

Psychosocial determinants of student well-being: The role of academic burnout, social support and learning empowerment through psychological capital

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ABSTRACT

Student well-being plays a vital role in college study, significantly influencing students' academic performance, satisfaction with learning, cognitive functioning, and motivation. Recognizing its essential impact, this study discovers how psychosocial factors (i.e. academic burnout, learning empowerment, and social support) predict psychological well-being through the mediating effect of psychological capital. A sample of 448 undergraduate students was recruited through convenience sampling, and data were collected via self-report measures assessing academic burnout, learning empowerment, social support, psychological well-being, and psychological capital. While statistical analyses including means, standard deviations, Pearson correlations, and hierarchical multiple regression were performed using SPSS v.26, the jAMM Module (medmod) of Jamovi software was employed to examine the mediation effects. The results indicate that academic burnout, learning empowerment, and social support are strong predictors of psychological well-being. Mediation analysis further shows that psychological capital partially mediates these relationships, suggesting that academic burnout, learning empowerment, and social support influence psychological well-being both directly and indirectly. Specifically, reducing academic burnout, fostering learning empowerment, and enhancing social support strengthen psychological capital, which, in turn, improves students' psychological well-being. These findings highlight the need to address burnout, nurture learning

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empowerment, and ensure social support as essential strategies for enhancing psychological capital and well-being in students. Consequently, college communities are encouraged to integrate these critical psychosocial resources into their programs to foster positive psychological well-being, academic success, and mental health among students.

KEYWORDS

learning empowerment, psychological capital, psychological well-being, social support, student burnout, college students

INTRODUCTION

Well-being is recognized as an essential aspect of college education, as it influences students' learning outcomes and mental health indicators, such as academic success, learning satisfaction, and motivation (Yu, Shek, & Zhu, 2018). Well-being is a complex concept generally described as an optimal psychological experience and flourishing (Ryan & Deci, 2001). Two main perspectives conceptualize well-being are Hedonism and Eudaimonia. The hedonic approach emphasizes happiness and defines well-being in terms of positive affect, such as satisfaction and pleasure, and the absence or minimal experience of negative affect. In contrast, the eudaimonic approach centers on meaning, purpose, and self-actualization, conceptualizing well-being in terms of an individual's capacity to realize their psychological potential and, in turn, function as a fully actualized person (Ryan & Deci, 2001). Following the eudaimonic approach, Ryff (1989) theorized psychological well-being as a multidimensional construct encompassing six dimensions: self-acceptance (a positive attitude toward oneself, despite personal limitations), positive relations with others (developing warm, trusting, and meaningful interpersonal relationships), autonomy (self-regulation and maintaining a sense of independence), environmental mastery (effectively managing one's environment to achieve a sense of control), purpose in life (a feeling that one's life is meaningful), and personal growth (utilizing psychological resources to their fullest potential and achieving self-actualization).

Although psychological well-being has traditionally been studied from a medical perspective, focusing on alleviating symptoms of mental illness (Ryff & Keyes, 1995), scholars working within the eudaimonic paradigm argue that well-being is not merely the experience of positive emotions like happiness and satisfaction, or the absence of pain (Ryff & Keyes, 1995). Instead, it includes the capacity to fully capitalize on one's potential (Ryff, 1989; Ryff & Keyes, 1995). This perspective suggests that students' ability to actualize their learning potential is a crucial feature of their psychological functioning. Positive psychological states, which are key to well-being, play a vital role in enhancing college students' capacity to invest in their future employability and social adaptation (Wei, 2022). Given the importance of psychological well-being in education, it is crucial to understand factors that positively or negatively impact students' well-being. One of the primary risk factors that can impair student psychological well-being is student burnout (Di Mario, Rollo, Gabellini, & Filomeno, 2024; Liu et al., 2023). Conversely, social support, learning empowerment, and psychological capital are considered key social and psychological resources that can enhance students' psychological well-being

and academic success (Hassan, Fang, Malik, Lak, & Rizwan, 2023; Indrianti, Sasmoko, Yossy, Suprpto, & Hartono, 2017; Poots & Cassidy, 2020). Thus, the main aim of this study is to investigate how student burnout, social support, and learner empowerment affect student well-being through the mediating role of psychological capital.

LITERATURE REVIEW

Academic burnout and psychological well-being

Academic burnout refers to the physical and psychological strain students experience due to feelings of exhaustion in managing academic demands, mental detachment from their studies, and a sense of inefficacy in completing academic tasks (Alves et al., 2022; Maslach, 1993). The concept of burnout was originally described as a work-related syndrome characterized by feelings of anger, frustration, exhaustion, and fatigue, occurring among various professional groups employed in human service fields such as healthcare, teaching, counseling, law enforcement, and social work (Freudenberger, 1974; Jacobs & Dodd, 2003; Maslach & Schaufeli, 1996). This led to the assumption that burnout was confined to these professions. However, it became clear that burnout is not restricted to human service workers; rather, it can also affect individuals in various other professional domains (Maslach, Schaufeli, & Leiter, 2001). Over time, the concept of burnout was extended to non-occupational groups, such as college students. Although college students are not employed and do not hold jobs, they are required to engage in formal and mandatory educational tasks, such as attending classes, preparing for exams, and completing assignments, which can be psychologically demanding and may lead to academic burnout (Hu & Schaufeli, 2009).

The relationship between academic burnout and the psychological well-being of college students is well-documented, indicating that students who experience emotional exhaustion from excessive academic demands, a cynical and detached attitude toward college study, and low self-efficacy are more likely to have poor psychological well-being (Rehman, Bhuttah, & You, 2020; Wei et al., 2021). Conversely, students with lower levels of academic burnout tend to experience better psychological well-being. For instance, Wei et al. (2021) conducted a systematic review of studies published between 2015 and 2020, which indicated that student burnout is negatively associated with mental health and academic performance. However, this review was limited to studies conducted among nursing students and may not represent non-medical students. A correlational study by Indreswari, Probawati, and Rachmawati (2022) also examined the association between psychological well-being and academic burnout with a sample of 180 students, validating the negative relationship between these variables. Similarly, in a study conducted in China, university students with lower levels of academic burnout reported better psychological well-being (Rehman et al., 2020). The existing literature consistently supports the notion that academic burnout negatively affects students' psychological well-being. Given the documented detrimental effects of burnout on students' mental health and learning outcomes, it is crucial to understand the resources that might protect students from such adverse impacts. While various factors can influence the relationship between burnout and psychological well-being, social support and psychological capital are recognized as key protective resources, though global empirical evidence remains limited.

