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Perceived Stress and Academic Burnout among Chinese Higher Vocational Students: The Mediating Roles of Social Support and Psychological Resilience

Fang Hu, Nik Rosila Nik Yaacob*, Fu Zhang
School of Educational Studies, Universiti Sains Malaysia,11600, Pulau Pinang, Malaysia

Correspondence: nikrusila@usm.my, 0000-0002-3972-5688

ABSTRACT: *This research aimed to determine the relationships among perceived stress, social support, psychological resilience, and academic burnout among Chinese higher vocational students. We examined the role of social support and psychological resilience as mediators of the effect of perceived stress on academic burnout. The cross-sectional design was used as a quantitative design, with data collected from 275 students at various institutions and analyzed using SmartPLS 4.0 and partial least squares structural equation modeling. The findings indicate that perceived stress is strongly associated with academic burnout and decreases social support and psychological strength. The relationship between stress and burnout was observed to have an adverse mediating effect through social support and psychological resilience, demonstrating their protective role. This paper draws on the transactional model of stress and coping, the stress-buffering model, and the conservation of resources theory to advance current knowledge of stress-related consequences in the vocational education setting.*

INTRODUCTION

Psychological well-being among Chinese higher vocational students has since become a pressing concern, as academic achievement is a matter of family prestige and employment prospects (Cheng et al., 2023). This type of learner experiences greater pressure from performance expectations, social stigma, and limited understanding of career paths than university learners, which leads to worsening feelings of inferiority and psychosocial stress (Yang et al., 2025; Sun et al., 2025). Subjective overload and a lack of control, collectively referred to as perceived stress, are strong predictors of psychological and academic success (Liu et al., 2024). Continuing stress in a competitive exam system has a risk of emotional and academic burnout, where (1) individuals are fatigued and (2) they experience decreased effectiveness (Ji et al., 2024). The prevalence of distress has also been studied worldwide, and culturally sensitive interventions are required (Cipolletta et al., 2021; Rahman, 2020). The increase in burnout among vocational students is also a symptom of rapid modernization, which is associated with a lower level of emotional adjustment (Qin et al., 2023). The relationships between perceived stress and social support, on the one hand, and resilience, on the other hand, determine the sustainability of well-being in this group (Hou et al., 2024).

Experienced stress has been shown to predict burnout and is correlated with emotional fatigue and disengagement (Cao et al., 2025; Hu et al., 2023; Gao, 2023). Social support and resilience decrease the effects of stress and increase coping (Cipolletta et al., 2022). Resilient students experience lower levels of exhaustion and are happier (He et al., 2023; Yang and Tu, 2025). However, research gaps remain. Most research on stress responses has been conducted in university settings rather than in the context of vocation-specific stressors and low social status (Xiao et al., 2023; S. Zhao et al., 2023; Xing et al., 2023). Support and resilience mediation mechanisms are rarely tested simultaneously; moreover, because self-reports are cross-sectional, causal relationships cannot be established (Liu et al., 2023; Fu, 2024). Compared with the Western experience, cultural norms shape perceptions of support in distinct ways (Wang and Jiao, 2023). Moreover, people tend to view resilience and support as fixed or as dynamic depending on the environment and developmental context (He et al., 2023). In this way, interaction modeling of perceived stress, support, and resilience is needed to forecast burnout among vocational students (Ibrahim et al., 2024).

There are three conceptual groundings on which they are based. The transactional model describes burnout as occurring when demands are perceived to exceed coping capacity (Folkman et al., 1986). According to the stress-buffering model, social support minimizes emotional harm by providing reassurance and a sense of belonging (Cohen and Wills, 1985). Conservation of resources theory posits that resilience is a psychological resource that replenishes energy under prolonged stress (Hobfoll, 1989). Drawing on these views, this paper aims to test the hypothesis that perceived stress is a direct predictor of burnout and to examine whether social support and resilience mediate this relationship in Chinese higher vocational education.

LITERATURE REVIEW

Perceived stress is a subjective assumption that life events are unpredictable, uncontrollable, and overwhelming (Cheng et al., 2023). Academic burnout (AB) is characterized by emotional depletion, cynicism, and diminished achievement resulting from chronic academic pressure (Liu et al., 2024). Stress is a strong predictor of burnout among students (Yang et al., 2023). Stress among Chinese vocational learners is exacerbated by performance-driven learning, unstable employment opportunities, and parental expectations (Cao et al., 2025). Stress depletes emotional resources, undermines motivation, and leaves individuals more exhausted (Hu et al., 2023). The transactional model posits that contingencies lead to burnout when demands exceed coping resources (Dong et al., 2023). Empirical evidence also confirms that stress is a risk factor for burnout due to exhausted emotional and cognitive resources (Yang et al., 2025). In this way, perceived stress will be useful for forecasting ABs among Chinese vocational students.

