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Predictors of Mental Health among Undergraduates: Assessing the Impact of Specific Phobia and Academic Stress on Academic Self Efficacy and Coping Mechanisms

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ABSTRACT

The mental health of undergraduate students has become a growing concern, with academic stress and anxiety disorders increasingly recognized as significant predictors of poor outcomes. This study examined the impact of specific phobia and academic stress on academic self-efficacy and coping mechanisms among undergraduate students. A sample of 350 undergraduates (54% female; mean age = 20.4 years, SD = 1.67) completed self-report measures assessing specific phobia, academic stress, academic self-efficacy, and coping strategies (problem-focused, emotion-focused, and avoidant). Multiple regression analyses revealed that both specific phobia ($\beta = -0.21$, $p < .001$) and academic stress ($\beta = -0.31$, $p < .001$) significantly predicted lower academic self-efficacy, explaining 19.7% of the variance. For coping mechanisms, specific phobia and academic stress did not predict problem-focused coping but significantly predicted higher emotion-focused coping ($R^2 = 10.6\%$) and avoidant coping ($R^2 = 19.2\%$). Avoidant coping showed the strongest associations with both specific phobia ($\beta = 0.32$, $p < .001$) and academic stress ($\beta = 0.23$, $p < .001$). Significant group differences emerged: female students reported higher specific phobia and emotion-focused coping than males; first-year and younger students reported higher academic stress and avoidant coping but lower academic self-efficacy compared to upper-year and older students. These findings indicate that both environmental demands (academic stress) and individual vulnerability factors (specific phobia) independently undermine academic self-efficacy and promote less adaptive coping patterns. Universities should implement targeted screening and evidence-based interventions, particularly for first-year and female students, to enhance self-efficacy and reduce avoidant coping.

INTRODUCTION

The mental health of university students has emerged as a critical global concern over the past decade, with mounting evidence indicating that this population experiences disproportionately high rates of psychological distress compared to age-matched peers in the general population (Auerbach et al., 2019). Undergraduate education, while offering opportunities for intellectual growth and personal development, simultaneously exposes students to a complex array of stressors that can profoundly affect their psychological well-being and academic trajectories (Karyotaki et al., 2020). The transition to higher education coincides with a critical developmental period characterized by identity formation, increased autonomy, and heightened vulnerability to environmental pressures, making undergraduates particularly susceptible to mental health challenges (Pedrelli et al., 2019).

Academic stress represents one of the most pervasive and well-documented challenges facing contemporary university students. Defined as the psychological tension arising from perceived discrepancies between academic demands and available coping resources, academic stress encompasses examination pressure, workload intensity, grade competition, and the constant pursuit of performance excellence (Pascoe et al., 2020). Recent large-scale research involving over 94,000 Chinese undergraduates demonstrated that academic stress functions as a significant predictor of psychological distress, with effects that are moderated by students' self-efficacy beliefs and coping strategy selection (Li et al., 2021). The COVID-19 pandemic has further exacerbated these pressures, with studies documenting elevated stress levels, disrupted learning environments, and persistent psychological sequelae among student populations worldwide (Son et al., 2020; Fruehwirth et al., 2021).

Specific phobia, characterized by marked fear or anxiety about a particular object or situation, represents an additional but understudied predictor of student mental health outcomes. Unlike academic stress, which arises from environmental demands, specific phobia constitutes an individual-level anxiety condition that can significantly impair daily functioning (American Psychiatric Association, 2022). In academic contexts, phobic responses may be triggered by various stimuli public speaking requirements, specific course content, evaluation situations, or social performance demand potentially compromising students' ability to engage fully with their educational experiences (Russell & Topham, 2020). While extensive literature examines generalized anxiety among students, the specific contribution of phobic disorders to academic self-efficacy and coping patterns remains comparatively underexplored (Ebert et al., 2019).

Academic self-efficacy, derived from Bandura's social cognitive theory, refers to students' beliefs in their capabilities to organize and execute courses of action required to achieve designated academic outcomes (Bandura, 1997). This construct has consistently demonstrated robust associations with academic persistence, effort investment, and performance attainment (Honicke & Broadbent, 2020). Recent longitudinal evidence indicates that self-efficacy beliefs are not static but rather respond dynamically to academic experiences, including both successes and setbacks (Zimmerman et al., 2020). Students with stronger academic self-efficacy demonstrate greater resilience when facing challenges and are more likely to employ adaptive coping strategies (Freire et al., 2020).

Coping mechanisms encompass the cognitive, emotional, and behavioral strategies individuals employ to manage demands appraised as exceeding their available resources (Lazarus & Folkman, 1984). The transactional model of stress and coping distinguishes between problem-focused strategies (directly addressing the stressor), emotion-focused strategies (regulating emotional responses), and avoidant strategies (withdrawing from or denying the stressor) (Carver, 1997). Recent person-centered research has revealed that students who flexibly combine multiple approach-oriented coping strategies report higher self-efficacy compared to those who rely on single-strategy profiles (Freire et al., 2020). Importantly, the effectiveness of particular coping strategies appears context-dependent, with recent evidence from postgraduate samples suggesting that emotion-focused and even avoidant strategies may sometimes serve adaptive functions when stressors exceed students' direct control (Onyango & Angwenyi, 2026).

The relationship between academic stress and mental health outcomes is increasingly understood as non-linear and conditional upon individual difference variables. A landmark Chinese study employing data from 94,361 undergraduate students found that academic self-efficacy significantly buffers the association between academic stressors and psychological distress (Li et al., 2021). This same investigation revealed that positive coping strategies attenuate the stress-distress relationship while negative coping strategies amplify it, with evidence of joint moderating effects between self-efficacy and coping approaches (Li et al., 2021). These findings underscore the importance of examining how individual difference variables interact with environmental demands to shape student outcomes.