Social support and psychological well-being

Social support is recognized as one of the most widely applied and effective forms of social capital that contributes to the positive academic and psychological experiences of students during their academic pursuits. Social support refers to the mutual exchange of resources among individuals, which is perceived by either the provider or recipient as intended to enhance the recipient's quality of life (Chen, Kuo, Chou, & Chen, 2007). It embodies an individual's sense of being accepted, cherished, and appreciated within their social circle by other members (Cheng, 1997). Social support encompasses both practical and emotional assistance extended to an individual through their social network. This support often originates from sources such as family, friends, teachers, college communities, or significant others (Kim, Sharma, Jung, Kim, & Nam, 2019; Rehman et al., 2020). It is well-established in the literature that academic burnout is negatively related to social support. For example, Ye, Huang, and Liu (2021) investigated the relationship between social support and academic burnout in university students with a sample of 502 Chinese university students, finding that social support was negatively related to academic burnout.

Additionally, the study by Ye et al. (2021) reported that life satisfaction partially mediated the association between social support and burnout. Similarly, a negative correlation between academic burnout and social support was observed in a study conducted among Kenyan secondary school students (Oyoo & Mutua, 2019). Therefore, following these studies, it can be said that students who receive social support experience significantly lower levels of academic burnout compared to their counterparts who do not have access to such support. Further, some studies suggest that social support might function as a critical protective factor, safeguarding students from negative psychological experiences such as stress, anxiety, depression, and burnout (Wang, Li, Chen, Yan, & Wen, 2022; Yasin & Dzulkifli, 2010; Ye et al., 2021). Rehman et al. (2020) also provide evidence supporting the notion that social support acts as a mediating variable in the relationship between academic burnout and psychological well-being. This study indicates that college students with lower levels of burnout were associated with a stronger social support system and, consequently, improved psychological well-being. Conversely, students with greater burnout symptoms received low or limited social support and, in turn, exhibited poorer psychological well-being.

Learner empowerment and psychological well-being

In addition to social support, learner empowerment is a key component of students' psychological well-being. Empowerment is generally described as a process that involves making individuals responsible and fostering a sense of ownership over the tasks they undertake (Shulman & Luechauer, 1993). Because empowerment is applied across various domains, such as education, management, and politics, it has been theorized in multiple ways. The literature addresses two main theoretical approaches to empowerment: structural and psychological. The structural theory of empowerment emphasizes organizational or environmental conditions as primary sources of empowerment for employees (Kanter, 1993). Conversely, the psychological empowerment theory of Spreitzer (1995) focuses on how individuals psychologically respond to empowering organizational conditions. According to this theory, psychological empowerment is characterized as intrinsic task motivation and involves cognitive resources related to meaning, competence, self-determination, and impact. Following psychological

empowerment theory, the current study explores the role of psychological empowerment in reducing burnout among college students. Like employees, students must be internally motivated and responsible to carry out their academic tasks successfully. Frymier, Shulman, and Houser (1996) expanded the concept of psychological empowerment from the workplace to the academic setting, introducing the construct of learning empowerment.

In the academic context, learning empowerment refers to students' feelings of competence in performing meaningful tasks that impact their academic experience. It comprises three components: meaningfulness, competence, and impact (Frymier et al., 1996). Meaningfulness pertains to the perceived importance of tasks based on personal standards; competence involves the belief in one's ability to complete tasks; and impact relates to the perception that academic behaviors influence one's learning (Frymier et al., 1996). While numerous workplace studies indicate a positive association between psychological empowerment and employee well-being, scholarly evidence on the contribution of psychological empowerment to student well-being is less comprehensive. However, a limited number of studies conducted among general student populations suggest a correlation between learner empowerment and student well-being (Indrianti et al., 2017). When students experience psychological empowerment in their educational pursuits, they develop a sense of autonomy and ownership over their academic endeavors, fostering greater satisfaction and positive learning outcomes.

The mediating role of psychological capital

Psychological capital is recognized as a potential mediating variable in the relationship between educational factors (e.g. academic stress, and student burnout) and students' psychological well-being (Alsultan, Alharbi, Mahmoud, & Elsharkasy, 2023; Nabais, Chambel, & Carvalho, 2024). Psychological capital involves utilizing positive psychological resources, such as efficacy, hope, optimism, and resilience, to enhance positive outcomes for individuals and organizations across various settings, including business, work, and education (Luthans, Avolio, Avey, & Norman, 2007). It is theorized as a state-like, higher-order construct comprising four key psychological assets: hope, efficacy or self-efficacy (confidence), resilience, and optimism. Numerous studies underscore the relationship between psychological capital and academic outcomes among students in higher education. For instance, in a recent systematic review of 43 articles published between 2012 and 2022, Li, Che Hassan, and Saharuddin (2023) found that psychological capital plays a crucial role in university students' academic outcomes, such as academic performance, stress, engagement, adjustment, burnout, and intrinsic motivation. Additionally, a recent cross-sectional study in Saudi Arabia identified a full mediational effect of psychological capital on the relationship between university students' perceived stress and their psychological well-being (Alsultan et al., 2023). Likewise, Rioli, Savick, and Richards (2012) observed that psychological capital buffered the adverse effects of stress on physical and psychological well-being. Moreover, a study by Yu, Yao, Chen, Zhu, and Yan (2023) validated the positive mediating role of psychological capital on the relationship between school climate and collective self-esteem, as well as between collective self-esteem and academic burnout among medical students in China. Another research involving Chinese undergraduate students revealed that psychological capital significantly mediates the link between psychological stress and psychological distress (Sun et al., 2022). Overall, these studies indicate that psychological capital acts as a protective factor, mitigating the adverse effects of stress on students' mental health.