> H1: Perceived stress has a positive and significant effect on academic burnout

Social support (SS) is defined as emotional, informational, and instrumental support from family, peers, and teachers (Huang et al., 2023) that helps balance academic pressure (Hou et al., 2024). It has been shown that perceived support is less common under greater stress due to withdrawal, disrupted communication, and a diminished desire to seek help (Wang et al., 2024), as it is less likely to be sought in such circumstances (Peng et al., 2023). Peer connectedness is also undermined by stress in occupational settings (Lin et al., 2023), and interpersonal resources are exhausted (He et al., 2023). Students exposed to chronic stress perceive support networks as less accessible (Zhao et al., 2023). This is why perceived stress is supposed to have a negative effect on SS.

> H2: Perceived stress has a negative and significant effect on social support

The capacity to adjust to and recover following stress (Zhao et al., 2023) by regulating emotions, being optimistic, and persevering is referred to as psychological resilience (PR). High levels of stress undermine PR by reducing confidence in coping and self-efficacy (Li et al., 2023; Paul et al., 2023; Yang et al., 2025). Vocational students who have considerable workloads become less adaptable (Fan et al., 2024). Chronic stress also interferes with emotional stability (Mao et al., 2023) and reduces long-term resilience (Cheng et al., 2023; Qin et al., 2023). Therefore, the influence of perceived stress on PR is predicted to be reduced.

> H3: Perceived stress has a negative and significant effect on psychological resilience

SS lessens the psychological effects of stress because it decreases exhaustion and discouragement (Wang and Jiao, 2023; Wang et al., 2024; Zhao et al., 2023).

Highly networked students tend to experience lower stress and be more stable (Jiang, 2024; Sun et al., 2024). Another way SS can mitigate burnout is by fostering an enhanced academic mindset (Chen, Bian, et al., 2023) and motivation in the face of challenges (Wen et al., 2023). Research has also shown that SS dilutes the stress-to-burnout relationship (Lin et al., 2023; Xie et al., 2023) and is particularly preventive in collectivist schools (Sun et al., 2025). Therefore, SS will mediate this relationship.

> H4: Social support negatively mediates the relationship between perceived stress and academic burnout such that greater social support reduces the impact of perceived stress on academic burnout.

The stress-to-burnout pathway is another pathway that PR mediates through facilitating adaptive coping (Gu et al., 2023). Stress diminishes resilience, which results in burnout susceptibility (Xing et al., 2023), whereas resilient students are emotionally stable in response to stress (Yang et al., 2025). PR reduces exhaustion in the form of proactive coping (Qin et al., 2023) and promotes growth-oriented appraisal of academic challenges (Fu, 2024) facilitated by flexible cognitive responses (Xia et al., 2025). Taken together, these findings indicate that PR reduces burnout caused by stress (Wu et al., 2024).

> H5: PR negatively mediates the relationship between perceived stress and ABs such that higher PR weakens the influence of perceived stress on ABs.

Theoretical Framework Supporting the Research

The theoretical construct underlying the current study is primarily grounded in the stress and coping model (Folkman et al., 1986), although, to a certain degree, the stress-buffering model (Cohen and Wills, 1985) was used to explain the interaction between perceived stress and SS, PR, and AB. According to the transactional approach, stress develops when individuals believe that environmental requirements exceed their coping levels, producing strain on the mind and maladaptive effects, including burnout. Perceived stress contributes to emotional burnout and withdrawal in the academic environment with a lack of coping strategies in learners (Huang et al., 2023). However, the stress-buffering theory states that SS is an external protective mechanism that reduces the adverse effects of stress by improving perceptions of control and emotional well-being (Cao et al., 2025). Similarly, the internal relationship between stress-coping resources is explained by the conservation of resources theory, and PR enables people to respond emotionally and adaptively to stress (Xu et al., 2023). Together, these frameworks suggest that perceived stress positively influences AB, and that SS and resilience negatively mediate these effects by replenishing used-up emotional and cognitive resources (Liu et al., 2023). Theoretical processes are particularly relevant to the study of the Chinese higher vocational sector, where students have a certain degree of uncertainty related to their academic and professional lives, and this fact predetermines the reason why both external and