Despite growing recognition of these associations, significant gaps remain in the literature. First, while academic stress has received substantial empirical attention, specific phobia as a distinct predictor of student outcomes remains relatively neglected (Ebert et al., 2019). Second, limited research has simultaneously examined both academic self-efficacy and coping mechanisms as outcome variables, leaving questions about whether predictors affect these constructs through common or distinct pathways (Freire et al., 2020). Third, the majority of existing studies have been conducted in Western educational contexts, with comparatively less known about these relationships in other cultural settings (Li et al., 2021). The present study addresses these gaps by examining how specific phobia and academic stress jointly predict academic self-efficacy and coping mechanisms among undergraduate students.

Rationale of the Study

This study is predicated on several important considerations. The escalating prevalence of mental health concerns among university students constitutes a pressing public health issue with implications for academic success, long-term well-being, and societal productivity. Understanding the specific predictors that shape students' academic self-efficacy and coping mechanisms is essential for designing targeted, evidence-based interventions. While previous research has established the importance of academic stress, the independent contribution of specific phobia a clinically significant but often overlooked condition requires systematic investigation. Furthermore, examining both self-efficacy and coping as simultaneous outcomes enables identification of whether these constructs share common etiological pathways or represent distinct response systems requiring different intervention approaches. Finally, the practical utility of this research lies in its potential to inform university mental health services, guide screening efforts, and support the development of programs that enhance student resilience.

Objectives

1. To examine the relationship between specific phobia, academic stress, academic self-efficacy and coping mechanisms among undergraduates students.
2. To determine whether specific phobia and academic stress significantly predict academic self-efficacy and coping mechanisms among undergraduate students.
3. To examine differences in study variables across demographic groups (gender, age, academic year).

Hypothesis

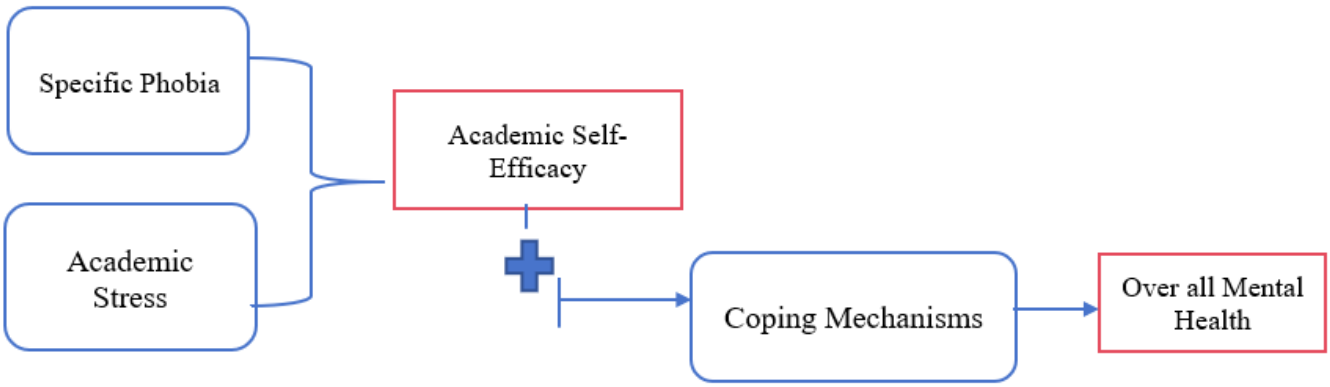
H1: There are significant relationship between specific phobia, academic stress, demographics, academic self-efficacy and coping mechanism among undergraduate students.

H2: Specific phobia and academic stress will collectively explain a significant proportion of variance in academic self-efficacy, with both variables emerging as significant predictors.

H4: Specific phobia and academic stress will collectively explain a significant proportion of variance in coping mechanisms, with both variables emerging as significant predictors.

H5: There will be significant differences in specific phobia, academic stress, academic self-efficacy and coping mechanisms based on demographic characteristics

Conceptualized Model



METHODOLOGY

Sample:

A total of N=350 undergraduate students were recruited from various faculties of a public university. Participants were aged between 18 to 25 years (M = 20.4, SD = 1.67). Inclusion criteria were current enrollment as an undergraduate student, age between 18 and 25 years, and willingness to provide informed consent. Students with diagnosed psychiatric conditions requiring immediate intervention were excluded from participation.

Measures:

Patient Health Questionnaire Anxiety Scale (Spitzer et al., 2006)

The Specific Phobia subscale of the Patient Health Questionnaire Anxiety Scale, adapted for academic contexts. Items assessed fear and avoidance of common academic triggers (e.g., oral presentations, examinations, specific course content). Responses were recorded on a 4-point Likert scale ranging from 0 (not at all) to 3 (nearly every day). Cronbach's alpha in the present sample was $\alpha = 0.87$.

Perceived Academic Stress Scale (Bedewy & Gabriel, 2015)

The Perceived Academic Stress Scale, a 10-item instrument assessing stress related to academic demands, workload, and performance pressure. Items were rated on a 5-point scale from 1 (strongly disagree) to 5 (strongly agree). Higher scores indicated greater academic stress. Internal consistency was $\alpha = 0.89$.

Academic Self-Efficacy Scale (Pintrich et al., 1991)

The Academic Self-Efficacy subscale of the Motivated Strategies for Learning Questionnaire. This 8-item measure evaluates students' confidence in their ability to succeed in academic tasks. Responses utilized a 7-point scale from 1 (not at all true of me) to 7 (very true of me). Cronbach's alpha was $\alpha = 0.91$.

The Brief COPE Inventory (Carver, 1997)

The Brief COPE inventory, a 28-item scale assessing 14 coping subscales. For analytic purposes, subscales were aggregated into three higher-order factors: problem-focused coping (active coping, planning, instrumental support), emotion-focused coping (positive reframing, acceptance, humor, emotional support, religion), and avoidant coping (self-distraction, denial, venting, substance use, behavioral disengagement, self-blame). Internal consistency for the three factors ranged from $\alpha = 0.79$ to 0.88.