Research also shows that social support can enhance student well-being by cultivating psychological resources like hope, efficacy, resilience, and optimism. This process suggests that psychological capital plays a mediating role in these relationships. For instance, a study conducted in China revealed that psychological capital significantly mediated the relationship between college students' perceived social support and their psychological well-being (Huang & Zhang, 2021). Also, resilience and self-efficacy, two core components of psychological capital, were found to mediate the relationships between social support and both psychological well-being (Dorostkar, Moosavipour, Pirani, & Motlagh, 2023) and procrastination (Zhang et al., 2024) among college students. Additionally, Lo, Chen, Ho, and Cheng (2023) reported that hope served as a mediating variable between perceived social support and mental health literacy, suggesting that university students who positively perceive their social support systems tend to be more hopeful, which in turn enhances their mental health knowledge and skills. Siu, Lo, Ng, and Wang (2023) also observed that psychological capital mediated the connection between social support and academic performance. Drawing from these findings, it can be proposed that psychological capital may serve as a mediator between social support and student well-being. Although there is a scarcity of literature addressing the role of learner empowerment in this context, studies conducted in organizational settings support its potential mediating effect. For example, research has shown that psychological capital mediates the relationships between empowered leadership (Gyu Park, Sik Kim, Yoon, & Joo, 2017) and psychological empowerment (Taştan, 2013) with employees' psychological well-being. In the educational context, several studies have reported correlations among psychological capital, student engagement, learning empowerment, and academic achievement, with learning empowerment acting as a mediating variable (Lee & Song, 2010; Siu et al., 2023). Thus, it is reasonable to expect that psychological capital can also mediate the connections between learner empowerment and student mental health.

The present study

The reviewed literature indicates that academic burnout, social support, and learning empowerment are associated with college students' psychological well-being. Several studies have examined the mediating role of psychological capital in the relationships between various factors and educational and psychological outcomes, as outlined above. Many of the reviewed studies consistently suggest that psychological capital is a key feature of students' academic and psychological outcomes. However, there is a lack of sufficient research specifically investigating the mediating effect of psychological capital on the relationships between psychosocial factors (i.e. academic burnout, social support, and learning empowerment) and psychological well-being in the academic context. Siu et al. (2023) also noted that the role of psychological capital in student outcomes, especially its potential indirect processes, remains largely overlooked. Furthermore, existing literature does not adequately represent all geographic regions, particularly Sub-Saharan African countries such as Eritrea. For example, Li et al. (2023) disclosed in their recent systematic review that empirical studies on psychological capital and academic outcomes have primarily been conducted in Asia and the United States, with some representation in Europe and Australia, while African and Latin American countries remain significantly underrepresented. Thus, the primary aim of the present study was to explore the influence of academic burnout, social support, and learning empowerment on college students' psychological

well-being through psychological capital. The findings are expected to offer evidence-based insights into the interplay among academic burnout, social support, learning empowerment, psychological capital, and psychological well-being. As a result, higher education institutions may consider practical steps to promote students' psychological well-being by addressing academic burnout, enhancing support systems, and fostering learning empowerment and psychological capital.

Hypotheses of the study:

Drawing from the reviewed literature, the following four hypotheses were developed to guide the study.

- H1. Academic burnout is negatively related to psychological well-being of college students.
- H2. Social support is positively related to psychological well-being in college students.
- H3. Learning empowerment is positively related to psychological well-being of college students.
- H4. Psychological capital will mediate the relationships of academic burnout, social support, and learning empowerment with psychological well-being of college students.

METHODS

Sample of the study

A total of 448 participants took part in this study, comprising undergraduate students selected from three colleges in Eritrea. The sample consisted of senior students across various disciplines such as Science, Engineering, and Education. Convenience sampling was utilized to select participants from the target population. The average age of the participants was 22 years ($SD = 2.30$). In terms of gender distribution, 224 (49.10%) were males, while 228 (50.90%) were females. Additionally, 429 participants (95.80%) were unmarried, while 19 (4.20%) were married. Regarding the representation of colleges, a significant proportion of participants were from the College of Science ($n = 235$; 52.50%) and College of Education ($n = 125$; 27.90%), while a smaller contingent came from the College of Engineering and Technology ($n = 88$; 19.60%).

Measures

Social support. The present study adopted the Multidimensional Scale of Perceived Social Support (MSPSS) to assess social support (Zimet, Dahlem, Zimet, & Farley, 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, Zimet, & Walker, 1991; Ermis-Demirtas et al., 2018; Tsilika, Galanos, Polykandriotis, Parpa, & Mystakidou, 2019; Zimet et al., 1988). The measure also showed good internal consistency in our study ($\alpha = 0.90$).

Academic burnout. Maslach Burnout Inventory-Student Survey (MBI-SS) was utilized to assess Academic burnout (Schaufeli et al., 2002a, 2002b). This instrument comprises 15 items categorized into three subscales: Emotional Exhaustion (5 items), Cynicism or Depersonalization (4 items), and Academic Efficacy (6 items). Employing a 7-point Likert scale, responses range from 1 (*strongly disagree*) to 7 (*strongly agree*). To calculate the total burnout score, the values for the Academic Efficacy subscale were reversed to reflect academic inefficacy. The resultant total score ranges from 15 to 105, with higher scores indicating a greater degree of burnout. The MBI-SS is widely used in academic settings, and its psychometric properties have been well-established in numerous studies conducted across diverse countries and cultures (e.g. Hu & Schaufeli, 2009; Jagodics & Szabó, 2022). In the current research, the reliability coefficient of the MBI-SS was found to be 0.77, indicating a relatively sufficient level of reliability.

