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Exploring the Mediation of Perceived Social Support and Psychological Capital on Academic Stress and Student Burnout Among Undergraduate Students

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ABSTRACT

The increasing prevalence of stress and burnout among college students has become widespread, and addressing these issues has long been a critical concern for college communities. Given this context, the study was carried out to explore whether social support and psychological capital function as protective factors against academic stress and burnout. The sample consisted of 448 college students who completed a set of measures assessing their academic stress, burnout, social support, and psychological capital. Hierarchical multiple regression and the PROCESS macro for SPSS were used for data analyses. The results revealed that academic stress was significantly related to academic burnout. Further, social support and psychological capital partially mediated the relationship between academic stress and burnout. The findings underscore the importance of addressing academic stress as a key risk factor for burnout and highlight the essential roles of perceived social support and psychological capital in promoting students' mental health.

Keywords: academic stress, academic burnout, perceived social support, psychological capital, undergraduate students

INTRODUCTION

The increasing prevalence of burnout among college students has become a widespread phenomenon, primarily rooted in various personal, social, academic, and environmental factors (Abraham et al., 2024; Barusi & Kurniawati, 2024;

Cengiz & Peker, 2024; Douwes et al., 2023; Kaggwa et al., 2021; Kong et al., 2023; Z. Liu et al., 2023). Burnout is commonly understood as "a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with people in some capacity" (Maslach et al., 1996, p. 206). In the academic context, student burnout refers to feelings of emotional exhaustion, depersonalization, and reduced academic efficacy arising from high academic demands, a negative attitude toward academic tasks (e.g., assignments), and perceived academic incompetence (Dyrbye et al., 2014; Pham Thi & Duong, 2024; Zhang et al., 2007). While various factors contribute to student burnout, academic stressors are considered among the primary sources in the educational setting. The demanding nature of the coursework, exam anxiety, academic setbacks, teacher expectations and behaviors, parental pressure, and the drive to excel academically significantly affect students' stress and burnout levels (e.g., Anuradha & Jha, 2014; Z. Liu et al., 2023). Moreover, the challenge of balancing rigorous academic requirements with extracurricular commitments, handling tests and assignments, managing relationships with teachers and peers, and integrating theoretical classes with internships further complicates students' experiences in higher education (Câmara & Carlotto, 2024). The persistent need to perform well, combined with the fear of failure, intensifies students' mental and emotional burdens (Rahmatpour et al., 2019; Zhang et al., 2007). Consequently, the prevalent issue of stress and burnout within college settings demands proactive strategies to foster mental well-being and resilience among students.

Academic stress is a psychological phenomenon characterized by the unpleasant mental experiences associated with the academic expectations placed on individuals by family members, teachers, and parents (Alam & Halder, 2018). Extensive research consistently highlights the prevalence of stress, particularly academic stress, among college students, and underscores its substantial impact on the overall quality of learning and mental health. For instance, Kausar (2010) a study among Indian university students and revealed that a significant portion, specifically 27 percent, reported experiencing elevated stress levels. Furthermore, a cross-sectional study involving Eritrean college students conducted by Yikealo et al. (2018) identified academic and environmental stressors as predominant factors contributing to heightened stress levels. Additionally, undergraduate students reported that concerns about future competence, financial issues, and academic workloads significantly contributed to their stress levels (Nguyen et al., 2024). This underscores the diverse sources from which academic stress can emanate, extending beyond mere academic pressures. The manifestation of academic stress in college students is complex, resulting from a combination of various stressors embedded in the academic environment. These stressors encompass academic-related demands and expectations that often surpass the available coping resources of individual students (S. Liu et al., 2024; Wilks, 2008). This suggests that addressing academic stress necessitates a comprehensive

understanding of the multifaceted nature of stressors in the academic setting, thereby enabling more effective interventions and support mechanisms for students.

Academic stress is well-documented as being positively related to academic burnout in college students. Those experiencing higher levels of academic stress are at a greater risk of emotional exhaustion, feelings of detachment, and diminished efficacy and confidence in their academic endeavors. For instance, a study conducted among Chinese adolescents found that academic stress is significantly associated with both academic anxiety and burnout (Gao, 2023). This suggests that adolescents with higher levels of academic stress are more prone to experiencing symptoms of anxiety and burnout in academic settings. In the same vein, Yongmei and Dan (2022) surveyed middle school students, finding that higher levels of various types of academic stress, such as competitive stress, task requirement stress, frustration stress, and expectation stress were positively and significantly associated with increased levels of academic burnout. Further, the research of S. Lin and Huang (2014) revealed that several distinct types of stress among college students play a crucial role in predicting academic burnout. Specifically, stress related to self-identity, interpersonal relationships, concerns about future development, and academic pressures were found to be significant contributors.