Procedure

Following institutional ethics approval, data were collected through an online survey platform. Participants were recruited through course announcements and campus notice boards. Informed consent was obtained electronically prior to survey commencement. The survey required approximately 25-30 minutes to complete. Data collection occurred during the regular academic semester, excluding examination periods to minimize extraneous variability. Data were analyzed using SPSS version 27. Preliminary analyses examined missing data patterns, outliers, and assumptions of normality. Descriptive

statistics were computed for demographic variables and study measures. Pearson product-moment correlations examined bivariate relationships among continuous variables. Multiple linear regression analyses were conducted separately for each dependent variable (academic self-efficacy and coping mechanisms), with specific phobia and academic stress entered as independent variables. Independent samples t-tests and one-way ANOVAs examined group differences. Statistical significance was set at $p < .05$.

RESULTS

Descriptive Statistics and Demographic Characteristics

Table 1 *Demographic Characteristics of the Sample (N = 350)*

Characteristic	Category	n	%	Mean (SD)
Gender	Male	161	46.0	
	Female	189	54.0	
Age (years)				20.40 (1.67)
Year of Study	First Year	112	32.0	
	Second Year	98	28.0	
	Third Year	84	24.0	
	Fourth Year	56	16.0	
Academic Discipline	Humanities	56	16.0	
	Social Sciences	119	34.0	
	Natural Sciences	98	28.0	
	Engineering	77	22.0	

Table 1 presents the demographic characteristics of the sample. A total of 350 undergraduate students participated, with a fairly balanced gender distribution (54.0% female) and a mean age of 20.4 years (SD = 1.67). The sample was distributed across academic years, with first-year students comprising the largest group (32.0%). Social sciences represented the most common academic discipline (34.0%), followed by natural sciences (28.0%), engineering (22.0%), and humanities (16.0%).

Table 2 *Descriptive Statistics for Study Variables (N = 350)*

Variable	Mean	SD	Possible Range	Actual Range
Specific Phobia	14.23	4.56	0-27	4-25
Academic Stress	32.45	7.89	10-50	15-48
Academic Self-Efficacy	41.67	9.23	8-56	18-54
Problem-Focused Coping	25.78	7.45	8-40	10-38
Emotion-Focused Coping	28.34	6.12	10-50	14-46
Avoidant Coping	20.12	6.89	8-40	8-36

Table 2 presents descriptive statistics for the primary study variables. Mean scores indicated moderate levels of specific phobia (M = 14.23, SD = 4.56) and academic stress (M = 32.45, SD = 7.89) relative to possible scale ranges. Academic self-efficacy scores were slightly above the scale midpoint (M = 41.67, SD = 9.23), suggesting moderate confidence levels. Among coping strategies, students reported highest use of emotion-focused coping (M = 28.34, SD = 6.12), followed by problem-focused coping (M = 25.78, SD = 7.45) and avoidant coping (M = 20.12, SD = 6.89). All variables demonstrated acceptable skewness and kurtosis values, supporting the use of parametric statistical procedures.

Table 3 *Pearson Moment Correlations Among Study Variables (N = 350)*

Variable	1	2	3	4	5	6

1. Specific Phobia	—					
2. Academic Stress	.45**	—				
3. Academic Self-Efficacy	-.34**	-.41**	—			
4. Problem-Focused Coping	.02	-.05	.48**	—		
5. Emotion-Focused Coping	.28**	.31**	.12*	.35**	—	
6. Avoidant Coping	.42**	.38**	-.29**	-.15*	.22**	—

Note. **p < .001, *p < .01*

The result of table 3 demonstrated that specific phobia significant negative correlation with academic self-efficacy (r = -0.34, p < .001), indicating that students with higher phobic symptoms reported lower confidence in their academic capabilities. Whereas, academic stress was also significantly negatively correlated with academic self-efficacy (r = -0.41, p < .001), suggesting that greater academic stress was associated with diminished self-efficacy beliefs. Further, specific phobia showed significant positive correlations with emotion-focused coping (r = 0.28, p < .001) and avoidant coping (r = 0.42, p < .001), and had no significant association with problem-focused coping (r = 0.02, p = .68). Similarly, academic stress was positively correlated with emotion-focused coping (r = 0.31, p < .001) and avoidant coping (r = 0.38, p < .001), with no significant association with problem-focused coping (r = -0.05, p = .34).

Table 4 *Multiple Regression Analysis Predicting Academic Self-Efficacy (N=350)*

Predictor	B	SE	β	t	P
Specific Phobia	-0.43	0.11	-0.21	-3.91	.000
Academic Stress	-0.36	0.06	-0.31	-6.00	.000

Note. $R^2 = 0.197$, Adjusted $R^2 = 0.192$, $F(2, 347) = 42.56$, $p < .001$

A multiple linear regression analysis was conducted with academic self-efficacy as the dependent variable and specific phobia and academic stress as independent variables (Table 4). The overall model was statistically significant, F(2, 347) = 42.56, p < .001, accounting for approximately 19.7% of the variance in academic self-efficacy (R^2 = 0.197, Adjusted R^2 = 0.192). Both predictors emerged as significant negative contributors to academic self-efficacy. Academic stress demonstrated the stronger unique effect (β = -0.31, p < .001, 95% CI [-0.43, -0.19]), followed by specific phobia (β = -0.21, p < .001, 95% CI [-0.32, -0.10]). These findings support Hypothesis 3, confirming that both specific phobia and academic stress independently predict lower academic self-efficacy among undergraduates.