internal resources counteract the negative effects of stress on academic health (Hanqing et al., 2024). Therefore, the proposed model (Figure 1) accommodates these relationships in that perceived stress is an antecedent variable that directly and indirectly influences AB through the mediating effects of SS and PR, hence providing a comprehensive view of how the interaction between individual and contextual factors determines the outcomes of students.
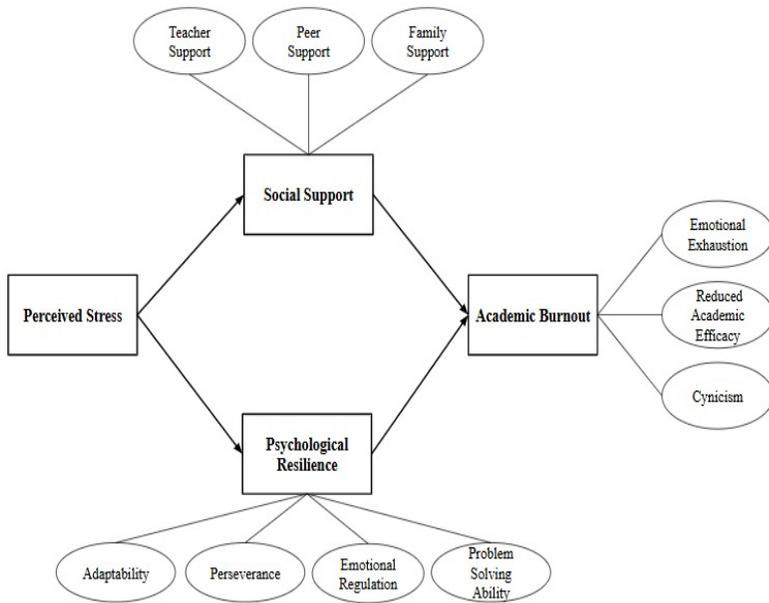

Figure 1: Conceptual Framework

METHOD

In this study, a quantitative cross-sectional design was adopted to examine the relationships among PSt, SS, psychological resiliency, and AB in Chinese higher vocational students. This design enabled empirical testing of the hypothesized associations via established theoretical foundations, including the transactional stress and coping model (Folkman et al., 1986) and the stress-buffering theory (Cohen & Wills, 1985). Standardized questionnaires provided numerical indicators for SEM analysis via SmartPLS, allowing objective, replicable, and generalizable assessment of causal pathways.

The target population comprised students from diverse vocational institutions and disciplines selected through purposive and convenience sampling, with inclusion limited to those who had completed at least one academic semester. A total of 275 valid responses were obtained via a bilingual self-administered questionnaire distributed online and in person. The instrument included demographic information and validated measurement scales. PSt was measured

via the PSt Scale (Cohen & Wills, 1985), SS with the MSPSS (Zimet et al., 1988), PR with the CD-RISC (Connor & Davidson, 2003), and AB with the Maslach Burnout Inventory-Student Survey.

The data were analyzed via SmartPLS 4.0 via PLS-SEM because of its suitability for complex, nonnormal data structures (Hair Jr et al., 2021). The measurement model assessment confirmed the factor loadings, Cronbach's alphas, composite reliabilities, and AVEs, demonstrating adequate reliability and validity. Structural modeling then evaluated the direct and mediating effects among PSt, SS, PR and AB through path coefficients, t values, p values, and bootstrapping with 5,000 resamples. The R^2, Q^2, and SRMR statistics further indicated the model's explanatory strength and predictive relevance.

RESULTS

Table 1 presents the reliability and validity statistics for all the constructs used in this study. The outer loadings of the items range from 0.696 to 0.908, indicating that all measurement items exhibit strong factor loadings, well above the recommended threshold of 0.70, confirming adequate indicator reliability. The Cronbach's alpha values for all constructs exceed 0.75, indicating internal consistency within each scale. The composite reliability (CR) values for all variables range from 0.852 to 0.939, exceeding the acceptable minimum of 0.70, further supporting construct reliability. Additionally, the average variance extracted (AVE) values range from 0.591--0.762, confirming convergent validity, as they exceed the threshold of 0.50. These results collectively demonstrate that the measurement model possesses strong reliability and validity, ensuring the robustness of the data used in the subsequent structural analysis.