Conservation of Resources Theory (COR) and the Job Demands-Resources Model (JD-R), which are widely applied in workplace settings, can also be relevant in the academic context (K. Salmela-Aro & Upadyaya, 2014). Academic tasks are inherently demanding, and students continually expend resources such as time, energy, and support. This can result in emotional exhaustion, detachment from their studies, and a diminished sense of achievement (K. Salmela-Aro, 2017; K. Salmela-Aro & Upadyaya, 2014). Building on the existing literature, it can be argued that academic stress is intricately associated with academic burnout. Elevated stress levels, stemming from the pressures of academic demands, uncertainties about prospects, and personal challenges, considerably heighten the risk of emotional exhaustion and diminished motivation. Mitigating these stressors is essential to prevent burnout and to sustain students' well-being and academic performance. Thus, addressing these factors is vital in fostering a supportive educational environment conducive to both personal and academic success.

Previous studies have primarily focused on the direct relationship between stress and burnout in workplace settings, resulting in a lack of sufficient literature addressing this issue in academic environments. It is equally important to recognize that the relationship between academic stress and academic burnout is often complex and indirect, influenced by various mediating variables. Therefore, understanding how academic stress impacts burnout requires identifying these mediators. While several personal and situational factors may elucidate the underlying mechanisms through which stress affects burnout, we draw upon the

conservation of resources theory, which posits that burnout is characterized by the depletion of resources, including personal assets, financial means, and social support over time (Hobfoll & Shirom, 2001). Accordingly, we have selected psychological capital and perceived social support as potential mediating variables in this relationship. In academic settings, burnout occurs when students lack the necessary resources to effectively manage academic stressors. Thus, it is plausible that psychological capital and social support serve as essential resources to protect students from experiencing burnout due to the adverse effects of academic stress.

F. Luthans and his colleagues have developed the concept of positive psychological capital, which represents the application of human resource strengths and psychological resources in the workplace to increase organizational success and productivity (F. Luthans et al., 2007). Positive psychological capital goes beyond the other types of capital and has been conceptualized as "an individual's positive psychological state of development that is characterized by: 1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; 2) making a positive attribution (optimism) about succeeding now and in the future; 3) persevering toward goals, and when necessary, redirecting paths to goals (hope) to succeed; and 4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success" (F. Luthans et al., 2007, p. 3). The construct is conceptualized as a state-like and higher-order construct with four psychological resources: Hope, Efficacy or Self-Efficacy (confidence), Resilience, and Optimism. It has been argued that when the four individual psychological resources of hope, efficacy, resilience, and optimism are combined, they show a synergistic effect and this qualifies psychological capital to be a higher-order construct. Psychological capital as a second-order core construct has been proven to have a better predicting effect on desirable outcomes such as performance and satisfaction than the individual resources that make it up (F. Luthans et al., 2006).

Existing literature highlights that college students are particularly vulnerable to academic stress, and those lacking sufficient resources to cope with these stressors are more susceptible to burnout. Several studies suggest that psychological capital may mediate the relationship between stress and mental health outcomes, such as burnout, distress, and psychological well-being in academic settings. For example, Fariborz et al. (2019) found that academic stress indirectly influences burnout through self-efficacy, a key component of psychological capital. Their findings show that students experiencing high levels of academic stress often exhibit reduced self-efficacy, increasing their likelihood of burnout. Similarly, research with university students in Saudi Arabia demonstrated that psychological capital fully mediated the relationship between academic stress and well-being (Alsultan et al., 2023). This suggests that students with stronger psychological resources, such as hope, efficacy, optimism, and resilience, experience lower stress levels and better mental health. Sun et al. (2022) reported a similar mediating effect of psychological capital between psychological

stress and distress among nursing students, showing that students with high levels of stress had lower psychological capital and, consequently, were more distressed than those with sufficient psychological resources, such as hope, efficacy, optimism, and resilience. Moreover, psychological capital has been shown to enhance self-directed learning by mitigating the detrimental effects of stress on learning behaviors (Yang et al., 2024). Additionally, it acts as a protective factor by buffering the negative impact of stress on academic achievement, behavioral problems (Muluneh & Bejji, 2024), and anxiety (Yang & Yang, 2022). Collectively, the literature indicates that psychological capital serves as an intermediary between stress and various mental health outcomes, such as burnout psychological wellbeing, and anxiety.