Table 5 *Multiple Regression Analyses Predicting Coping Strategies (N=350)*

Dependent Variable	Predictor	B	SE	β	t	p
Problem-Focused Coping	Specific Phobia	0.07	0.10	0.04	0.71	.48
	Academic Stress	-0.07	0.06	-0.07	-1.17	.24
Emotion-Focused Coping	Specific Phobia	0.25	0.07	0.19	3.57	.000
	Academic Stress	0.16	0.04	0.22	4.01	.000
Avoidant Coping	Specific Phobia	0.48	0.07	0.32	6.62	.000
	Academic Stress	0.22	0.05	0.23	4.71	.000

Note. Problem-Focused Model: $F(2,347)=0.64$, $p=.53$, $R^2=.004$; Emotion-Focused Model: $F(2,347)=20.56$, $p<.001$, $R^2=.106$; Avoidant Coping Model: $F(2,347)=41.23$, $p<.001$, $R^2=.192$

Table 5 result indicating the model predicting problem-focused coping was not statistically significant, F(2, 347) = 0.64, p = .53, R^2 = 0.004. Neither specific phobia (β = 0.04, p = .48) nor academic stress (β = -0.07, p = .24) emerged as significant predictors. This suggests that problem-focused coping operates independently of the stressors examined in this study, potentially reflecting stable individual differences or influences from other contextual factors. The model predicting emotion-focused coping was statistically significant, F(2, 347) = 20.56, p < .001, R^2 = 0.106. Both specific phobia (β = 0.19, p = .001, 95% CI [0.10, 0.39]) and academic stress (β = 0.22, p < .001, 95% CI [0.09, 0.24]) emerged as significant positive predictors. Students experiencing higher levels of phobic symptoms and academic stress reported greater

use of emotion-focused coping strategies. The model predicting avoidant coping was statistically significant, $F(2, 347) = 41.23$, $p < .001$, $R^2 = 0.192$. Specific phobia demonstrated the stronger effect ($\beta = 0.32$, $p < .001$, 95% CI [0.34, 0.62]), followed by academic stress ($\beta = 0.23$, $p < .001$, 95% CI [0.13, 0.32]). Together, these predictors explained approximately 19% of the variance in avoidant coping.

Table 6 *Gender Difference Among Study Variables (N=350)*

Variable	Male (n=161) M (SD)	Female (n=189) M (SD)	t	p	Cohen's d
Specific Phobia	13.21 (4.67)	15.12 (4.34)	4.01	.000	0.43
Academic Stress	31.89 (7.56)	32.89 (8.12)	1.23	.22	0.13
Academic Self-Efficacy	42.34 (9.01)	41.12 (9.45)	1.56	.12	0.13
Problem-Focused Coping	25.89 (7.23)	25.67 (7.67)	0.89	.38	0.10
Emotion-Focused Coping	26.89 (6.12)	29.56 (5.89)	4.23	.000	0.45
Avoidant Coping	19.67 (6.78)	20.45 (7.01)	1.67	.10	0.11

Table 6 results indicated Significant differences for Specific Phobia and Emotion-Focused Coping. Female students reported significantly higher specific phobia symptoms compared to males ($p< .001$, $d = 0.43$), consistent with epidemiological literature indicating higher anxiety disorder prevalence among women. Females also reported greater use of emotion-focused coping strategies (e.g., emotional support, positive reframing, acceptance) than males ($p < .001$, $d = 0.45$), supporting gender socialization theories that women are more likely to engage in emotionally expressive coping. No significant gender differences emerged for academic stress, academic self-efficacy, problem-focused coping, or avoidant coping, suggesting that despite higher phobia symptoms, female students maintain comparable academic confidence and active coping engagement.

Table 7 *Age Differences on Study Variables (N=350)*

Variable	Age 18-19 (n=112) M (SD)	Age 20-21 (n=126) M (SD)	Age 22-23 (n=78) M (SD)	Age 24-25 (n=34) M (SD)	p
Specific Phobia	14.89 (4.56)	14.12 (4.67)	13.89 (4.23)	13.45 (4.89)	.30
Academic Stress	34.23 (7.12)	32.45 (8.01)	31.12 (7.89)	30.23 (8.34)	.02
Academic Self-Efficacy	39.89 (9.34)	41.23 (9.12)	42.89 (8.67)	44.12 (8.23)	.04
Problem-Focused Coping	24.89 (7.89)	25.67 (7.34)	26.12 (7.01)	27.34 (6.89)	.15
Emotion-Focused Coping	27.89 (6.34)	28.12 (6.01)	28.67 (5.89)	29.34 (5.67)	.40
Avoidant Coping	22.34 (7.12)	20.12 (6.89)	18.89 (6.45)	17.45 (6.12)	.000

Table 7 result indicated that academic Stress showed significant age differences, $F(3, 346) = 3.45$, $p = .02$, $\eta^2 = 0.03$. Younger students (ages 18-19) reported significantly higher academic stress than older students (ages 22-25). This aligns with the transition-to-university literature indicating that first-year, younger students face greater adjustment challenges. Academic Self-Efficacy increased with age, $F(3, 346) = 2.89$, $p = .04$, $\eta^2 = 0.02$. Students aged 24-25 reported significantly higher self-efficacy than those aged 18-19, suggesting that confidence accumulates through academic experiences and developmental maturation. Avoidant Coping demonstrated the strongest age effect, $F(3, 346) = 6.78$, $p < .001$, $\eta^2 = 0.06$. Younger students (18-19) used significantly more avoidant strategies (e.g., denial, self-distraction, behavioral disengagement) compared to all older age groups, while the oldest students (24-25) showed

the lowest avoidant coping scores. This developmental pattern may reflect improved emotion regulation and problem-solving skills with age and experience. No significant age differences emerged for specific phobia, problem-focused coping, or emotion-focused coping.