Positive psychological capital. The study measured participants' psychological capital using the 24-item Psychological Capital Questionnaire (PCQ), initially developed by 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 0.93 and 0.89, respectively (Liran & Miller, 2017). Similarly, the Cronbach alpha of PCQ in our sample was found to be good ($\alpha = 0.82$).

Learning empowerment. Students' learning empowerment was assessed using the 18-item Learner Empowerment Scale (LES) developed by Frymier et al. (1996) and adapted by Weber, Martin, and Cayanus (2005) to assess students' empowerment in their learning process. This scale consists of three subscales: Meaningfulness (6 items), Competence (6 items), and Impact (6 items). The LES follows a Likert-type format, where participants rate their level of learning empowerment on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The total score on the scale ranges between 18 and 90, with higher scores indicating greater learner empowerment. The internal consistency of the measure was found to be high, yielding an alpha coefficient of 0.91. Additionally, the subscales of meaningfulness, competence, and impact demonstrated reliability coefficients of 0.87, 0.91, and 0.91, respectively (Weber et al., 2005). In the present study, the overall reliability coefficient of the scale was satisfactory ($\alpha = 0.79$) and greater than the benchmark value of 0.50 (Fisher, Matthews, & Gibbons, 2016).

Positive psychological well-being. Positive Psychological Well-being was evaluated utilizing the 18-item version of the Psychological Well-being Scale developed by Ryff and Keyes (1995). This assessment tool was designed to measure six distinct facets of psychological well-being: Self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. Respondents used a Likert-type scale, rating items from 1 (*strongly disagree*) to 7 (*strongly agree*). The total score on the scale range between 18 and 127. Students' higher scores reflect better psychological well-being. The scale's reliability and validity were supported by statistical evidence provided by the authors. In an Iranian study conducted by Khanjani, Shahidi, Fathabadi, Mazaheri, and Shokri (2014), the overall scale demonstrated an

adequate level of internal consistency ($\alpha = 0.71$). In our study, the scale also demonstrated a good internal consistency ($\alpha = 0.74$).

Data collection procedure and ethical consideration

Following the approval of the study by Asmara College of Education, self-report paper-and-pencil questionnaires were distributed among the student participants within their respective classrooms. Initially, a total of 850 questionnaires were distributed, out of which 562 were used for the final analyses. Given the participants' adequate proficiency in English, the questionnaires were provided in English. Ethical considerations were carefully addressed. Each questionnaire included a letter of informed consent outlining the study's purpose. Participants were also explicitly informed that their participation was voluntary and anonymous. Additionally, they were assured that all collected data would be treated with confidentiality and solely used for the intended study, without any other purpose.

Statistical analyses

SPSS (version 26) and Jamovi (version 2.4.8) software were utilized for data analysis. Descriptive statistical techniques, including measures such as mean, standard deviation, and measures of distribution shapes, were computed to explore and summarize the data. The Pearson product-moment correlation was used to examine the interplay between the study variables. The descriptive and correlation analyses were carried out using SPSS. Additionally, the jAMM Module (medmod) of jamovi was employed to determine the mediation effects of psychological capital on the links of academic burnout, social support, and learning empowerment with psychological well-being. *T*-tests and *F*-tests were used to assess the significance of the correlation and regression results, while the bias-corrected bootstrap method was applied to test the mediation effects.

RESULTS

Descriptive statistics of the study variables

The values for descriptive statistics (i.e. mean, standard deviation, minimum, and maximum), reliability coefficients, and measures of shape were presented in Table 1. All the study variables demonstrated high-reliability coefficients. To test the assumption of normality of the datasets, skewness and kurtosis were calculated and the values indicated that the data were normality distributed. According to Gravetter and Wallnau (2014), the acceptable range for skewness and

Table 1. Summary of descriptive values of the study variables (448)

Variables	Min	Max	<i>M</i>	SD	Items	α	<i>Sk</i>	<i>Ku</i>
Social support	12.00	60.00	48.02	8.92	12	0.90	−0.97	1.21
Psychological capital	38.00	120.00	82.38	11.28	24	0.82	−0.30	1.38
Academic burnout	15.00	96.00	54.84	12.12	15	0.77	−0.23	0.57
Learning empowerment	31.00	82.00	61.20	9.19	18	0.79	−0.48	0.35
Psychological well-being	39.00	126.00	90.93	13.45	18	0.74	−0.27	−0.08

Note. *Sk* = skewness; *Ku* = kurtosis.

kurtosis typically lies between -2 and $+2$, and the values for all study variables fell within this acceptable range, indicating a normal distribution of the data or study.

Interconnections between study variables

The examination of the associations between variables of the study utilized the Pearson product-moment correlation coefficient, revealing statistically significant relationships among all study variables (Table 2). Social support ($r = 0.41, p < 0.001$), learning empowerment ($r = 0.43, p < 0.001$) and psychological capital ($r = 0.43, p < 0.001$) demonstrated positive relationships with psychological well-being. Conversely, academic burnout ($r = -0.37, p < 0.001$) was negatively associated with psychological well-being. Additionally, social support ($r = 0.32, p < 0.001$) and learning empowerment ($r = 0.52, p < 0.001$) displayed positive relationships with psychological capital. On the other hand, academic burnout appeared to have a significant negative association with psychological capital ($r = -0.49, p < 0.001$) (Table 2).