Perceived social support is another social and psychological resource that is recognized as a potential mediator in the relationship between academic stress and academic burnout. Social support refers to the subjective emotional, psychological, or physical support that individuals receive or perceive in their surroundings (N. Lin, 1986; Zhang & He, 2015). Social support is a multifaceted concept, consisting of received social support, which refers to the actual support a person obtains (Haber et al., 2007), and perceived social support, which relates to both the recipient's satisfaction with the support and their perception of its availability (Sarason et al., 1990). The current study focuses on perceived social support, which is considered a reliable factor closely associated with well-being (Haber et al., 2007; Wills & Shinar, 2000). Emphasizing cognitive appraisal, perceived social support involves feelings of social connection and nurturance, characterized by the subjective sense of having sufficient support available (Graham et al., 2007). Even though the available perceived social support literature is not sufficient in the field of academia, general social support studies established the mediating and moderating roles of the variable on the links of various personal variables and burnout. For example, Kim and Lee (2022) validate the mediating effect of social support on the links between grit and burnout in nursing students. This study suggests that social support can increase the grit of the students and alleviate the feeling of burnout. Social support was found to function as a mediating factor in the relationship between coping styles and mental health, like depression (Dong et al., 2024). Another study carried out among university students also pointed out that social support significantly affected the health of male students through social support, but not in females (Asensio-Martínez et al., 2023). Furthermore, social support significantly mitigated the effects of stress and emotional labor on burnout, highlighting its mediating role in the relationships among these variables (Noh, 2017). The studies reviewed above generally suggest that college students who receive adequate social support from peers, parents, teachers, and significant others are less likely to experience feelings of burnout, such as emotional exhaustion, cynicism, and low self-efficacy, as a result of academic stressors. Therefore, there is increasing evidence that social support

serves as an important resource in lessening the exacerbating impact of stress on students' academic burnout.

Problem Statement and Aim of the Study

Mental health is a vital element of student wellbeing and academic achievement in higher education (Khan et al., 2024; Rautela et al., 2024). However, the wellbeing of students has not been given the attention it deserves within academic research and institutional policies (Douwes et al., 2023). The excessive academic demands associated with college life often make students more prone to mental health difficulties, including anxiety, depression, and burnout (Pamela et al., 2023). Among these, student burnout is a pressing concern that can significantly hinder students' overall success and quality of life. Academic stress has been identified as a key driver of burnout, as it creates prolonged psychological strain that can deplete students' emotional and cognitive resources. Emerging research suggests that psychological capital and social support may equip students to better manage stress and maintain their wellbeing. However, there is a lack of sufficient empirical evidence on how psychological capital and social support can mediate the negative effects of academic stress on burnout, particularly in the Eritrean higher education context. This study aims to fill this gap by investigating the mediating roles of psychological capital and social support in the relationship between academic stress and burnout. Specifically, it seeks to unravel the mechanisms through which these protective factors operate and to what extent they can mitigate the detrimental effects of stress on students' mental health. By examining the interplay among these variables, this research aspires to provide insights that can inform strategies for promoting mental wellbeing and reducing burnout among college students.

Hypothesis of The Study

Drawing on the reviewed literature and theoretical perspectives, the following hypotheses were formulated to guide the study.

H1. Academic stress will be negatively related to student burnout in undergraduate students.

H2. Psychological capital will mediate the relationships between academic stress and student burnout in undergraduate students.

H3. Social support will function as a mediator in the relationships between academic stress and student burnout in undergraduate students.

METHODS

Sample of the Study

The sample of the study involved 448 participants, who were undergraduate students selected from three colleges in Eritrea. They were in their second, third, fourth, and fifth years of undergraduate studies across various fields,

including Engineering (e.g., Civil Engineering, Electrical Engineering, Agricultural Engineering, Mechanical Engineering, Agricultural Engineering, Computer Engineering, and Chemical Engineering), Science (e.g., Biology, Chemistry, Mathematics, Earth Sciences, and Physics), and Educational Sciences (e.g., Educational Administration, Educational Psychology, Chemistry Education, Biology Education, Mathematics Education, and Physics Education). Participants were chosen using convenience sampling from the target population. On average, the participants were 22 years old (SD = 2.30). The frequency of the demographic characteristics of the participants is presented in Table 1. In terms of gender, 228 (50.90%) were male, and 228 (49.10%) were female. Additionally, 429 participants (95.80%) were single, while 19 (4.20%) were married. Regarding college representation, a significant number came from the College of Science (n = 235; 52.50%) and the College of Education (n = 125; 27.90%), whereas a smaller proportion originated from the College of Engineering and Technology (n = 88; 19.60%).

Table 1

Frequency Distribution of Characteristics of the Participants

Variable	*n*	%	*N*
Gender			
Male	228	50.90	448
Female	222	49.10	
Marital status			
Married	19	4.20	448
Unmarried	429	95.80	
College			
Education	135	27.90	448
Science	235	52.50	
Engineering	88	19.60	

Measures

Academic Stress

We utilized the Perceptions of Academic Stress Scale (PAS), developed by Bedewy and Gabriel (2015), to evaluate the academic stress experienced by student participants. This instrument is designed to gauge university students' perceptions of academic stress, encompassing factors such as pressure to perform, workload perceptions, academic self-perceptions, and time constraints. The PAS comprises 18 Likert-type items, with responses ranging from 1 (strongly disagree) to 5 (strongly agree). Scores on the PAS range from 18 to 80, with higher scores indicating elevated levels of academic stress. We selected the PAS over other

measures of academic stress due to its tailored focus on university students and its manageable number of items. Furthermore, the scale's authors have provided statistical evidence supporting its satisfactory reliability ($\alpha = 0.70$) and validity.