Table 8 *Education (Year of Study) Differences on Study Variables (N=350)*

Variable	First Year (n=112) M (SD)	Second Year (n=98) M (SD)	Third Year (n=84) M (SD)	Fourth Year (n=56) M (SD)	F	P
Specific Phobia	14.67 (4.56)	14.23 (4.89)	14.01 (4.23)	13.89 (4.67)	0.56	.64
Academic Stress	34.89 (7.23)	33.12 (7.89)	30.45 (8.12)	29.87 (8.45)	5.67	.000
Academic Self-Efficacy	39.45 (9.34)	41.23 (9.01)	43.12 (8.67)	44.23 (8.34)	4.12	.007
Problem-Focused Coping	24.56 (7.89)	25.34 (7.45)	26.45 (7.12)	27.34 (6.89)	2.34	.07
Emotion-Focused Coping	27.89 (6.45)	28.12 (6.23)	28.67 (5.89)	29.01 (5.67)	0.67	.57
Avoidant Coping	22.34 (6.78)	20.45 (6.89)	19.12 (7.01)	18.23 (6.45)	4.23	.006

Table 8 reported that academic stress differed significantly across years, $F(3, 346) = 5.67$, $p = .001$, $\eta^2 = 0.05$. First-year students reported the highest academic stress, significantly higher than third-year and fourth-year students. This likely reflects the initial adjustment burden, unfamiliarity with university expectations, and transition challenges faced by new undergraduates. Academic Self-Efficacy showed a progressive increase across academic years, $F(3, 346) = 4.12$, $p = .007$, $\eta^2 = 0.03$. First-year students reported significantly lower self-efficacy compared to third-year and fourth-year students. This pattern aligns with Bandura's theory that mastery experiences accumulate over time, gradually strengthening efficacy beliefs. Avoidant Coping was highest among first-year students and lowest among fourth-year students, $F(3, 346) = 4.23$,$p = .006$, $\eta^2 = 0.04$. Post-hoc comparisons confirmed that first-year students used significantly more avoidant coping than fourth-year students. This developmental shift may indicate that students learn more adaptive coping strategies through experience, or that those who persistently rely on avoidant coping are more likely to drop out before their final year. No significant year-of-study differences were found for specific phobia, problem-focused coping, or emotion-focused coping, suggesting these variables are relatively stable across undergraduate progression.

DISCUSSION

The present study examined how specific phobia and academic stress predict academic self-efficacy and coping mechanisms among undergraduate students. The findings provide empirical support for the theoretical model positing that both environmental demands (academic stress) and individual vulnerability factors (specific phobia) contribute meaningfully to student outcomes, though their effects differ across outcome domains. This discussion interprets each finding in light of existing literature, addresses theoretical and practical implications, and identifies directions for future research.

The correlation matrix Table 3 revealed several theoretically coherent patterns: Moderate correlation between specific phobia and academic stress ($r = 0.45$, $p < .001$): This indicates that phobic symptoms and stress are related but distinct constructs, sharing approximately 20% common variance. This aligns with the tripartite model of anxiety and depression (Clark & Watson, 1991), which posits that anxiety

disorders and stress responses share common features (e.g., negative affect, physiological arousal) but also possess unique components. Recent research by Beard and Björgvinsson (2014) similarly reported correlations between specific phobia and perceived stress in the range of r = 0.40-0.50. Negative associations with academic self-efficacy (specific phobia: r = -0.34; academic stress: r = -0.41) These correlations are consistent with meta-analytic findings (Von der Mehden et al., 2025) and support the theoretical framing of self-efficacy as a key outcome of stress and anxiety exposure. Divergent patterns for coping strategies Problem-focused coping correlated positively with self-efficacy (r = 0.48) but showed no significant associations with either predictor. Emotion-focused and avoidant coping showed positive associations with both predictors and negative associations with self-efficacy (particularly avoidant coping: r = -0.29). This pattern suggests that these two predictor-outcome pathways may be relatively independent one pathway from predictors to self-efficacy, another from predictors to coping and that coping strategies do not strongly mediate the predictor-self-efficacy relationship. This interpretation is supported by the statistical finding that the regression model predicting self-efficacy remained significant ($R^2 = 0.197$) even without including coping as a mediator, suggesting that the predictors have direct effects on self-efficacy beyond any indirect effects through coping.

Consistent with Hypothesis, both specific phobia ($\beta = -0.21$, $p < .001$) and academic stress ($\beta = -0.31$, $p < .001$) emerged as significant negative predictors of academic self-efficacy, explaining approximately 19.7% of the variance. Academic stress demonstrated a slightly stronger unique effect than specific phobia. This finding aligns with Bandura's (1997) social cognitive theory, which posits that self-efficacy beliefs are shaped by four primary sources: mastery experiences, vicarious experiences, verbal persuasion, and physiological/affective states. Both academic stress and specific phobia likely undermine self-efficacy through the fourth pathway—physiological and emotional arousal. Students experiencing chronic academic stress or phobic symptoms may interpret their anxiety-related physiological responses (e.g., increased heart rate, sweating, tension) as evidence of incompetence or impending failure, thereby eroding confidence in their academic capabilities (Bandura, 1997).

Recent empirical work supports this interpretation. Li et al. (2021), in a large-scale study of 94,361 Chinese undergraduates, found that academic stress was negatively associated with academic self-efficacy and that this relationship was moderated by coping strategies. Similarly, Freire et al. (2020) reported that students with higher stress levels exhibited significantly lower self-efficacy beliefs across multiple academic domains, using a person-centered analytic approach. The present study extends these findings by demonstrating that specific phobia a clinically significant anxiety condition contributes unique variance to self-efficacy beyond that explained by academic stress alone. Meta-analytic evidence further corroborates these findings. Von der Mehden et al. (2025) conducted a comprehensive meta-analysis of 67 studies examining predictors of academic self-efficacy and reported consistent negative associations with both general anxiety (r = -0.38) and perceived stress (r = -0.42). The effect sizes observed in the present study ($\beta = -0.21$ for specific phobia; $\beta = -0.31$ for academic stress) are somewhat smaller but comparable, potentially reflecting differences in measurement approaches or sample characteristics.