Table 1: Variable reliability and validity

Variables	Items	Outer Loading	Cronbach's Alpha	CR	AVE
Adaptability (A)	A1	0.880	0.803	0.884	0.718
	A2	0.826			
	A3	0.835			
Cynicism (C)	C1	0.704	0.817	0.880	0.648
	C2	0.870			
	C3	0.863			
	C4	0.772			
Emotional Exhaustion (EE)	EE1	0.719	0.818	0.880	0.649
	EE2	0.808			
	EE3	0.870			
	EE4	0.816			
Emotional Regulation (ER)	ER1	0.764	0.757	0.861	0.675
	ER2	0.826			
	ER3	0.870			

Family Support (FS)	FS1	0.908	0.895	0.928	0.762
	FS2	0.891			
	FS3	0.881			
	FS4	0.809			
Perseverance (P)	P1	0.828	0.803	0.884	0.717
	P2	0.879			
	P3	0.833			
Peer Support (PS)	PS1	0.696	0.767	0.852	0.591
	PS2	0.747			
	PS3	0.838			
	PS4	0.786			
Problem-Solving Ability (PSA)	PSA1	0.852	0.817	0.891	0.732
	PSA2	0.870			
	PSA3	0.845			
Perceived Stress (PSt)	PSt1	0.828	0.927	0.939	0.660
	PSt2	0.791			
	PSt3	0.844			
	PSt4	0.793			
	PSt5	0.851			
	PSt6	0.804			
	PSt7	0.815			
	PSt8	0.770			
Reduced Academic Efficacy (RAE)	RAE1	0.842	0.857	0.903	0.701
	RAE2	0.861			
	RAE3	0.787			
	RAE4	0.857			
Teacher Support (TS)	TS1	0.839	0.879	0.917	0.734
	TS2	0.855			
	TS3	0.862			
	TS4	0.870			

Figure 2 displays the SmartPLS-estimated model, illustrating the hypothesized relationships among PSt, SS, PR, and AB. The model visually demonstrates both the direct and indirect (mediated) pathways and their standardized coefficients, confirming the strength and direction of each relationship tested in the study.

Table 2 presents the results of discriminant validity testing using the heterotrait–monotrait ratio (HTMT). The HTMT values indicate the extent to which the constructs are distinct from one another. In this study, all HTMT ratios were below the threshold of 0.90, confirming that discriminant validity has been established among all constructs. For example, the HTMT ratios between PSt and AB (0.626), between SS and PR (0.742), and between teacher support and peer support (0.837) were all within acceptable limits. These results indicate that each construct measures a unique concept and that there is no multicollinearity or

excessive conceptual overlap. The relatively lower HTMT values among key variables such as adaptability, family support, and perseverance also demonstrate conceptual distinctiveness within the model. Hence, the discriminant validity outcomes reinforce that the constructs in the study are empirically distinct, allowing for reliable structural model estimation.
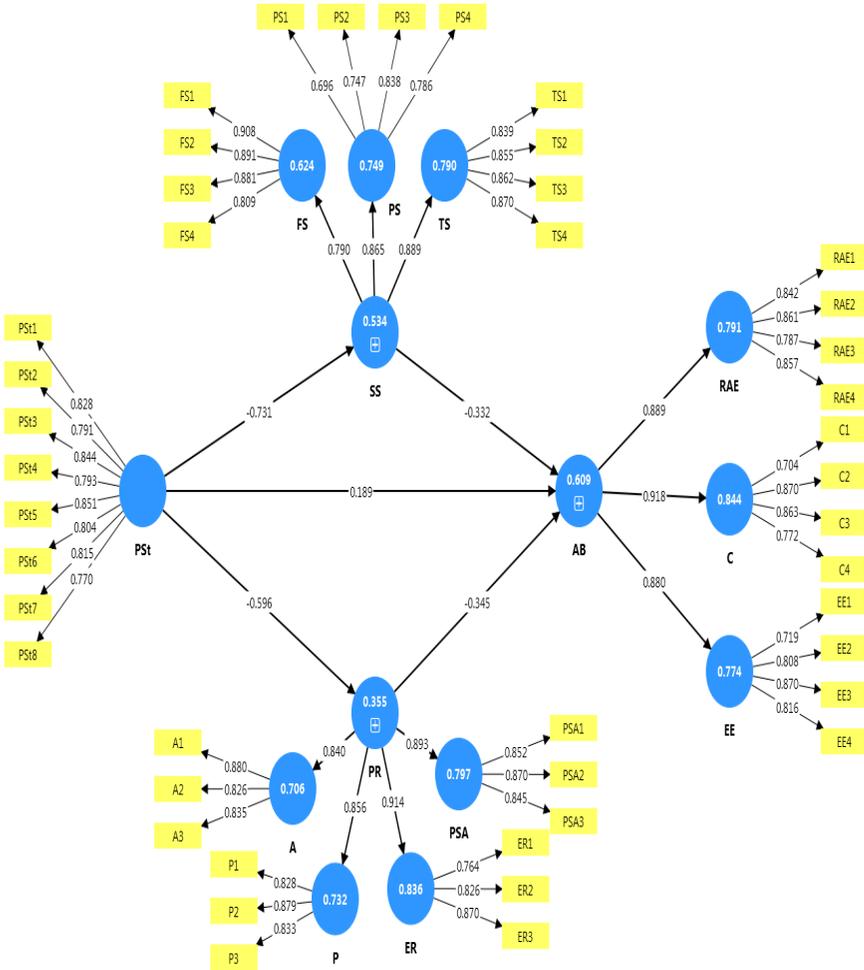

