

Environmental Demands, Appraised Stressors, Coping Strategies, and Academic Well-Being Among Doctoral Students: A Mixed-Methods Study

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Abstract. Poor academic well-being challenges doctoral students. The best-fit structural model explaining academic well-being through environmental demands, appraised stressors, and coping strategies was determined using a convergent parallel mixed-methods design. The study addressed the limited empirical evidence on how these variables collectively shape doctoral students' academic well-being in the Philippine context. It examined their levels, relationships, influence on academic well-being, and the best-fit structural model, while also exploring students' challenges, coping strategies, and developed insights and values. Quantitative data from 400 doctoral students were collected through disproportionate stratified random sampling and analyzed using mean, standard deviation, Pearson r correlation, multiple regression, and structural equation modeling. Four adapted survey questionnaires measured the study variables. A single-case study was utilized for qualitative inquiry, with semi-structured interviews analyzed through thematic analysis. Methodological triangulation integrated the findings. Significant relationships were found among the variables, with the sequential mediation model emerging as the best fit. Environmental demands and coping strategies demonstrated weak positive significant correlations with academic well-being, while appraised stressors displayed a moderate positive significant correlation. Regression analysis confirmed the combined influence of the variables on academic well-being. Qualitative findings revealed role overload, emotional regulation, social and material support, and meaning-making sustaining academic functioning despite ongoing strain. Quantitative findings indicated very low levels of avoidance coping, whereas qualitative findings emphasized support-seeking and faith-based coping as more prominent responses to stress. The integrated findings supported and extended the Theory of Stress and Coping, showing that adaptive meaning-making, supportive relationships, and resilient coping processes strengthen academic well-being. Higher education institutions may strengthen mental health services, peer mentoring, flexible academic arrangements, writing support groups, and financial or technological assistance. Future researchers may investigate longitudinal pathways, variables like supervision and culture, why hindrance appraisal did not contribute to the model, and how spiritual factors sustain doctoral well-being.

Keywords: Academic well-being; appraised stressors; coping strategies; doctoral students; environmental demands

Introduction

Low academic well-being, referring to a diminished state of mental, emotional, and physical health that limits students' ability to thrive academically, has become a notable concern among doctoral students (Cidentify, 2026; Puiu et al., 2024; Abdullah et al., 2024). Research indicates that doctoral students often experience lower overall well-being compared to general population norms (Zhang et al., 2022). Longitudinal research has found that doctoral students' well-being generally decreases during the early years of doctoral study (Gonzalez et al., 2020), and a systematic review of 56 prior studies reports that doctoral students' well-being remains consistently limited across multiple research contexts (Guo & Liu, 2026).

International research confirms that poor academic well-being is a widespread concern. In the United States, many doctoral learners experience compromised well-being (Zhang et al., 2022). Evidence from Canada implies that graduate students commonly encounter difficulties with academic and mental well-being (Javadizadeh et al., 2025). Similar challenges have been observed in Pakistan (Mahsood et al., 2025). In the Philippines, low academic well-being has been documented among graduate students in education (Corpuz, 2023; Grajo et al., 2024), including a phenomenological study in Cebu City underscoring difficulties in sustaining work-life balance amid academic demands (Valencia, 2026) and evidence from Davao Region during thesis writing (Trinidad et al., 2025).

Reduced academic well-being among doctoral students, manifested in psychological strain, depression, anxiety, burnout, and emotional exhaustion, triggers lower engagement, weakened confidence, decreased self-efficacy, and increased risk of attrition (Agbayani & Paglinawan, 2025; Senthilkumar et al., 2023; Libago et al., 2024; Casey et al., 2023; Castulo, 2025; Fang et al., 2025). These challenges are further compounded by high workloads, pressures to publish, and insufficient time management (Deroncele-Acosta et al., 2024; Perez et al., 2025). However, despite growing evidence of the problem, no comprehensive mixed-methods investigation has empirically explored the interplay of environmental demands, appraised stressors, coping strategies, and academic well-being among Philippine doctoral students. This gap constrains understanding of how these interconnected factors shape persistence and professional growth, leaving important issues unaddressed.