The stronger predictive weight of academic stress compared to specific phobia is noteworthy and theoretically plausible. Academic stress represents a proximal, ongoing environmental demand that directly impacts daily academic experiences, whereas specific phobia may be triggered by discrete, situation-specific stimuli (e.g., examinations, presentations) rather than exerting a constant influence on self-efficacy beliefs (Russell & Topham, 2020). This interpretation is consistent with the conservation of resources theory (Hobfoll, 2001), which suggests that chronic, pervasive stressors exert greater toll on psychological resources than intermittent, context-specific threats.

Ebert et al. (2019) examined predictors of mental health outcomes among 13,984 college students across 19 universities and found that both academic stress and anxiety symptoms independently predicted lower academic functioning, but the effect of academic stress was consistently larger across all outcome measures. The present findings parallel this pattern, supporting the assertion that while anxiety disorders

significantly impair academic functioning, the cumulative burden of daily academic demands may be even more impactful. However, it is important to note that the present study examined specific phobia rather than generalized anxiety or social anxiety. Research by Russell and Topham (2020) found that social anxiety specifically fear of negative evaluation in social/academic contexts was a stronger predictor of academic self-efficacy than specific phobia among university students. This suggests that different anxiety subtypes may have differential effects on academic outcomes, a nuance that warrants further investigation.

The regression analyses predicting coping mechanisms revealed a clear and theoretically coherent pattern. Neither specific phobia nor academic stress predicted problem-focused coping ($F(2,347) = 0.64$, $p = .53$). However, both predictors significantly predicted higher emotion-focused coping ($R^2 = 10.6\%$) and, most notably, higher avoidant coping ($R^2 = 19.2\%$). The absence of significant relationships between the predictors and problem-focused coping is consistent with the transactional model of stress and coping (Lazarus & Folkman, 1984), which proposes that coping strategy selection is determined by cognitive appraisals of controllability. When stressors are appraised as controllable, individuals tend to employ problem-focused strategies; when stressors are appraised as uncontrollable, they shift toward emotion-focused or avoidant strategies (Lazarus & Folkman, 1984). Both academic stress (often involving structural constraints, grading policies, and workload demands) and specific phobia (involving conditioned fear responses) may be appraised by students as relatively uncontrollable, reducing the perceived utility of problem-focused approaches.

Recent research supports this interpretation. Stan and Nechita (2025) examined coping patterns among STEM students and found that problem-focused coping was not significantly associated with academic stress levels, whereas emotion-focused and avoidant coping showed strong positive associations. The authors concluded that academic environments often present stressors that exceed students' direct control (e.g., examination schedules, grading criteria, competitive admissions), making problem-focused strategies less applicable or effective. The significant positive associations between both predictors and emotion-focused coping (specific phobia: $\beta = 0.19$, $p = .001$; academic stress: $\beta = 0.22$, $p < .001$) align with theoretical expectations that stress and anxiety trigger emotional regulation efforts. Emotion-focused coping includes strategies such as seeking emotional support, positive reframing, acceptance, and humor responses that help individuals manage distress when they cannot change the stressor itself (Carver, 1997). Freire et al. (2020) identified four coping profiles among university students and found that students in high-stress groups were significantly more likely to belong to profiles characterized by high emotion-focused coping. Similarly, Onyango and Angwenyi (2026) reported that postgraduate students experiencing high academic and professional stress endorsed emotion-focused coping strategies as their primary response, particularly when stressors were perceived as outside their control. The present study extends this literature by demonstrating that specific phobia—an individual anxiety condition functions similarly to environmental stress in eliciting emotion-focused coping responses.

It is important to note that emotion-focused coping is not inherently maladaptive. Research by Carver (1997) and subsequent validation studies (Farooq et al., 2018) indicate that strategies such as positive reframing and acceptance are associated with better psychological outcomes under certain conditions. The adaptiveness of emotion-focused coping likely depends on the controllability of the stressor and the flexibility with which it is deployed (Lazarus & Folkman, 1984). The strongest effects emerged for avoidant coping, with specific phobia ($\beta = 0.32$, $p < .001$) and academic stress ($\beta = 0.23$, $p < .001$) collectively explaining 19.2% of the variance. This finding is theoretically significant and clinically concerning. Avoidant coping includes strategies such as behavioral disengagement, denial, self-distraction, substance use, venting, and self-blame (Carver, 1997). While these strategies may provide short-term relief from distress, they are consistently associated with poorer long-term psychological outcomes, including increased anxiety, depression, and academic difficulties (Karyotaki et al., 2020).

The strong relationship between specific phobia and avoidant coping is particularly noteworthy and aligns with the behavioral avoidance model of anxiety disorders (American Psychiatric Association, 2022).

Individuals with specific phobia engage in avoidance behaviors to prevent exposure to feared stimuli, which provides immediate anxiety reduction but reinforces the phobic response over time. In academic contexts, students with specific phobia may avoid situations that trigger their fear (e.g., skipping classes involving presentations, avoiding certain course content, withdrawing from required oral exams), which undermines academic engagement and skill development (Russell & Topham, 2020). Research by Aihie (2022) examining academic stress among Nigerian undergraduates found that avoidant coping was the most commonly endorsed strategy among students reporting high stress levels, with 67% of high-stress students endorsing frequent use of avoidance. Similarly, Li et al. (2021) reported that avoidant coping significantly amplified the relationship between academic stress and psychological distress, functioning as a vulnerability factor rather than a protective mechanism. The present finding that both predictors explain nearly 20% of variance in avoidant coping suggests that stress and phobia symptoms are particularly potent drivers of avoidance behavior. This has important implications for intervention, as discussed below.

Recent person-centered research by Freire et al. (2020) identified four distinct coping profiles among 1,128 university students: Profile 1 (High approach, low avoidance): Optimal outcomes, highest self-efficacy; Profile 2 (Moderate approach, moderate avoidance): Average outcomes; Profile 3 (Low approach, high avoidance): Poor outcomes, high distress; Profile 4 (High approach, high avoidance): Mixed outcomes. Students in the present sample, given the positive associations between predictors and avoidance, would likely cluster in Profiles 3 or 4, which are characterized by poorer psychological adjustment. This underscores the need for interventions that specifically target avoidance while enhancing approach-oriented coping.