Figure 2: Estimated Model

Table 2: Discriminant validity (HTMT)

Variables	A	C	EE	ER	FS	P	PS	PSA	PSt	RAE	TS
Adaptability											
Cynicism	0.632										
Emotional Exhaustion	0.763	0.692									
Emotional Regulation	0.810	0.682	0.837								
Family Support	0.544	0.442	0.593	0.501							
Perseverance	0.596	0.508	0.726	0.607	0.444						
Peer Support	0.743	0.785	0.769	0.819	0.592	0.703					
Problem-Solving Ability	0.770	0.695	0.840	0.790	0.531	0.753	0.766				
Perceived Stress	0.626	0.644	0.669	0.616	0.739	0.524	0.668	0.627			
Reduced Academic Efficacy	0.661	0.670	0.758	0.658	0.440	0.548	0.820	0.651	0.589		
Teacher Support	0.420	0.681	0.793	0.767	0.565	0.751	0.837	0.742	0.660	0.679	

Table 3 shows the coefficient of determination (R^2) and major model fit variables. The model has an R^2 of 0.609, indicating that approximately 61% of the variance in AB is explained by the independent variables. Likewise, PR and SS have R^2 values of 0.355 and 0.534, respectively, which indicates moderate explanatory power. The value of the adjusted R^2 is fairly close to the original R^2 score, indicating the strength and less overfitting of the model. The $Q^2predict$ values are all positive, with all above zero, confirming that the model is relevant for prediction. In addition, the root mean square error (RMSE) and mean absolute error (MAE) are within reasonable ranges, indicating that the model is well-fitted. Taken together, these results indicate that the model explains a large portion of the variance in the endogenous constructs, making it valid and predictive.

Table 3: R-square statistics Model Goodness of Fit Statistics

	R-square	R-square adjusted	Q²predict	RMSE	MAE
Academic Burnout	0.609	0.605	0.394	0.789	0.576
Psychological Resilience	0.355	0.353	0.345	0.817	0.634
Social Support	0.534	0.533	0.529	0.693	0.535

Figure 3 depicts the structural model derived from SmartPLS analysis, highlighting the hypothesized causal relationships and their standardized path coefficients. The model illustrates both direct and mediated effects of PSt on AB through SS and PR.
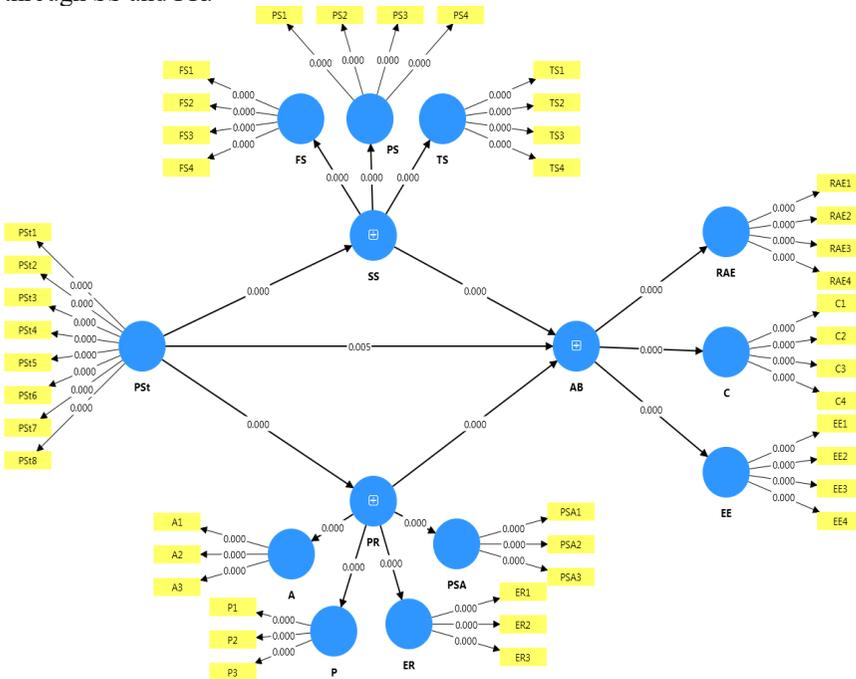