Academic Burnout

The Maslach Burnout Inventory-Student Survey (MBI-SS) was employed to evaluate Academic burnout (Schaufeli et al., 2002b; Schaufeli et al., 2002a). This tool consists of 15 items divided into three subscales: Emotional Exhaustion (5 items), Cynicism or Depersonalization (4 items), and Academic Efficacy (6 items). Responses were gathered using a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). To compute the total burnout score, scores for the Academic Efficacy subscale were reversed to reflect academic inefficacy. The resulting total score ranges from 15 to 105, with higher scores indicating a greater level of burnout. Widely utilized in academic contexts, the MBI-SS's psychometric properties have been extensively validated in various studies conducted across diverse countries and cultures(e.g., Hu & Schaufeli, 2009; Jagodics & Szabó, 2022). In the present study, the MBI-SS exhibited a reliability coefficient of 0.77, indicating a higher level of reliability compared to the baseline value of 0.70 (Griethuijsen et al., 2015).

Social Support

The present study adopted the Multidimensional Scale of Perceived Social Support (MSPSS) to assess social support (Zimet et al., 1988). MSPSS is a 12-item instrument with three subscales: family (4 items), friends (4 items), and significant other (4 items). The measure is rated on a 7-point Likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). The range of the total scores is between 7 and 140. Higher scores represent higher social support. MSPSS is a widely used instrument in which its psychometric properties (i.e., reliability and validity) are well established in various previous studies (Dahlem et al., 1991; Ermis-Demirtas et al., 2018; Tsilika et al., 2019; Zimet et al., 1988). The measure also showed a higher internal consistency in our study ($\alpha = 0.90$).

Psychological Capital

The study measured participants' Psychological Capital using the 24-item Psychological Capital Questionnaire (PCQ), initially developed by F. Luthans et al. (2007). This questionnaire was later adapted by Liran and Miller (2017) to suit the academic context, specifically for university students. The adapted PCQ uses a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Scores on the PCQ can range from 24 to 240, with higher scores indicating a higher Positive Psychological Capital. The PCQ measures four dimensions: hope,

optimism, self-efficacy, and resilience. The overall Cronbach's alpha for the original and adapted versions of the PCQ was found to be .93 and .89, respectively (F. Luthans et al., 2007). Similarly, the Cronbach alpha of PCQ in our sample was found to be high ($\alpha = 0.82$).

Procedure and Ethical Considerations

Following approval from the College of Education, self-report questionnaires were distributed to student participants in their respective classrooms, with the questionnaires being in English due to the participants' sufficient proficiency. Ethical considerations were paramount, as participants were provided with statements of consent outlining the study's purpose, ensuring voluntary participation. Confidentiality was maintained through anonymous questionnaire preparation, with participants assured that their data would solely be used for research purposes. This procedure underscores a commitment to ethical research practices, including informed consent, voluntary participation, and data confidentiality.

Data Analyses

The data analysis utilized SPSS version 26 and jamovi version 4.1. Descriptive statistics, Pearson product-moment correlation, and hierarchical multiple regression analyses were conducted in SPSS to explore the relationships between academic stress, academic burnout, social support, and psychological capital. Jamovi was then used to perform linear mediation analyses to investigate the mediating effects of social support and psychological capital on the relationship between academic stress and academic burnout. Prior to performing the regression and correlation analyses, several basic assumptions, such as linearity, multicollinearity, homoscedasticity, and the presence of outliers, were assessed, and no violations of these assumptions were found in the study sample data set.

RESULTS

Descriptive Statistical Values of the Study Variables

The descriptive statistics for the key variables of the study, including minimum, maximum, mean, and standard deviation, Cronbach's alpha skewness, and kurtosis values are summarized in Table 2. For instance, the academic stress scores of the students ranged from 18 to 80, with a mean value of 47.55. Participants reported burnout scores ranging from 15 to 96, with a mean value of 54.77. The range of scores for students' perceived social support was between 12 and 60, while for psychological capital, it was between 38 and 115, with mean values of 48.02 and 82.09, respectively. Additionally, Cronbach's alpha was used

to assess the internal consistency of the scales, and the values indicated good internal consistency for all study variables. The normality of the data, as assessed by skewness and kurtosis, fell within the range of -2 to +2 (Gravetter & Wallnau, 2014), suggesting normal distribution across all datasets.