Female students reported significantly higher specific phobia symptoms ($t(348) = 4.01$, $p < .001$, $d = 0.43$) and higher emotion-focused coping ($t(348) = 4.23$, $p < .001$, $d = 0.45$) compared to males. The gender difference in specific phobia is robustly documented in epidemiological literature. The American Psychiatric Association (2022) reports that specific phobia is approximately twice as common in females as in males across the lifespan, with prevalence rates of 12-15% in females and 5-7% in males. Auerbach et al. (2019), analyzing data from the World Health Organization World Mental Health Surveys International College Student initiative, found that female college students had significantly higher odds of meeting criteria for any anxiety disorder, including specific phobia, compared to male students (OR = 1.86, 95% CI [1.52, 2.28]). Several explanations for this gender difference have been proposed. Biological factors include hormonal influences on fear conditioning and differential stress reactivity (Pedrelli et al., 2019). Psychosocial explanations emphasize gender socialization, whereby females are more likely to be reinforced for expressing fear and avoidance while males are socialized toward risk-taking and emotional suppression (Karyotaki et al., 2020). Additionally, females may be more willing to report anxiety symptoms on self-report measures, introducing potential reporting bias (Ebert et al., 2019).

The finding that females reported higher emotion-focused coping aligns with extensive coping literature. A meta-analysis by Tamres, Janicki, and Helgeson (2002), updated in a recent systematic review (Stan & Nechita, 2025), found consistent evidence that women report greater use of emotion-focused coping strategies, particularly seeking emotional support and positive reappraisal. This gender difference is often attributed to socialization processes that encourage emotional expressiveness and relational coping in females, while males are socialized toward instrumental, problem-focused approaches (Lazarus & Folkman, 1984). Notably, no significant gender differences emerged for academic self-efficacy in the present study. This finding is encouraging and suggests that despite higher phobia symptoms, female students maintain comparable confidence in their academic capabilities. This aligns with recent research by Von der Mehden et al. (2025), who reported that gender differences in academic self-efficacy have diminished over the past two decades, potentially reflecting increased educational equity and changing gender norms.

Younger students (ages 18-19) and first-year students reported significantly higher academic stress, higher avoidant coping, and lower academic self-efficacy compared to older and upper-year students. These findings align with the well-documented "transition effect" in higher education research. The first year of university represents a critical period characterized by multiple simultaneous transitions: new academic expectations, increased autonomy, reduced familiar support systems, and often relocation from family homes (Pedrelli et al., 2019). Karyotaki et al. (2020), analyzing data from over 14,000 first-year students across eight countries, found that first-year students reported significantly higher stress and lower self-efficacy than students in subsequent years, with stress levels peaking in the first semester and gradually declining thereafter. The finding that avoidant coping is highest among first-year students and declines across academic years is particularly significant. This developmental pattern may reflect several processes. First, students may naturally develop more adaptive coping strategies through experience and maturation (Zimmerman et al., 2020). Second, students who persistently rely on avoidant coping may be more likely to drop out, creating a selection effect whereby upper-year students represent a more resilient subsample (Auerbach et al., 2019). Third, universities may provide coping skills training or support services that are more accessible or utilized by upper-year students (Ebert et al., 2019). The age-related increase in academic self-efficacy observed in the present study is consistent with Bandura's (1997) assertion that efficacy beliefs strengthen through accumulated mastery experiences. Students who successfully navigate multiple academic years accumulate evidence of their capabilities, which gradually enhances confidence. Longitudinal research by Zimmerman et al. (2020) found that academic self-efficacy increased by approximately 0.3 standard deviations between the first and fourth years of university, an effect size comparable to that observed in the present study.

Limitations

Several limitations should be acknowledged. First, the cross-sectional design precludes causal inferences about the direction of observed relationships. While the proposed model posits that specific phobia and academic stress predict self-efficacy and coping, reciprocal effects are plausible: low self-efficacy may increase stress, and maladaptive coping may exacerbate phobic symptoms. Longitudinal research is needed to establish temporal precedence. Second, reliance on self-report measures introduces potential bias from social desirability, recall inaccuracies, and common method variance. Future studies incorporating behavioral measures, clinical interviews, or informant reports would strengthen validity. Third, the sample was drawn from a single university, potentially limiting generalizability to other institutional contexts, geographic regions, or educational systems. Fourth, the assessment of specific phobia focused on academic-relevant triggers but did not include diagnostic interviews, precluding clinical classification. Fifth, the study did not assess potential mediators (e.g., cognitive appraisals, physiological arousal) that might explain how predictors influence outcomes, representing an important direction for future research.

Implications

These findings have several practical implications for universities and mental health services. First, screening for both academic stress and specific phobia symptoms could identify students at risk for low self-efficacy and maladaptive coping, enabling early intervention. Second, interventions targeting self-efficacy might benefit from addressing both environmental demands (e.g., workload reduction, skill-building workshops) and individual vulnerability (e.g., cognitive-behavioral therapy for anxiety). Third, the high levels of avoidant coping among first-year students suggest that orientation programs and first-semester support services should explicitly teach adaptive coping strategies and normalize help-seeking behavior. Fourth, engineering programs may benefit from targeted self-efficacy enhancement interventions, such as mastery experiences through scaffolded projects or vicarious learning through alumni speakers who describe overcoming academic challenges .

Theoretically, these findings suggest the need for integrated models incorporating both environmental and individual predictors of student outcomes. Future theoretical work should specify mechanisms linking

specific phobia to academic outcomes, as this pathway remains relatively underexplored compared to academic stress. Additionally, the differential prediction of coping strategies suggests that researchers should examine problem-focused, emotion-focused, and avoidant coping as distinct outcomes rather than aggregating them into a single coping index.