Hierarchical regression analyses

Before conducting the regression analyses, preliminary analyses were performed to ensure no violation of the assumptions of normality, and multicollinearity. Normality was assessed using skewness and kurtosis values (see Table 1). Multicollinearity was evaluated through Tolerance and Variance Inflation Factor (VIF) values. According to Field (2009) and Pallant (2020), a Tolerance value below 0.10 and a VIF above 10 indicate multicollinearity. The Tolerance and VIF values for each predictor were as follows: academic burnout (Tolerance = 0.97, VIF = 1.04), social support (Tolerance = 0.92, VIF = 1.08), psychological capital (Tolerance = 0.70, VIF = 1.44), and learner empowerment (Tolerance = 0.59, VIF = 1.70). These results indicate that the sample did not violate the assumptions of normality or multicollinearity. Then, multiple hierarchical regression analysis was run to explore the predictive impacts of academic burnout, social support, learning empowerment, and psychological capital on psychological well-being while controlling the effects of demographic variables. When running the regression analyses, the variables were entered into the regression model in sequential models. Initially, demographic variables, such as gender, age, and marital status were entered into the first model. Subsequently, social support was included in the second model, followed by the addition of academic burnout in the third model. Psychological capital and learning empowerment were successively submitted into the fourth and fifth models of the regression analyses. As can be seen from the data presented in Table 3, variables of the first model explained a smaller percent (2%) of variance in the psychological well-being and the model was statistically significant ($R^2 = 0.02$,

Table 2. Bivariate relationships between the study variables

Variables	1	2	3	4
1. Social support				
2. Psychological capital	0.32**	1		
3. Academic burnout	-0.22**	-0.49**	1	
4. Learning empowerment	0.30**	0.52**	-0.56**	1
5. Psychological well-being	0.41**	0.43**	-0.37**	0.43**

* $p \leq 0.01$ (2-tailed).

Table 3. Hierarchical regression results for predictors of psychological well-being

Predictors	B	SE	β	Model				
				R	R ²	ΔR^2	F	df
<i>Model 1</i>				0.15	0.02		3.35*	3, 444
Gender	-3.86	1.29	-0.14*					
Age	0.55	0.33	0.09					
Marital	-2.00	3.68	-0.03					
<i>Model 2</i>				0.39	0.15	0.13	19.80***	4, 443
Gender	-2.77	1.21	-0.10*					
Age	0.45	0.31	0.08					
Marital status	-5.33	3.45	-0.08					
Academic burnout	-0.41	0.05	0.37***					
<i>Model 3</i>				0.51	0.25	0.10	30.25***	5, 442
Gender	-1.11	1.16	-0.04					
Age	0.31	0.29	0.05					
Marital status	-4.07	3.24	-0.06					
Academic burnout	-0.33	0.05	-0.30***					
Social support	0.51	0.07	0.34***					
<i>Model 4</i>				0.55	0.30	0.04	31.00***	6, 441
Gender	-1.69	1.13	-0.06					
Age	0.29	0.28	0.05					
Marital status	-2.62	3.17	-0.04					
Academic burnout	-0.21	0.05	-0.19***					
Social support	0.42	0.07	0.28***					
Psychological capital	0.30	0.06	0.25***					
<i>Model 5</i>				0.56	0.32	0.02	29.22***	7, 440
Gender	-1.77	1.12	-0.07					
Age	0.20	0.28	0.03					
Marital status	-2.52	3.12	-0.04					
Academic burnout	-0.13	0.06	-0.11*					
Social support	0.38	0.07	0.25***					
Psychological capital	0.23	0.06	0.19***					
Learning empowerment	0.28	0.08	0.19***					

Note. Dummy variables were coded as: Gender: Male = 1, Females = 0; Marital status: Married = 1, Unmarried = 0; * $p < 0.05$, *** $p < 0.001$.

$F_{(3, 444)} = 3.35, p < 0.05$). The addition of academic burnout to the second model improved the ability of the two models to jointly explain a total of 15% of variance in the psychological well-being and the regression model was also statistically significant from zero ($R^2 = 0.26, F_{(4, 443)} = 19.80, p < 0.001$). After controlling the effects for demographics, academic burnout contributed an additional 13% of the variance in the outcome variable, with a significant regression model (R^2 change = 0.13, $F_{(1, 443)} = 67.67, p < 0.001$).

With the inclusion of social support in the third model of the regression, the model explained a large amount of variance in psychological well-being (25%). The third model was also statistically significant from zero ($R^2 = 0.25, F_{(5, 442)} = 30.25, p < 0.001$). When the effects for demographics and academic burnout were controlled, social support had a 10% unique

contribution to enhancing the model and the model was significant as well (R^2 change = 0.10, $F_{(1, 442)} = 61.28, p < 0.001$). In model 4, the addition of psychological capital has resulted in 30% of the variability in psychological well-being ($R^2 = 0.30, F_{(5, 442)} = 31.00, p < 0.001$). When the effects for the first and second models were removed, the individual contribution of the psychological capital to the regression model was 4% and the model was statistically significant well (R^2 change = 0.04, $F_{(1, 441)} = 26.11, p < 0.001$). Finally, when learning empowerment was added to the fifth model, the overall model accounted for a total of 32% of the change in psychological well-being ($R^2 = 0.30, F_{(5, 442)} = 31.00, p < 0.001$). After controlling the effects for all the variables in all the previous models, the unique contribution of learning empowerment to the model was two percent and the model was significant (R^2 change = 0.02, $F_{(1, 441)} = 13.36, p < 0.001$).

Mediation analyses

The mediation analysis was conducted using the jAMM Module (medmod) of jamovi software.

In performing the mediation analyses, academic burnout, social support, and learning empowerment were set as independent variables, psychological capital as a mediator, and psychological well-being as an outcome variable. Results obtained from jamovi delineated that all the regression paths were statistically significant, which are set as preconditions for mediational analyses. As presented in Table 4 and Fig. 1, the direct effects of academic burnout ($\beta = -0.12, SE = 0.06, p < 0.001$), social support ($\beta = 0.27, SE = 0.10, p < 0.001$) and learning empowerment ($\beta = 0.19, SE = 0.09, p < 0.001$) on psychological well-being were statistically significant. Besides, there were statistically significant regression coefficients for the effects of academic burnout ($\beta = -0.28, SE = 0.05, p < 0.001$), social support ($\beta = 0.17, SE = 0.06, p < 0.001$), and learning empowerment ($\beta = 0.31, SE = 0.09, p < 0.001$) on psychological capital. Further, psychological capital was also positively and significantly related to psychological well-being