Figure 3: Structural Model for Path Analysis

Table 4 provides the structural path coefficients, standard deviations, t values, and p values for the five hypotheses tested. The findings indicate that all the hypothesized relationships are statistically significant. PSt has a positive and significant effect on AB ($\beta = 0.189$, $t = 2.609$, $p = 0.005$), confirming that higher stress levels lead to increased burnout among students. Additionally, PSt negatively influences SS ($\beta = -0.731$, $t = 20.726$, $p = 0.000$) and PR ($\beta = -0.596$, $t = 9.671$, $p = 0.000$), suggesting that elevated stress reduces students' access to supportive resources and their capacity to cope effectively. The mediation results further confirm that SS ($\beta = -0.243$, $t = 4.193$, $p = 0.000$) and PR ($\beta = -0.206$, $t = 4.599$, $p = 0.000$) significantly buffer the relationship between PSt and AB. These findings demonstrate that strong social networks and resilient traits mitigate the detrimental effects of stress, reinforcing the importance of emotional and interpersonal coping mechanisms in educational environments.

Table 4: Path Analysis

	Beta Value	S.D	T value	P Value
H1: PSt has a positive and significant effect on AB	0.189	0.072	2.609	0.005
H2: PSt has a negative and significant effect on SS	-0.731	0.035	20.726	0.000
H3: PSt has a negative and significant effect on PR	-0.596	0.062	9.671	0.000
H4: SS negatively mediates the relationship between PSt and AB.	-0.243	0.058	4.193	0.000
H5: PR negatively mediates the relationship between PSt and AB.	-0.206	0.045	4.599	0.000

DISCUSSION

An analysis of the study's findings reveals that the entire PSt-SS-PR interaction dimension contributes to AB among Chinese higher vocational students. The general outcomes provide a very clear picture of the psychological processes that make students successful in a challenging learning environment where performance pressure, training as a skill and social pressures intermingle. The psychological health of vocational students in China has been a hot topic in recent years, and there is growing evidence that stress-related difficulties significantly influence motivation, interest, and academic achievement (Fan et al., 2024; Qin et al., 2023).

The results of the current study revealed that the relationship between PSt and AB among Chinese higher vocational students was positive and significant, providing strong empirical support for the first hypothesis (H1). This finding is consistent with earlier studies and highlights that an increased number of stressed students are likely to experience emotional exhaustion, depersonalization, and poor school performance (Tianzuo et al., 2025). This can be explained by the transactional model of stress and coping (Folkman et al., 1986), which holds that stress will eventually result in burnout, in which students perceive that the pressure of their educational demands is much greater than they would otherwise

be able to handle. Such perceptions of excessive demands are heightened in the Chinese vocational setting, where students are subjected to two stressors: educational achievement and competency demands based on skills (Wang & Wang, 2023). Furthermore, the competitive educational environment and social pressures on future employability contribute to psychological pressure on students, leading to chronic emotional exhaustion and a lack of interest in studying. Empirical evidence from other studies in Asia also supports the finding that PSt and AB are significantly correlated, and that other factors contributing to burnout symptoms among vocational and university students include academic pressure, test anxiety, and future uncertainty (Yi et al., 2025). Therefore, this research supports the perception that coping interventions and stress management are essential for decreasing burnout in vocational education systems.

These findings further revealed that SS is affected negatively and significantly by PSt, thus confirming the second hypothesis (H2). This observation is in line with previous empirical studies that have proposed that high levels of stress frequently reduce individuals' perception of available SS, leading them to isolate or misinterpret supportive behaviors as insufficient (Ibrahim et al., 2024). In the Chinese context of higher vocational schools, the relationship can be exacerbated by cultural elements that emphasize self-sufficiency, academic rivalry, and emotional constraints that do not support students' open seeking of social or emotional support (Dong et al., 2023). High stress can also decrease the motivational levels of students in relation to peers and teachers, which then leads to lowered access to both emotional and instrumental resources that would otherwise alleviate the effect of stress. This finding is consistent with the stress-buffered model (Cohen & Wills, 1985), which asserts that persons with less perceived SS are more vulnerable to stress effects.