The present research conceptualizes stress arising from external conditions such as environmental demands, cognitive evaluation as appraised stressors, and behavioral and psychological responses as coping strategies, with academic well-being serving as the outcome variable. Environmental demands, indicated by busyness and routine, refer to academic, institutional, and personal pressures (Martin & Park, 2003; Xu et al., 2024). Appraised stressors reflect cognitive evaluation through challenge appraisal, hindrance appraisal, stress mindset, resilience, and strain (Crum et al., 2013; Webster et al., 2011; Ouyang et al., 2026). Coping strategies encompass problem solving, seeking social support, and avoidance (Amirkhan, 1990; Algorani & Gupta, 2023). Academic well-being comprises cognitive, physical, social, and material dimensions (Borgonovi & Pál, 2017; Walia & Murugesan, 2025). This study aimed to examine the relationships among these four constructs to provide a more comprehensive understanding of how doctoral students navigate academic demands. The scope is limited to doctoral students in the Philippines, using a mixed methods design to address the identified research gap.

The study supports SDG 3 (Good Health and Well-being) by addressing mental health challenges, stress, and emotional exhaustion that hinder doctoral students' academic functioning. It also supports SDG 4 (Quality Education) by providing data-driven direction for strengthening doctoral education aligned with the Commission on Higher Education's (CHED) commitment to accessible, relevant, and globally responsive higher education. It also supports Holy Cross of Davao College (HCDC) in enriching its graduate programs to develop resilient, ethically grounded scholars and reinforce the institution's role in promoting educational advancement and long-term societal development.

Research Questions

This study aimed to determine a structural model on academic well-being by examining the dimensions of environmental demands, appraised stressors, and coping strategies among doctoral students. It likewise provided an in-depth understanding of doctoral students' academic experiences by exploring the challenges they encounter, coping mechanisms they deploy, insights they gain, and values they develop throughout their academic journey.

Specifically, this study sought to address the following objectives and corresponding research questions:

1. To determine the levels of environmental demands in terms of busyness and routine; appraised stressors in terms of challenge appraisal, hindrance appraisal, stress mindset, resilience, and strain; coping strategies in terms of problem solving, seeking social support, and avoidance; and academic well-being in terms of cognitive dimension, physical dimension, social dimension, and material dimension.
2. To determine the significance of the correlation between the environmental demands, the appraised stressors, the coping strategies; and the academic well-being.
3. To determine the significance of the individual and combined degree of influence of environmental demands, appraised stressors, and coping strategies on the academic well-being among doctoral students.
4. To derive the best fit model predicting academic well-being among doctoral students.
5. What challenges in terms of environmental demands do doctoral students encounter that affect their academic well-being?
6. What are the coping strategies that doctoral students used that contribute to their academic well-being?
7. What are the insights, realizations, and values developed by the doctoral student as they face challenges and apply coping strategies?
8. To examine the extent to which the qualitative findings corroborate with the quantitative results.

Methodology

Research Design

This study used a convergent parallel mixed-methods design, which involves concurrent collection and analysis of quantitative and qualitative data followed by integration of the results. Its strengths include intuitive implementation, broad applicability, time efficiency, and flexible independent analysis prior to synthesis (Hecker & Kalpokas, 2026). This fits the multidimensional nature of the phenomenon, requiring both numerical patterns and contextual insights (Dovetail Editorial Team, 2023). Following Creswell (2013), the process proceeded through four steps including simultaneous data collection with equal priority, separate statistical and thematic analyses, merging results to determine convergence or divergence, and final interpretation where both strands confirm or clarify one another. Within this design, the quantitative strand used a descriptive-correlational method with structural equation modeling (SEM). This non-experimental method describes existing conditions and examines relationships without manipulation (Barooah, 2026). It is descriptive in assessing environmental demands, appraised stressors, coping strategies, and academic well-being (Singh, 2023), and correlational in examining relationships among variables (Sreekumar, 2024). Advantages include flexibility, time efficiency, diverse data collection methods, examination of natural variables, detailed information for hypothesis development, minimized bias, and cost-effective large sample investigation (All Assignment Help, 2024). SEM was then employed to examine direct and indirect relationships and determine the best-fitting model including mediation effects (Statistics Solutions, 2026). Meanwhile, the qualitative strand used a single-case study involving in-depth examination of a single subject in its real-world context and typically applied when seeking a detailed understanding of complex phenomena (Hecker & Kalpokas, 2026). This provided context-specific perspectives through semi-structured interviews (Willis, 2014; Cherry, 2026). After separate analyses, findings were integrated through methodological triangulation to identify convergences that reinforce patterns and divergences that reveal complexities beyond numerical results (Dovetail Editorial Team, 2023; IMotions, 2024).