Table 2

Descriptive Statistics of the Study Variables

Variables	*Min*	*Max*	*M*	*SD*	items	α
Academic stress	18.00	80.00	47.55	10.33	18	.80
Student burnout	15.00	96.00	54.77	12.11	15	.77
Social support	12.00	60.00	48.02	8.92	12	.90
Psychological capital	38.00	115.00	82.09	11.05	24	.79

Associations Between the Study Variables

The Pearson product-moment correlation coefficient was applied to examine the relationships within the study. Results revealed statistically significant correlations among the variables (see Table 3). Academic stress showed a positive correlation with student burnout ($r = .43$, $p < .001$), and a negative correlation with both social support ($r = -.16$, $p < .001$) and psychological capital ($r = -.31$, $p < .001$). Additionally, student burnout exhibited negative associations with social support ($r = -.22$, $p < .001$) and psychological capital ($r = -.49$, $p < .001$). Moreover, a statistically significant positive correlation emerged between participants' perceived social support and their psychological capital scores ($r = .32$, $p < .001$).

Table 3

Bivariate Relationships Between the Study Variables

Variables	1	2	3	4	5	6
1. Gender						
2. Marital status	.07					
3. Age	.22**	.52**				
4. Academic stress	.09	-.07	-.06			
5. Academic burnout	.09	-.15**	-.09	.43**		
6. Social Support	-.19**	-.00	.02	-.16**	-.22**	
7. Psychological capital	-.00	-.00	.04	-.31**	-.49**	.32**

** $p \leq .01$ (2-tailed).

Table 4

Hierarchical Regression Analyses for the Predictors of Student Burnout

				Model				
Predictors	B	SEB	β	R	R^2	ΔR^2	F	df
Block 1				.19	.04		5.66*	3, 444
Gender	2.68	1.16	.11*					
Marital status	-8.19	3.29	-.14*					
Age	-.24	.29	-.05					
Block 2				0.46	0.21	0.17	28.97***	4, 443
Gender	1.60	1.06	.07					
Marital status	-6.93	2.99	-.12*					
Age	-.11	.27	-.02					
Academic stress	.49	.05	.42***					
Block 3				.48	.23	.02	25.95***	5, 442
Gender	.93	1.06	.04					
Marital status	-7.24	2.95	-.12*					
Age	-.09	.27	-.01					
Academic stress	.47	.05	.40***					
Social support	-.20	.06	-.14*					
Block 4				.59	.35	.13	40.09***	6, 441
Gender	1.67	.98	.07					
Marital status	-8.15	2.71	-.14*					
Age	-.01	.24	-.00					
Academic stress	.34	.05	.29***					
Social support	-.04	.06	-.03					
Psychological capital	-.43	.05	-.39***					

Note. Dummy variables were coded as: *Gender*: Male = 1, Females = 0; *Marital status*: Married = 1, Unmarried = 0; *$p < .05$, ***$p < .001$

Hierarchical Multiple Regression Analyses

To assess the predictive effects of academic stress, social support, and psychological capital on student burnout, a multiple hierarchical regression analysis was conducted, controlling for demographic variables. The variables were entered into the regression model in sequential blocks. The first block comprised demographic factors such as gender, age, marital status, and program of study. Then, academic stress was added in the second block, followed by social support in the third block, and finally, psychological capital in the fourth block. The results, as presented in Table 4, indicate that the block variables collectively explained 4% of the variance in student burnout, and the model was statistically significant (R^2 = .04, $F(4, 444) = 5.66$, $p < .05$). The inclusion of academic stress in the second block significantly improved the model, explaining a total of 21% of the variance in student burnout, and remained statistically significant (R^2 = .21, $F(5, 443)$ = 28.97, $p < .001$). Controlling for demographic variables, academic stress contributed an additional 17% of the variance in the outcome (R^2 change = .17, $F(1, 443) = 96.35$, $p < .001$). Upon introducing social support in the third block, the model accounted for 23% of the variance in student burnout, remaining statistically significant (R^2 = .23, $F(5, 442) = 25.95$, $p < .001$). However, when demographics and academic stress were controlled, social support contributed only 2% of the unique variance to the model (R^2 change = .03, $F(1, 442) = 11.21$, $p <$ .001). The addition of psychological capital in the final block resulted in a model explaining 35% of the variability in student burnout (R^2 = .35, $F(5, 442) = 40.09$, $p < .001$). When controlling for demographics, academic stress, and social support, psychological capital independently contributed 13% to the regression model, which remained statistically significant (R^2 change = .13, $F(1, 441) = 85.90$, $p <$ .001).

Mediational Analyses

The Mediating Effect of Social Support on Academic Stress and Student Burnout

To examine the mediating role of social support, we conducted simple linear regression analyses using PROCESS macro for SPSS. In this analysis, academic stress served as an independent variable, student burnout as an outcome variable, and social support as a mediating variable. As outlined in Table 5, the regression results revealed statistically significant linear regression paths: academic stress → social support (b = -0.14, $p < .001$), social support → student burnout (b = -0.20, $p < .001$), and academic stress → student burnout (b = 0.51, p < .001). To evaluate the statistical significance of the indirect effect of academic stress on student burnout through social support, we employed a bias-corrected

bootstrap method with a sample size of 5000. The results indicated a significant effect, as the 95% confidence interval (CI) did not encompass zero (b = 0.03, 95% CI = 0.01, 0.05). However, it's important to note that the direct effect of academic stress on burnout remained significant (b = 0.28, p < .001), indicating a partial mediation effect.