Moreover, the analysis confirmed a negative and significant impact of PSt on PR, thereby supporting the third hypothesis (H3). This result is in line with the theoretical assumption of conservation of resources theory (Hobfoll, 1989), which holds that stress drains individuals' resources, both psychological and emotional, leaving them less equipped to cope with difficulties in a productive way. Students' resilience (the capacity to bounce back and achieve mental balance) is weakened when they perceive academic expectations as burdens (Xu et al., 2023). Constant exposure to stressors and a lack of effective coping strategies and institutional support can lead to a faster loss of resilience in the Chinese vocational education context, where students are often pressured to perform, face uncertainty about career prospects, and experience heightened competition (Yang et al., 2025). Past research has shown that emotional stability, self-efficacy, and optimism, which are essential elements of PR, are compromised by continuous exposure to academic stress (Sun et al., 2025). The findings of this research thus reveal that adaptation-enhancing programs, including mindfulness training, emotion regulation, and counseling interventions, play critical roles in strengthening students' adaptive abilities. Through resilience, schools can equip students with the internal resilience needed to better handle stress and reduce their susceptibility to burnout. In summary, these findings confirm the mutually reinforcing relationships among stress, support, and resilience and the necessity of combining

efforts in Chinese higher vocational education to support student well-being and academic stamina.

The present research found that SS negatively mediates the relationship between PSt and AB; hence, the fourth hypothesis (H4) was supported. This result shows that the more SS a student has, the less likely they are to experience the negative effect of PSt on burnout as a Chinese higher vocational student. This result aligns with the stress-buffered model suggested by Cohen & Wills (1985), which argues that social relations provide individuals with psychological and emotional resources that allow them to reframe or better cope with stress. Academic stress is less internalized because social networks foster a sense of belonging and shared coping among students, who feel that peers, family, and teachers provide strong emotional, informational, and instrumental support (Gao, 2023). In the Chinese vocational education framework, where academic and practical skills are highly valued, supportive relationships may be an essential protective factor against psychological burnout and detachment (Wang & Fan, 2023). This result aligns with earlier empirical research showing that students with more perceived SS exhibit less fatigue associated with stress and symptoms of anxiety and burnout.

Similarly, the findings revealed that the relationship between PSt and AB is negatively mediated by PR, confirming the fifth hypothesis (H5). That is, resilient students find it easier to take academic pressure without becoming emotionally drained, cynical and unproductive at school. The outcome aligns with the Conservation of Resources Theory (Hobfoll, 1989), which posits that individuals with greater psychological resources, including resilience, can better balance themselves in adverse situations. In line with earlier research, resilience was shown to mitigate the direct effect of PSt on burnout through promoting adaptive coping, emotional regulation, and problem-solving skills (Tang & Osman, 2023). Resilience helps Chinese higher vocational education students reconstrue challenges as learning opportunities, remain confident during academic stress, and continue pursuing their educational objectives despite disappointment (Chen et al., 2023). The mediation results thus show that resilience has a buffering effect, realigning the stress-burnout pathway toward more adaptive outcomes.

This study demonstrated that PSt, SS, and PR interact in a complex yet symbiotic manner and may be determinants of AB. The acceptance of all hypotheses demonstrates the strength of the presented conceptual framework, as it indicates that, despite PSt being a rather straightforward and adverse contributive factor to burnout, social and psychological resources play an important role in alleviating burnout (Cipolletta et al., 2022; Paul et al., 2023). The contribution of this study is its focus on the protective role of social connectedness and resilience in the context of Chinese vocational education, and it offers theoretical and practical recommendations. Improving SS systems and promoting resilience-focused interventions can therefore be key priorities for educational policymakers and administrators interested in healthier, more sustainable learning environments.

Practical Implications

The implications of the research findings suggest that it is important for teachers, administrators, and policy makers in the Chinese higher vocational education system. The fact that AB is directly related to PSt underscores the urgency of implementing a series of interventions to improve students' ability to cope with the academic and emotional burden more efficiently. Through stress management training, which includes mindfulness training, time management training, and cognitive-behavioral counseling, students' skills in effectively handling academic stressors can be improved. In addition, the identification of SS and PR as mediating variables in the study underscores the need to design a supportive school atmosphere that establishes external and internal resources. To improve the development of better social networks to reduce the effects of stress, schools can support peer mentoring, group learning, and better teacher–student interactions. In addition, reinforcing strategies, such as training in life skills, self-efficacy, and emotional regulation, can be encouraged to help students address academic failure and move on. This understanding can also assist policymakers in updating vocational education policy to incorporate mental health support and campus health and well-being programs into the curriculum. Such efforts may help vocational institutions create holistic learning experiences that emphasize learners' psychological well-being, thereby reducing burnout and increasing academic persistence, satisfaction, and future employability.