Sampling Design

The study population consisted of doctoral students enrolled in public and private higher education institutions (HEIs) in Davao City. For the quantitative strand, a total of 400 respondents were selected to ensure sufficient statistical power and model stability for structural equation modeling (SEM), consistent with recommendations for larger sample sizes in complex models (Newsom, 2025; Wolf et al., 2013; Westland, 2010). A disproportionate stratified sampling technique was employed to ensure representation from both public and private HEIs, given that student populations vary considerably across institutions. This technique selects respondents from each stratum in numbers not proportional to their actual population size to prevent underrepresentation of smaller groups (Reddy & Khan, 2023; Sharma, 2023). Simple random sampling was then applied within these HEIs to provide equal chances of selection and minimize bias (Stratton, 2023). For the qualitative strand, purposive sampling was utilized to select one information-rich participant from the quantitative respondents. Purposive sampling is a non-probability sampling technique that intentionally selects information-rich participants relevant to the research problem, allowing the collection of detailed, flexible, and context-specific data efficiently (Tajik et al., 2025). One family member familiar with the participant's experiences was also included as a secondary informant to validate accounts and enrich contextual understanding of the participant's challenges and coping mechanisms. The inclusion of secondary informant provides complementary perspectives that verify response consistency and enhance the credibility and depth of the qualitative data (Kibuacha, 2024).

Research Locale

Davao City served as the locale of the study. Based on data from the Commission on Higher Education Region XI (n.d.), the city recorded 2,185 doctoral enrollees for the school year 2025–2026, representing the majority of doctoral students in Davao Region. As a major educational center in Mindanao, the city offers diverse doctoral programs with varying academic demands, institutional resources, and student support systems. These conditions make the locale suitable for examining the academic experiences and well-being of doctoral students across diverse institutional contexts.

Research Participants

For the quantitative strand, respondents were doctoral students from public and private HEIs in Davao City who were currently enrolled and had completed at least one academic term. Students who were on leave or had discontinued their studies were excluded from participation. The inclusion and exclusion criteria ensured that respondents possessed relevant experiences necessary to address the research objectives, thereby improving the consistency, relevance, and appropriateness of the collected data (Nikolopoulou, 2023). For the qualitative strand, the participant was required to have reached an advanced

stage of the doctoral program, such as oral defense, technical reading, or an approved dissertation awaiting graduation. This criterion ensured substantial academic experience relevant to the study (Dovetail Editorial Team, 2023)

Research Instrument

The study used four adapted instruments measured on a four-point Likert scale (1–4), with reliability established through pilot testing among 30 doctoral students using Cronbach’s Alpha (Hair et al., 2021). The Environmental Demands Questionnaire, drawn from Martin and Park (2003), contains 11 items and displayed acceptable reliability with an alpha coefficient of 0.711. The Appraised Stressors Questionnaire, originally developed by Crum et al. (2013) and Webster et al. (2011) and as used in Klinefelter (2020), has 48 items and showed excellent reliability with an alpha of 0.953. The Coping Strategies Questionnaire, derived from Amirkhan (1990), includes 33 items and likewise exhibited excellent reliability with an alpha of 0.913. The Academic Well-Being Questionnaire, based on Borgonovi and Pál (2017), consists of 45 items and also demonstrated excellent reliability with an alpha of 0.949. Overall, the instruments revealed strong internal consistency with a combined Cronbach’s Alpha of 0.970. Revisions based on validators’ feedback were incorporated prior to final administration. A semi-structured interview guide was utilized to collect qualitative data from the participant. The instrument contained open-ended questions covering key themes while allowing flexibility for follow-up questions and deeper exploration of the participant’s answers (Patton, 2002). This facilitated the examination of the participant’s explanations and insights, particularly regarding the most significant and negative outcomes reflected in the quantitative survey. The interview guide was also reviewed and validated by experts to ensure content validity and appropriateness. Pilot testing was further conducted to establish its validity and reliability and to ensure the accuracy and credibility of the qualitative data collected.