Table 5

Direct and Indirect Effects of Academic Stress on Burnout through Social Support

				95% CI		
Type of effect	Path	B	SE	Lower	Upper	*p*
Indirect	PAS ⇒ SS ⇒ SB	0.03	0.01	0.01	0.05	
Component	PAS ⇒ SS	-0.14	0.04	-0.22	-0.06	< .001
	SS ⇒ SB	-0.20	0.06	-0.32	-0.09	< .001
Direct	PAS ⇒ SB	0.48	0.05	0.38	0.58	< .001
Total	PAS ⇒ SB	0.51	0.05	0.41	0.61	< .001

Note. P**AS**= Perceived Academic Stress**; SS** = Social Support; **SB** = Student Burnout

The Mediating Effect of Psychological Capital on Academic Stress and Student Burnout

To investigate how psychological capital mediates the relationship between academic stress and academic burnout, simple linear regression analyses with the help of PROCESS macro for SPSS were utilized. In carrying out the analyses, academic stress was set as the predictor, student burnout as the outcome, and psychological capital as the mediator. As depicted in Table 6, the regression findings showed significant linear regression paths: academic stress → psychological capital (b = -0.33, p < .001), psychological capital → student burnout (b = -0.43, p < .001), and academic stress → student burnout (b = 0.51, p < .001). To assess the significance of the indirect effect of academic stress on student burnout via social support, we used a bias-corrected bootstrap method with a sample size of 5000. The results indicated a significant effect, with the 95% confidence interval excluding zero (b = 0.03, 95% CI = 0.01, 0.05). It's worth noting that despite this mediation, the direct impact of academic stress on burnout remained significant (b = 0.37, p < .001), suggesting a partial mediation effect.

Table 6

Direct and Indirect Effects of Academic Stress on Burnout through Psychological Capital

Type of effect	Path	B	SE	95% CI		*p*
				Lower	Upper	
Indirect	PAS ⇒ PsyCap ⇒ SB	0.14	0.04	0.08	0.22	
Component	PAS ⇒ PsyCap	-0.33	0.05	-0.43	-0.24	< .001
	PsyCap ⇒ SB	-0.43	0.04	-0.52	-0.35	< .001
Direct	PAS ⇒ SB	0.37	0.05	0.27	0.46	< .001
Total	PAS ⇒ SB	0.51	0.05	0.41	0.61	< .001

Note. P**AS**= Perceived Academic Stress**; SB** = Student Burnout; **PsyCap** = Psychological Capital

DISCUSSION

This study explored the mediating roles of social support and psychological capital in the relationship between academic stress and student burnout among undergraduate students. The findings indicate that both social support and psychological capital significantly mediated the relationship between academic stress and burnout, providing a deeper understanding of how these factors interact to influence student well-being. Specifically, the discussion centers on three key findings: 1) the relationship between perceived academic stress and burnout, 2) the mediation of psychological capital in the connection between academic stress and student burnout, and 3) the mediation of perceived social support in the relationship between academic stress and student burnout. The study confirmed the hypothesis that academic stress is a significant predictor of student burnout, consistent with previous research that identifies academic stress as a major contributor to burnout symptoms such as emotional exhaustion, depersonalization, and reduced personal accomplishment (e.g., Gao, 2023; Kong et al., 2023; Y. Liu & Cao, 2022; Yongmei & Dan, 2022). The negative correlation between academic stress and student burnout is unsurprising, as academic stress often results from factors such as high demands, excessive workload, and performance pressures. These challenges can overwhelm students, draining their emotional and cognitive resources, which in turn can severely impact their psychological well-being. Conservation of resources theory (COR) also provides a strong explanation for this relationship. According to COR theory, stress results from the perceived threat of resource loss or actual loss of resources (Hobfoll, 1989). The theory suggests that when students face high levels of academic stress, they experience a depletion of their emotional and psychological resources, leading to burnout. This resource depletion impairs their ability to cope effectively with stress, resulting in emotional exhaustion and a diminished sense of accomplishment (Schaufeli et al., 2002b). The continuous strain from academic stress not only exacerbates burnout but also negatively impacts students' overall mental health and academic performance (Aitken et al., 2024; Barbayannis et al., 2022). Similarly, the JD-R model assumes

that the environment consists of two key aspects: demands and resources (Demerouti et al., 2001). While demands require physical or psychological investments and are associated with costs such as strain or stress, resources represent the means to effectively manage these demands, thereby mitigating their harmful effects on mental health. Although primarily applied in workplace settings, the model has also been validated in academic contexts, where high academic demands can lead to burnout and disengagement (Salmela-Aro & Upadyaya, 2014). Drawing from this theory, we can argue that college students who face significant academic demands, which are inherently stressful and can result in burnout and mental health problems, especially the absence of sufficient protective resources.