Theoretical Implications

In principle, this study contributes to the literature by integrating the stress-buffering model, the transactional model of stress and coping, and conservation of resources theory to clarify the complex relationships among PSt, SS, PR, and AB. These theoretical considerations are supported by the findings that both external (SS) and internal (resilience) resources mediate the stress–burnout relationship. It is founded on earlier abstract deliberation and a thorough paradigm encompassing direct and indirect routes to stress academic well-being. This finding supports the notion that burnout does not simply arise from excessive stress but rather is a complex psychological process that is informed by the coping and resource facilities at their disposal. Additionally, the research contextualizes these relationships within the Chinese higher vocational education system, thereby enhancing the cross-cultural relevance of coping and stress theories, which have been predominantly studied in university or Western settings. The results show that cultural orientations, such as collectivism, the value placed on interpersonal harmony, and a sense of belonging in China, might influence how students perceive and access SS to alleviate stress. This study thus adds to the theory by defining the current psychological models within the context of the cultural educational environment and creates a prospective comparison and longitudinal study of stress, resiliency and burnout among diverse sets of students.

Limitations and Future Directions

Although this study provides useful information about the relationships among PSt, SS, PR and AB in Chinese higher vocational students, it is also worth mentioning several limitations, which in turn create opportunities for subsequent research studies. First, it was a cross-sectional study and hence could not make any a priori assumptions on the relationships among the variables. Future studies could adopt a longitudinal method to determine the dynamic nature of stress, support and resilience over time and to better represent the influence of changes in these constructs on burnout development. Second, the data were collected via self-administered questionnaires, which are susceptible to social desirability bias and participant-perceived errors. Future research could be enhanced through the implementation of mixed methods such as behavioral assessment or qualitative interviews. Third, a sample of 275 students in a sample of higher vocational institutions in China is not representative of the population of vocational or university students in the whole country. In future research, larger and more diverse samples can be employed across fields, and findings from different cultures and institutional contexts can be compared to enhance applicability. Furthermore, SS and PR were considered mediating factors in this research; however, other psychological moderating or mediating factors, such as self-efficacy, academic motivation, emotional intelligence, and coping styles, can also be significant in the stress burnout relationship. Research on these additional variables could present a more comprehensive view of the mechanisms of academic well-being. The impact of institutional conditions, such as instructional practices, the campus atmosphere and student–teacher interactions, can also be studied to establish the role of contextual factors in interacting with individual psychological resources in mediating the effects of burnout. The implications of the present findings can be extended to refine the theoretical framework and address limitations, thereby enabling more focused and culturally sensitive interventions to improve academic stress management and, consequently, resilience among vocational students in China.

CONCLUSION

In general, this study provides valuable insights into the relationships among PSt, SS, and PR and their interactions in determining AB among Chinese higher vocational students. These findings support the hypothesis that PSt is a major cause of AB, leading vocational students to experience strong psychological pressure to balance their academic workload and fear of not finding a job after college. Moreover, the mediating effects of SS and PR could be considered indicators of the ability of external and internal coping resources to diminish the detrimental effects of stress. The more socially connected students are and the more resilient they are, the better they can handle academic challenges and stay emotionally stable. These findings not only validate several key psychological theories, such as the transactional model of stress and coping, the stress-buffering model, and the conservation of resources theory, but can also be used to expand the application of these theories to the Chinese school setting. This study contributes to a growing body of research on the importance of understanding AB

as a stress-determined, multidimensional phenomenon and on coping resources as moderators. In practice, the findings indicate that integrating mental health programs, resilience training, and SS programs into vocational education is needed to support students' well-being and academic success. Overall, this research not only adds to the theoretical and empirical understanding of the interaction among stress, support, and resilience but also offers invaluable recommendations for future educational policy, institutional interventions, and research to promote healthier education in a rapidly changing Chinese vocational education setting.

Note: In the preparation of this manuscript, we did not utilize artificial intelligence (AI) tools for content creation

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Author bios

Fang Hu is currently a PhD candidate in the School of Educational Studies, Universiti Sains Malaysia, Malaysia. Her primary research interests include school psychological education, school mental health education, and psychological counseling. Email: hufang@student.usm.my

Nik Rosila Nik Yaacob, PhD, is an Associate Professor in the School of Educational Studies, Universiti Sains Malaysia, Malaysia. Her major research interests lie in academic literacy, academic integrity, higher education research, and multiculturalism. Her fields of specialization and research extend to Islamic education, Islamic psychology and counseling, educational psychology, and early childhood education, with a particular focus on Islamic psychological approaches, counseling practices, and developmental learning in early childhood contexts. Email: nikrusila@usm.my

Fu Zhang is currently a PhD candidate in the School of Educational Studies, Universiti Sains Malaysia, Malaysia. Her primary research interests include school psychological education, school mental health education, psychological counseling, and high education research. Email: zhangfu0309@student.usm.my