Table 4. Indirect, direct, and total effects

Type	Effect	B	SE	95% CI		β	z	p
				Lower	Upper			
Indirect	AB \Rightarrow PsyCap \Rightarrow PWB	-0.06	0.02	-0.098	-0.026	-0.05	-3.16	0.002
	SS \Rightarrow PsyCap \Rightarrow PWB	0.05	0.02	0.018	0.093	0.03	2.61	0.009
	LE \Rightarrow PsyCap \Rightarrow PWB	0.09	0.03	0.039	0.151	0.06	3.21	0.001
Components	AB \Rightarrow PsyCap	-0.25	0.05	-0.352	-0.162	-0.28	-5.23	<0.001
	PsyCap \Rightarrow PWB	0.23	0.06	0.096	0.339	0.19	3.94	<0.001
	SS \Rightarrow PsyCap	0.21	0.06	0.106	0.328	0.17	3.82	<0.001
	LE \Rightarrow PsyCap	0.38	0.06	0.262	0.495	0.31	6.39	<0.001
Direct	AB \Rightarrow PWB	-0.13	0.06	-0.236	-0.016	-0.12	-2.28	0.022
	SS \Rightarrow PWB	0.40	0.10	0.206	0.601	0.27	4.12	<0.001
	LE \Rightarrow PWB	0.27	0.09	0.098	0.457	0.19	3.04	0.002
Total	AB \Rightarrow PWB	-0.19	0.05	-0.292	-0.069	-0.17	-3.48	<0.001
	SS \Rightarrow PWB	0.45	0.10	0.277	0.638	0.30	4.72	<0.001
	LE \Rightarrow PWB	0.36	0.09	0.200	0.546	0.25	4.14	<0.001

Note. AB = Academic Burnout; SS = Social Support; LE = Learning Empowerment; PsyCap = Psychological capital; PWB = Psychological Well-Being.

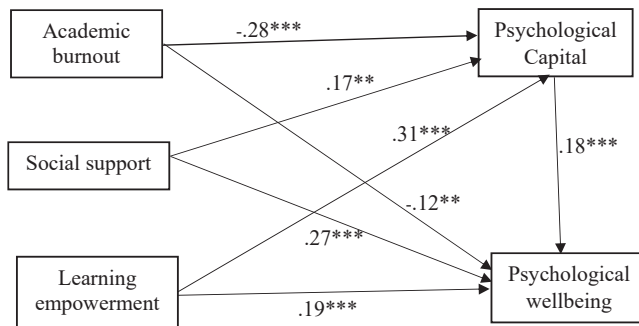


Fig. 1. The mediated effects of academic burnout, social support, and learning empowerment on psychological wellbeing through psychological capital (standardized coefficients are reported)

($\beta = 0.19$, $SE = 06$, $p < 0.001$). The three indirect effects of academic burnout, social support, and learning empowerment on psychological well-being were tested using the bias-corrected bootstrap method with a sample of 1,000. All the three mediated effects of academic burnout ($\beta = -0.05$, $SE = -0.02$, 95% $CI = -0.098, -0.026$) social support ($\beta = 0.03$, $SE = 0.02$, 95% $CI = 0.018, 0.013$) and learning empowerment ($\beta = 0.06$, $SE = -0.03$, 95% $CI = 0.039, 0.0151$) on psychological well-being through psychological capital were statistically significant since the 95% confidence interval did not include zero. Although the three indirect effects showed statistical significance, indicating the presence of mediation, the mediation effects are partial due to the simultaneous significance of all direct effects.

DISCUSSION

The research was designed to examine the interplay among academic burnout, social support, and learning empowerment, and their combined effect on the psychological well-being of college students. We posited six hypotheses to provide a structured framework for our investigation. Through rigorous analysis, we unearthed compelling evidence suggesting that psychological capital plays a crucial role as a mediator in shaping the relationship between these predictors and the overall psychological well-being of students. Specifically, our study corroborates the hypothesis that academic burnout bears a negative correlation with the psychological well-being of college students. This suggests that individuals experiencing lower levels of academic burnout tend to exhibit greater psychological well-being. This finding aligns harmoniously with previous research, which has consistently highlighted the adverse impact of academic burnout on psychological well-being among college students (Rehman et al., 2020; Wei et al., 2021; Yu & Chae, 2020). The negative correlation between academic burnout and psychological well-being might be explained within the context of conservation of resources theory. According to this theory, academic burnout usually stems from prolonged stress, an overwhelming workload, and a lack of resources such as time, support, and coping mechanisms. As individuals experience burnout, they may deplete their psychological resources, leaving them less able to maintain a sense of psychological well-being (Hobfoll, 1989, 2002). Similarly, academic burnout is often characterized by emotional exhaustion, where students feel drained, fatigued, and emotionally exhausted

due to their academic demands. This emotional exhaustion can negatively impact the students' psychological well-being by reducing their resilience to stress and diminishing positive emotions. In a similar vein, the Demand-Resource Model posits that students face excessive academic demands, which can lead to burnout and hinder their future engagement in school-related activities. These circumstances profoundly affect students' participation in school and their overall well-being (Wei, Wang, & Macdonald, 2015).

The sample data of our research also supported the hypothesis that perceived social support plays a crucial role in predicting the psychological well-being of college students. This implies that students who feel supported by their families, friends, and significant others are more likely to experience positive psychological states. This notion is in line with prior studies that consistently demonstrate the link between social support and improved well-being (e.g. Harandi, Taghinasab, & Nayeri, 2017; Huang & Zhang, 2021; Poudel, Gurung, & Khanal, 2020; Ye et al., 2021). Therefore, our results emphasize the significance of acknowledging and fostering social connections, highlighting the need for interventions aimed at strengthening social support networks to enhance the psychological well-being of college students. The conservation of resources theory of Hobfoll (2002) might best justify the positive association between social support and psychological well-being. Within this theoretical framework, social support functions as a significant psychological resource by offering individuals emotional comfort, practical assistance, and informational guidance, bolstering their resilience and coping abilities. Besides, social support can act as a buffer against resource depletion during times of stress, conserving individuals' existing psychological resources and mitigating psychological distress. Further, perceived social support facilitates the mobilization of additional resources, empowering individuals to seek help, access available resources, and adopt adaptive coping strategies. This multifaceted role of social support underscores its significance in enhancing an individual's capacity to cope with stressors and maintain psychological well-being.