The study also provided evidence to confirm the second hypothesis that perceived social support significantly mediates the relationship between academic stress and student burnout. This finding aligns with previous studies documenting the significant mediating role of social support in the relationship between stress and mental health issues such as burnout (Asensio-Martínez et al., 2023; Noh, 2017). Perceived social support, which includes emotional, informational, and instrumental assistance from family, friends, and peers, can buffer the negative impact of academic stress by equipping students with the necessary resources to effectively manage academic demands, leading to lower levels of emotional exhaustion and cynicism, as well as greater efficacy in their studies. A possible explanation for this mediating role can be understood within the theoretical frameworks of COR and JD-R model. According to these frameworks, the detrimental effect of high demands on mental health depends on the availability of psychological and social resources such as social support (Hobfoll, 2002; Salmela-Aro & Upadyaya, 2014). This suggests that when college students perceive they are adequately cared for, respected, and supported, they are less likely to experience the negative impacts of excessive demands on their mental health, as they recognize they have people to turn to for advice, comfort, and practical help. The stress and coping theory also posits that perceived social support influences our perception of stress and provides individuals with the essential resources needed to cope effectively (Lazarus & Folkman, 1984). Perceived social support can strengthen students' resilience and promote effective stress-coping strategies by fostering a sense of belonging and connectedness (Cao et al., 2024; McBeath et al., 2018). When students feel supported, they are more likely to engage in positive social interactions and experience greater life satisfaction, which can help reduce the negative emotional impact of burnout (Ye et al., 2021). This social connectedness is essential for maintaining emotional wellbeing and plays a critical role in preventing the wellbeing of students from stress (P. Li et al., 2022; Yıldırım & Green, 2024). Conversely, those who perceive a lack of support and feel socially disconnected in their environment are more vulnerable to the effects of academic stress or excessive demands on their mental health, leading to burnout (Poole et al., 2023). Therefore, it is arguable that the perception of support plays a crucial

role in reducing emotional exhaustion, cynicism, and feelings of inadequacy associated with burnout in the academic setting.

The third and final expectation that psychological capital significantly mediates the relationship between academic stress and student burnout was also supported. The partial mediation effect suggests that academic stress has both direct and indirect effects on burnout. This finding is in accord with previous studies that have identified the potential mediating effects of psychological capital on stress and mental health problems such as burnout, psychological distress, anxiety, and depression (Alsultan et al., 2023; Lara-Cabrera et al., 2021; R. Li et al., 2023; Sun et al., 2022; Yang & Yang, 2022) This results can be best understood within the framework of positive psychology. The concept of psychological capital is grounded in positive psychology and is considered a critical personal resource that helps individuals cope with challenges and thrive in stressful environments (F. Luthans et al., 2007). This suggests that psychological capital can enhance students' cognitive and emotional resources, which are crucial for managing stress effectively. For example, self-efficacy, or the belief in one's ability to succeed, enables students to approach academic challenges with confidence, reducing the impact of stress on burnout (Bandura, 1997), wellbeing, and flourishing (Yıldırım & Green, 2024). Similarly, optimism and hope foster a positive outlook on the future and help students maintain motivation and perseverance in the face of difficulties, which can counteract the feelings of exhaustion and cynicism associated with burnout (Snyder et al., 2002). Resilience, a key component of psychological capital, is vital for helping students recover from setbacks and maintain their persistence in the face of academic pressures, thereby mitigating the effects of these pressures on learning burnout (Gong et al., 2023), depression, anxiety and psychological distress (Lara-Cabrera et al., 2021). Resilient students tend to perceive stressors as opportunities for growth rather than as threats or insurmountable challenges (Kao, 2024). They also view failures as temporary setbacks, maintaining confidence in their ability to manage them successfully (Martin & Marsh, 2006). Consequently, this positive perception may significantly diminish the negative impact of academic stress on burnout among college students. Moreover, psychological capital can reduce the negative impact of academic stress by promoting adaptive coping strategies, such as problem-solving and seeking social support, rather than maladaptive strategies like avoidance or disengagement. This proactive coping approach can prevent the depletion of resources and the onset of burnout, highlighting the protective role of psychological capital in the stress-burnout relationship (F. Luthans et al., 2007).

Implications of the Study

The findings of this study hold both theoretical and practical significance. From a theoretical perspective, it expands the existing literature by examining the direct link between academic stress and burnout, while also exploring how psychological capital and perceived social support act as mediating mechanisms.

