Thinking	4	.70	3	12	7.35	2.11	.04
General Learning Outcomes	8	.78	8	40	21.44	5.58	-.58
Career Readiness	5	.79	5	20	10.77	2.93	.39
Overall Satisfaction	3	.68	3	12	8.19	1.99	-.02
Problem Focused Coping	8	.75	8	30	20.87	4.72	-.25
Emotion-Focused Coping	12	.80	15	44	28.79	5.81	-.90
Avoidant Coping	8	.79	9	25	16.63	3.46	.01

Results in Table 2 highlight that the alpha reliabilities of the scales administered in the present study. The reliability of the scales employed was established through Cronbach's alpha values (α), which ranged from .59 to .80. In order to explore the relationship among study variables, a bivariate correlation was done as presented in Table 3.

**Table 3**

Correlation between the subscales of perceptions of academic stress, student engagement strategies and coping mechanisms (N=200)

Variables	1	2	3	4	5	6	7	8	9	10
1 Stress related to academic expectations	1	.41**	.27**	.06	-.03	.09	-.03	.18*	.23**	.16*
2 Stresses related to faulty work and examinations		1	.41**	-.01	-.13	-.05	.01	.06	.11	.09
3 Stresses related to student's academic self-perceptions			1	.12	.05	.09	.23**	.24**	.16*	.05
4 Higher Order Thinking				1	.25**	.22**	.06	.27**	.25**	.09
5 General Learning Outcomes					1	.27**	.15*	.12	.02	.00
6 Career Readiness						1	.07	.16*	.07	.09
7 Overall Satisfaction							1	.12	.12	.07
8 Problem Focused Coping								1	.59**	.17*
9 Emotion-Focused Coping									1	.43**
Avoidant Coping										1

Note: \*p < .05, \*\*p < .01

Results in table 3 demonstrate that stress related to academic expectations is significant positively linked

with stresses related to faulty work and examinations, stresses related to student's academic self-perceptions, problem focused coping, emotion-focused coping, and avoidant coping. Furthermore stresses related to students' academic self-perceptions is linked with overall satisfaction, problem focused coping, and emotion-focused coping. Higher order thinking is found to be linked with general learning outcomes, career readiness, overall satisfaction, problem focused coping, and emotion-focused coping. Also general learning outcomes are linked with career readiness and overall satisfaction of the student. Specifically career readiness is found to be significantly linked with problem focused coping.

**Table 4**

Gender Differences Based on Perceptions of Academic Stress, Student Engagement Strategies and Coping Mechanisms(N=200)

Variables	Male (n=91)		Female (n=109)		t	p	Cohen's d
	M	SD	M	SD			
Stress related to academic expectations	12.59	2.88	12.53	3.01	.47	.65	.02
Stresses related to faulty work and examinations	25.60	4.73	24.56	4.77	.07	.58	.22
Stresses related to student's academic self-perceptions	19.36	3.93	19.11	3.56	.48	.63	.06
Higher Order Thinking	7.47	1.92	7.25	2.27	.73	.47	.11
General Learning Outcomes	20.68	6.17	22.08	4.98	.08	.05	.25
Career Readiness	10.86	2.76	9.11	3.07	.65	.03	.60
Overall Satisfaction	8.29	1.96	8.09	2.01	.47	.46	.11
Problem Focused Coping	21.57	4.69	19.29	4.70	1.92	.05	.48
Emotion-Focused Coping	28.74	5.64	30.83	5.97	-.11	.04	.36
Avoidant Coping	16.39	3.47	18.83	3.46	-.89	.02	.70

Table 4 is presenting the difference among male and female students. According to the findings female students are more oriented towards the general learning outcomes also female students are more inclined towards adopting emotion-focused coping and avoidant coping strategies. However male students are found to be more focused on problem based coping strategies than female students.

## Discussion

This study aims at studying the relationship between academic stress, coping and engagement strategies among adolescent students having age range of 14-19-year. The sample size of this research was 200 students. The data was collected using a set of instruments including a demographic sheet, Subscales of Academic Stress Perception (PAS), Subscales of Student Engagement Raine (SER), and subscales of Brief Coping Scale (BCS). Cronbach's alpha values ( $\alpha$ ), of all the subscales ranged from  $\alpha=.59$  to  $\alpha=.80$  (Table 2).

The 1<sup>st</sup> hypothesis was based on the relationship between coping strategies and academic stress. This claim is supported by the results of the investigation, which revealed a highly significant correlation between Student engagement coping strategies and academic stress (Table 3). Prior literature on unpleasant emotions, cognition, behaviour, and physiological processes might occur from a person's attempt to cope with or adjust to a pressure source, according to a previous study (Huan, et al., 2006). The act of interfering with, threatening to interfere with, or harming another person's normal activities (Yumba, 2008). It has been shown that low-level academic stress may also have a good effect on us by motivating us to complete assignments and work harder so that we can get better results in our coursework (Huan, et al., 2006).

The 2<sup>nd</sup> hypothesis was about the relationship between academic stress and engagement strategies among adolescents (Table 3). This hypothesis is accepted as a result of running Pearson correlation analysis, the results showed that there is good and a moderate level of significant exist in academic stress and coping strategies. Another research was conducted which studies the relationship of perceived stress, engagement

strategies and self-determination among adolescent students. After running Pearson correlation, the result of this study reveals that there is a negative exist between academic stress and engagement strategies, however self-determination was acted as a mediator between these two (Raufelder, et al., 2014).

The other hypothesis of this research was about to study the gender differences in the study variables. As a result of running independent sample t-test on gender, this hypothesis is partially accepted, as there were small differences of gender in some subscales, however on the other hand according to the findings female students are more oriented towards the general learning outcomes also female students are more inclined towards adopting emotion-focused coping and avoidant coping strategies (Table 4). However male students are found to be more focused on problem based coping strategies than female students.

Research studies conducted in the past gave the same results. Research was conducted among university students in the epidemic situation, which study the relationship of academic stress and academic satisfaction and mental health impairment. The results of the prior studies also indicate that the level of academic stress is significantly different among gender; it is higher in female which is affecting their mental health as compare to men (Rubach, et al., 2022).

Another research was done to investigate the differences of gender in coping strategies and stressors in university students. The results demonstrated that students employ a variety of coping mechanisms, including prayer, meditation, and self-distracting hobbies. Although girls reported feeling more stress overall than males did when it came to health and academic pressures, however the gender gap was small. When compared to men, females also perceived stress from psychosocial stressors as being higher. It also showed up that the females were seen to use avoidant coping strategies while males were perceived to use problem focused strategies (Adasi, et al., 2020).

## CONCLUSION

The aim of this research was to study the association between academic stress, coping strategies, and student engagement among adolescents. The findings of this study demonstrated that all the hypotheses are accepted which showed up that there is strong and significant relationship exists between academic stress, coping and engagement strategies. As a result of running independent sample t-test on gender, this hypothesis is partially accepted, as there were small differences of gender exist but there were only few subscales of student engagement which showed significant difference.

### Implications

- This research filled up a building block in the literature.
- The results of the study can help students to see that how academic stress can affect their coping and engagement strategies.
- The results can also help students to increase the productivity in their academic career.

### Limitation and Future Suggestions

- This research has a small sample size which limits the generalizability of the results.
- Qualitative research can be conducted in future to get in more depth results.
- This research uses self-reported measures, in future interview and observational methods can be used for a detail analysis.

### Competing Interest

The author had no competing interests.

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