We also proposed that there would be a significant relationship between learner empowerment and psychological well-being. Our data analysis provided robust support for this assertion. We found that college students who demonstrate high levels of learner empowerment are notably more likely to experience better psychological well-being, including autonomy, positive relations, environmental mastery, purpose in life, self-acceptance, and personal growth. For instance, students who understand the meaning of their academic courses tend to set meaningful goals in their lives and continue to acquire new knowledge and develop new skills that enhance their personal growth. Students' meaningful academic engagement also strengthens positive relations, as shared goals and mutual interests create a sense of connection. Similarly, students who believe in their ability to perform academic tasks successfully and effectively tend to achieve a better sense of mastery and confidence in managing their environment and making the best use of the opportunities around them. Students' feeling that they can make a difference in their learning environment bolsters autonomy and positive relations with others. When students feel their contributions are valued and impactful, they experience greater autonomy and are more likely to feel respected and connected to others. The experience of having an impact promotes self-efficacy and supports continuous personal growth as students take ownership of their learning journey. Central to this relationship is the concept of intrinsic motivation, which serves as a key aspect of empowerment (Frymier et al., 1996; Thomas & Velthouse, 1990). When students are intrinsically motivated in their learning pursuits, they are more likely to find fulfillment in their academic endeavors. This intrinsic drive propels them to engage more deeply

with their studies, fostering a sense of satisfaction and accomplishment (Frymier et al., 1996). Consequently, these students tend to exhibit higher levels of academic energy and enthusiasm, which further enhances their positive psychological functioning. On the other hand, students with low intrinsic motivation and autonomy tend to experience poor psychological well-being, such as problems in interpersonal relationships, lower environmental mastery, and lack of purpose in life.

The positive link between learner empowerment and psychological well-being can be effectively explained through Self-Determination Theory (SDT). According to SDT, autonomy (a sense of choice and self-direction), competence (a feeling of mastery and confidence), and relatedness (a sense of social connection and belonging) are fundamental psychological needs that promote well-being and optimal functioning (Ryan & Deci, 2017). When these needs are met, individuals are more motivated, and resilient, and experience greater psychological health. Similarly, learner empowerment involves students' recognition of the value and purpose of their academic work (meaningfulness), confidence in their ability to succeed in academic tasks (competence), and understanding the influence of their studies (impact). Given the conceptual overlap between empowerment and the needs outlined in SDT (Brooks & Young, 2011), it can be argued that students with high levels of learner empowerment, who feel competent, purposeful, impactful, and self-determined, are more likely to experience enhanced positive psychological functioning such, personal growth, purpose in life, sense of environmental mastery. These empowered students may engage more fully in their education, handle academic challenges with greater resilience, and sustain higher levels of satisfaction and well-being in their academic lives.

Finally, the study provided evidence supporting the hypothesis that psychological capital significantly mediates the relationships between academic burnout, social support, learner empowerment, and psychological well-being. Findings suggest that students with low levels of burnout, adequate social support, and high learner empowerment tend to have stronger psychological resources, such as hope, efficacy, resilience, and optimism, that contribute to improved psychological well-being. The partial mediation finding indicates that burnout, social support, and empowerment have both direct and indirect effects on student well-being. Although research on this topic is limited, our findings are consistent with the broader literature regarding the mediating role of individual components of psychological capital in the relationships between various burnout and student mental health outcomes. For instance, Cengiz, Yıldırım, Kaşıkçı, and Peker (2024) found that hope and resilience, two critical components of psychological capital, mediated the relationship between school burnout and well-being. This suggests that students who exhibit higher levels of hope and resilience tend to experience lower levels of burnout and, consequently, improved psychological well-being. Virgã, Pattusamy, and Kumar (2020) argue that the development of psychological resources, such as hope, optimism, resilience, and efficacy, can shield students from burnout and boredom while also enhancing engagement and academic performance. Furthermore, students with high levels of resilience appear to be less susceptible to symptoms of burnout and report better psychological well-being, suggesting that this resource mediates the relationship between burnout and well-being (Yu & Chae, 2020).

According to the conservation of resources theory, individuals become more susceptible to burnout and mental health issues when their essential resources are depleted. This resource depletion hampers their ability to cope, which in turn restricts opportunities to recoup lost

resources (Hobfoll, 2002). In the context of college students, psychological resources, such as hope, efficacy, optimism, and resilience, act as key protective factors that help them withstand academic pressures and prevent burnout. These resources serve not only as defenses against stress but also as improve positive academic engagement and well-being. Hope provides students with a sense of purpose and the ability to envision pathways to achieve their goals, making it easier for them to overcome academic setbacks. Efficacy, or confidence in one's ability to succeed, empowers students to tackle difficult tasks and fosters a sense of control over their academic journey. Optimism enables students to approach challenges with a positive attitude, expecting favorable outcomes despite potential obstacles. Finally, resilience, essential for bouncing back from adversity, enables students to adapt to changing academic demands and recover from setbacks with greater ease. Together, these elements form what is known as psychological capital, a valuable resource that shapes students' mindsets and behaviors.

The indirect effect of social support on psychological well-being through psychological capital is supported by previous studies that have documented similar findings (e.g. Huang & Zhang, 2021; Li et al., 2014; Li & Qin, 2020; Siu et al., 2023; Wang, Ng, & Siu, 2023). Social support serves as a vital resource that enhances students' psychological assets, such as hope, optimism, self-efficacy, and resilience, which, in turn, promotes their overall well-being. In the face of the inherent challenges associated with higher education, students who receive adequate and high-quality academic, social, emotional, and moral support from parents, counselors, teachers, peers, and classmates tend to exhibit greater hopefulness, resilience, confidence, and optimism. This support system not only mitigates stress from academic pressures but also fosters students' sense of personal strengths and enhances their subjective well-being (Siu et al., 2023; Xin, 2023). For example, when college students receive constructive feedback, advice, mentorship, and encouragement from their teachers, parents, and peers, and collaborate with their classmates, they often experience increased motivation and energy in their academic activities (hope), develop confidence in their ability to accomplish academic tasks (efficacy), expect positive learning outcomes (optimism), and remain persistent in overcoming academic obstacles. As a result, these students are better equipped with sufficient resources to tackle difficulties and navigate their academic paths, ultimately enhancing their psychological well-being (Laranjeira & Querido, 2022).