By highlighting these mediating roles, the study provides a comprehensive framework that clarifies how personal psychological resources and external support systems shape the relationship between stress and burnout. Practically, these insights can inform college communities, instructors, counselors, curriculum developers, and parents in addressing student burnout by fostering both social support and psychological capital. Colleges can implement various programs that cultivate supportive environments, promoting the development of these resources. For example, peer mentoring, collaborative learning, group discussions, campus clubs, academic support groups, and collaborative research work have been shown to be effective. In their systematic review, Gehreke et al. (2024) highlighted that individual and group-based mentoring programs enhance students' sense of belonging, academic and social integration, and emotional skills. Collaborative group work also supports the development of communication, conflict resolution, and teamwork skills, which are essential for managing academic stress and reducing burnout (McKay & Sridharan, 2024). Emotional and moral support, including love, trust, empathy, motivation, companionship, and comfort, are key aspects of social and psychological support systems. These resources are vital for students to manage academic challenges and thrive in their educational pursuits (J. Li et al., 2018). Furthermore, community-based collaborative interdisciplinary research practices involving faculty mentors and students can foster meaningful interpersonal relationships between students and faculty as well as among students themselves (Fakhoury & Peterson, 2024). These social connections and mentorship programs may ultimately enhance students' perceptions of social support within the educational context, which is essential for managing stress and preventing burnout (Owusu et al., 2024). Additionally, fostering a harmonious learning environment where administrators, teachers, counselors, students, health workers, and parents collaborate can enhance students' sense of belonging and improve their perceptions of the availability and quality of support systems.

Recognizing the malleable and teachable nature of psychological capital, colleges can offer educational interventions such as workshops, seminars, and training programs focused on social and emotional competencies (e.g., critical thinking, interpersonal communication, conflict management), stress and coping strategies, mental health issues, and principles of positive psychology (e.g., hope, efficacy, optimism, and resilience), which have been proven effective (Gomes da Costa et al., 2021; K. W. Luthans et al., 2016). Curriculum developers should incorporate social and emotional skills into the educational content to equip students with psychological resources like hope, efficacy, optimism, and resilience, factors critical for mitigating the negative impact of stress on burnout. Counselors should offer individual and group counseling services to students, particularly those at high risk for stress and burnout. Parents also play a crucial role by providing emotional and psychological support to help their children cope with academic challenges and prevent burnout. College lecturers should create a positive classroom environment that fosters students' psychosocial capital and

perceived social support through positive education pedagogy, grounded in principles of positive psychology. This approach focuses on cultivating and developing human strengths, including self-efficacy, social and emotional learning, hope, optimism, resilience, character education, mental toughness, and well-being (Green et al., 2021). Students endowed with these strengths are more likely to thrive and flourish regardless of the inherent academic and mental health challenges of college study. Lastly, students should actively engage in programs designed to foster social support and psychological capital, while also developing help-seeking behaviors to access assistance when needed. This holistic approach will empower students to manage stress more effectively and enhance their academic resilience, reducing the likelihood of burnout and improving their overall mental health.

Limitations and Future Research Recommendations

Despite the fact this study presents important theoretical and practical contributions, several limitations warrant attention in future research. Although a relatively large sample size, the use of convenience sampling and the focus on three Eritrean colleges limit the generalizability of the findings. The sample may not fully represent the broader student population, and the results may not extend to other colleges in the country. Future research should aim to strengthen these findings by employing a more inclusive, randomly selected sample from all colleges of the country. Additionally, relying solely on self-report questionnaires may introduce social desirability bias. To mitigate this, future studies could adopt mixed methods of data collection, combining quantitative and qualitative approaches. Furthermore, although the study focused on perceived social support and psychological capital as mediators between stress and burnout, it did not account for other individual and situational factors, such as emotional intelligence, personality, coping styles, and school culture, which could also mediate this relationship. Exploring these variables in future research could provide a more comprehensive understanding of the stress-burnout dynamic. Another limitation lies in the study's restriction to the college context. Replicating the research across different educational levels, such as elementary, junior, and secondary schools, could yield valuable comparative insights. Lastly, given the significance of perceived social support and psychological capital in promoting mental health and mitigating stress and burnout, future research should empirically investigate effective strategies that college communities can implement to cultivate these factors, ultimately improving student well-being.

Conclusion

Owing to the inherently demanding and stressful nature of higher education, students are increasingly vulnerable to mental health problems such as academic burnout, depression, anxiety, stress, and psychological distress (Paul et al., 2024; Vidović et al., 2024). In light of this, the current study aimed to explore

the social and psychological protective factors that shield students from the debilitating effects of academic stress on burnout. Specifically, the study examined the potential mediating roles of perceived social support and psychological capital in the relationship between stress and student burnout. The findings indicate that academic stress leads to burnout, while perceived social support and psychological capital serve as significant protective resources, mitigating the detrimental effects of stress. This suggests that college students who have a positive perception of the quality and availability of their support systems, along with high psychological capital characterized by hope, efficacy, optimism, and resilience, are better equipped to manage their academic demands. As a result, they experience lower levels of cynicism, emotional exhaustion, and enhanced academic efficacy. Therefore, this study underscores the critical importance of social and psychological resources, such as social support and psychological capital, in safeguarding the mental health of college students. To effectively address the mental health challenges faced by students, college communities must prioritize the cultivation and enhancement of these vital resources.

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