Future Research Directions

Longitudinal studies examining how specific phobia and academic stress interact over time to shape developmental trajectories of self-efficacy and coping would be valuable. Research might also examine potential moderators of these relationships, such as social support, personality characteristics, or institutional factors. Intervention studies randomly assigning high-stress students to different support conditions (e.g., stress management workshops, anxiety treatment, academic skills training) could identify optimal approaches for enhancing self-efficacy and adaptive coping. Cross-cultural replication would determine whether these findings generalize across educational systems and cultural contexts. Finally, given the emerging evidence for bibliotherapy and physical activity interventions in improving academic self-efficacy , future research should examine whether such approaches are effective specifically for students with high phobic symptoms or academic stress.

CONCLUSION

This study examined how specific phobia and academic stress predict academic self-efficacy and coping mechanisms among undergraduate students. The findings demonstrate that both predictors independently contribute to lower academic self-efficacy and greater reliance on emotion-focused and avoidant coping strategies, while neither predicts problem-focused coping. First-year students, female students, and those in engineering programs emerged as potentially vulnerable subgroups requiring targeted support. These results underscore the importance of addressing both environmental demands and individual vulnerability factors in efforts to enhance student mental health and academic success. Universities must move beyond generic support programs toward "fit-for-purpose" interventions that recognize the diverse pathways through which academic stress and anxiety symptoms affect student outcomes. By identifying students at risk and providing evidence-based support addressing both self-efficacy and coping skills, institutions can help undergraduates navigate the challenges of higher education while maintaining psychological well-being and academic engagement.

REFERENCES

Abid, A., Farhan, S., & Atif, T. (2021). Academic stress, psychological distress, coping and self-efficacy among undergraduate university students during COVID 19. *Asian Journal of Social Sciences and Management Studies*, 8(2), 45-53.

Abdelrahman, A., et al. (2025). Sources of stress and coping strategies employed by undergraduate students over a semester: Motivations and implications for academic success. *Advances in Physiology Education*. https://doi.org/10.1152/advan.00292.2025

Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman.

Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the Brief COPE. *International Journal of Behavioral Medicine*, *4*(1), 92–100. https://doi.org/10.1207/s15327558ijbm0401_6

Freire, C., Ferradás, M. M., Regueiro, B., Rodríguez, S., Valle, A., & Núñez, J. C. (2020). Coping strategies and self-efficacy in university students: A person-centered approach. *Frontiers in Psychology*, 11, 841.

Gafoor, K. A., & Ashraf, M. (2007). *Academic self-efficacy scale*. University of Calicut.

Gao, X. (2023). The mechanism of academic burnout in university students. *Frontiers in Psychology*, *14*. https://doi.org/10.3389/fpsyg.2023.111

Hammoudi Halat, S., et al. (2024). Mental health and stress among faculty and students in the Arab context. *Frontiers in Education*, *9*. https://doi.org/10.3389/feduc.2024.174

Kristensen, S., et al. (2023). Academic stress and self-efficacy: A longitudinal study of university students. *Journal of Higher Education Research*.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.

Li, R., Guo, M., & Qiu, Z. (2026). Academic libraries as wellness centers: A randomized controlled trial comparing bibliotherapy and exercise for student learning enhancement. *The Journal of Academic Librarianship*, 52(3), 102-115.

Lipp, A., Zhang, X. C., Dere, E., & Zlomuzica, A. (2023). The role of self-efficacy in specific fears. *PLoS ONE*, *18*(3), e0283523. https://doi.org/10.1371/journal.pone.0283523

Liu, Y., et al. (2024). Mediation of coping style between academic self-efficacy and academic stress in middle school students. *Frontiers in Psychology*, *15*. https://doi.org/10.3389/fpsyg.2025.1496528

Low, M. P., Chong, W. L. W., & Thien, L. M. (2026). Technology fatigue!? A comparative model analysis of technostress, academic self-perception and engagement in higher education settings. *Quality & Quantity*. Advance online publication.

Nosè, M., Muriago, G., & Turrini, G. (2025). Effectiveness of a self-guided digital intervention for mental health in university students. *Journal of Medical Internet Research*, *27*. https://doi.org/10.2196/74205

Onyango, J. O., & Angwenyi, L. B. (2026). The dual-burden of professional and academic stress: A cross-sectional mapping of mental health status and coping efficacy among postgraduate students in Nairobi, Kenya. *Frontiers in Psychiatry*, 17, 1820905.

Pérez-Jorge, D., et al. (2025a). Examining the effects of academic stress and self-efficacy: A moderated-mediation model. *Frontiers in Psychology*, *16*. https://doi.org/10.3389/fpsyg.2025.1517

Pérez-Jorge, D., et al. (2025b). The impact of academic stress on the physical and mental health of university students. *International Journal of Environmental Research and Public Health*.

Schunk, D. H., & DiBenedetto, M. K. (2020). Motivation and self-efficacy in education. *Contemporary Educational Psychology*, *61*. https://doi.org/10.1016/j.cedpsych.2020.101852

Son, C., et al. (2020). Effects of COVID-19 on college students' mental health in the United States: Interview survey study. *Journal of Medical Internet Research*, *22*(9), e21279. https://doi.org/10.2196/21279

Teixeira, C., et al. (2022). Positive coping strategies and academic self-efficacy: A correlational study. *Health Psychology Open*.

Umm e Habiba, Hassan, Z., & Sahar, F. (2025). Academic self-efficacy, academic stress, and AI dependency: A predictive model for undergraduate thesis students. *International Journal of Academic Research for Humanities*, *5*(4), 89–99.

Zhang, L., et al. (2025). The relationship between stress and academic burnout in college students: Evidence from longitudinal data. *Frontiers in Psychology*, *16*. https://doi.org/10.3389/fpsyg.2025.1517920