The literature on the mediating effect of psychological capital in the relationship between learner empowerment and psychological well-being remains limited. Nonetheless, this study's findings are generally in accord with existing research reporting similar patterns. For example, Rodríguez-Cifuentes, Segura-Camacho, García-Ael, & Topa (2020) identified psychological capital as a mediator in the relationship between motivational traits and organizational outcomes. Similarly, Gyu Park et al. (2017) found psychological capital fully mediated the link between empowering leadership and psychological well-being. In the educational context (Taştan, 2013), reported that self-efficacy, a core component of psychological capital, mediated the relationship between psychological empowerment and well-being. Although these studies were conducted among employees, they indicate that psychological capital may serve a similar mediating function in academic settings, connecting empowerment with students' psychological well-being. For instance, students who recognize the value of academic content may develop a positive outlook on their studies and future outcomes (optimism), establish clear goals, and foster motivation to find multiple pathways toward achieving them (hope). Such a mindset can contribute to aspects of well-being like purpose in life. Furthermore, the competence dimension of learner

empowerment can enhance students' self-efficacy and resilience, leading to well-being indicators like environmental mastery and personal growth. Similarly, a sense of self-determination and power in academic pursuits can instill optimism about positive results, fostering psychological well-being in areas like autonomy and social relationships. Empowered students, therefore, demonstrate strong internal motivation and make independent decisions that support academic success and personal flourishing (Derakhshan, 2022).

Limitations, implications, and future research directions

The study has several methodological limitations that should be considered in future research. First, as all study variables may change over time, the cross-sectional research design limits our ability to capture how these variables interact longitudinally. The prediction and mediation effects observed in this study were also based on correlational, not experimental, data, so causal relationships cannot be inferred. Future studies might consider a longitudinal or experimental design to better understand the dynamics between these variables over time and establish causality. Second, as a quantitative study, data collection relied on questionnaires, which may have introduced social desirability bias, potentially impacting response accuracy. Employing a mixed-methods approach could offer deeper insights into the factors influencing psychological well-being among college students. Third, the use of a convenience sampling strategy may have limited the representativeness of the sample. Future studies are encouraged to replicate this research with representative samples obtained through random sampling. Finally, this study focused specifically on the psychological well-being of college students. Future research might extend these findings to other educational levels (e.g. elementary, junior, and high school) and organizational settings, such as workplace environments.

Despite the above-mentioned limitation, the study also provides both practical and theoretical implications. Considering the limited literature on the topic within educational settings, this study may extend our understanding of how academic burnout, social support, and learner empowerment impact students' psychological well-being. More importantly, the mediated effects of these predictors on well-being through psychological capital clarify the mechanisms underlying their relationships with the outcome variable. Beyond its scholarly contributions, this study can benefit colleges, teachers, and counselors by offering evidence-based insights for fostering psychological capital and well-being through cultivating learner empowerment, enhancing social support, and reducing student burnout. For example, teachers' interpersonal communication behaviors are essential for promoting learner empowerment, fostering social support, reducing burnout, and thereby enhancing positive learning outcomes and psychological health (Frymier et al., 1996; Hoferichter, Kulakow, & Raufelder, 2022; Zheng, 2021). Teachers should create classroom environments where students feel a sense of internal motivation, ownership, purpose, and competence in their tasks and enjoy learning as a holistic experience (Frymier et al., 1996). Relying on passive knowledge consumption does little to enhance students' psychological empowerment or social connections.

Research suggests that positive interpersonal behaviors, such as credibility, care, confirmation, clarity, and relational closeness, are critical elements of psychological empowerment for students (Derakhshan, 2022; Frisby, 2019). Peers and classmates also represent vital sources of social support for college students (Hoferichter et al., 2022). Thus, colleges, and teachers in particular, should aim to establish learning environments that promote cooperative learning

through collaborative academic tasks (e.g. group work). Students who receive sufficient support from their peers and classmates are more likely to feel psychologically empowered, develop positive perceptions of support, and effectively handle academic challenges, ultimately strengthening their psychological resources and optimal functioning. Colleges can also organize workshops, short training sessions, and seminars to raise students' awareness of the impact of psychological empowerment, positive social support, psychological capital, and burnout on their well-being. Since strengths like psychological capital are open to development and can be nurtured through training (Luthans et al., 2007, 2016), such interventions not only enhance students' knowledge but also foster and build these essential personal strengths. Counselors should likewise offer positive psychology-based guidance and counseling services at both individual and group levels. These services should primarily focus on cultivating and developing students' social and psychological assets, such as psychological capital, academic empowerment, problem-oriented coping strategies, and supportive perceptions, which tremendously contribute to students' optimal psychological functioning, rather than solely addressing negative mental health issues like stress, anxiety, depression, and burnout.

CONCLUSION

Student well-being plays a critical role in enhancing positive learning outcomes, including academic performance, as documented extensively in the literature (Du Toit, Thomson, & Page, 2022; Holzer, Bürger, Lüftenegger, & Schober, 2022). However, identifying the factors that support or undermine psychological well-being in college settings remains a persistent challenge for researchers and educators. To address this, the present study examined whether academic burnout, social support, and learning empowerment predict psychological well-being, with psychological capital as a mediating factor. The findings indicate that academic burnout, social support, and learning empowerment significantly predict psychological well-being, with psychological capital partially mediating these relationships. This study underscores the importance of these factors in supporting college students' psychological functioning. Therefore, educational institutions should prioritize these psychosocial components to create environments that actively promote student well-being, ultimately enhancing both personal and academic success.

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