Data Gathering Procedure

The study used a mixed-methods approach involving both quantitative and qualitative data-gathering procedures to obtain comprehensive and reliable information relevant to the research objectives. For the quantitative component, data were collected through structured survey questionnaires to gather measurable information about the respondents’ views, experiences, and behaviors. A hybrid method of data collection was used to maximize participation and accessibility. Google Forms was utilized for respondents who were distant or difficult to reach, while printed questionnaires were personally distributed within selected Higher Education Institutions (HEIs). This approach allowed broader participation and improved data collection. For the qualitative component, a semi-structured interview guide with open-ended questions was used to gather in-depth insights from the main participant and secondary informant. This method allowed flexibility in asking follow-up questions and provided a deeper understanding of the participants’ experiences and responses, particularly regarding significant and negative findings identified in the quantitative results (Patton, 2002). The interviews were conducted online through Google Meet for convenience and accessibility.

Results and Discussions

Research Question 1: Levels of Environmental Demands, Appraised Stressors, Coping Strategies, and Academic Well-Being.

Table 1. Descriptive Statistics (N = 400)

Variable	N	SD	M	Description
Environmental Demands	400	0.30	3.45	Very High
Busyness	400	0.34	3.45	Very High
Routine	400	0.29	3.46	Very High
Appraised Stressors	400	0.13	2.53	High
Challenge Appraisal	400	0.32	3.46	Very High
Hindrance Appraisal	400	0.19	1.52	Very Low
Stress Mindset	400	0.27	3.83	Very High
Resilience	400	0.36	3.50	Very High
Strain	400	0.31	1.54	Very Low
Coping Strategies	400	0.17	2.88	High
Problem Solving	400	0.31	3.52	Very High
Seeking Social Support	400	0.32	3.49	Very High
Avoidance	400	0.28	1.63	Very Low
Academic Well-Being	400	0.23	3.53	Very High
Cognitive Dimension	400	0.29	3.49	Very High
Physical Dimension	400	0.38	3.46	Very High
Social Dimension	400	0.28	3.56	Very High
Material Dimension	400	0.33	3.53	Very High

Table 1 presents the descriptive statistics of environmental demands, appraised stressors, coping strategies, and academic well-being. It shows their mean values, standard deviations, and descriptive levels as indicators of doctoral students' academic experiences. Based on the data, the environmental demands variable obtained a mean of 3.45, classified as very high, confirming that such demands are very often experienced. Its subcomponents, busyness and routine, were also rated very high, while the standard deviation of 0.30 reflects highly consistent responses. Appraised stressors recorded a mean of 2.53, described as high, suggesting that stressors are perceived as demanding. Specifically, challenge appraisal, stress mindset, and resilience were rated very high, whereas hindrance appraisal and strain were very low. The standard deviation of 0.13 also signifies strong consistency in the responses. Coping strategies yielded a mean of 3.88, interpreted as high, showing frequent use of coping methods, with problem solving, seeking social support, and avoidance likewise rated very high. Its standard deviation of 0.23 demonstrates consistent response patterns. Academic well-being obtained a mean of 3.56, categorized as very high, denoting a very good level of academic well-being. Its dimensions, including cognitive, physical, social, and material, were all very high, while the standard deviation of 0.17 further reflects consistency in the answers provided. Environmental demands and academic well-being were both interpreted at very high levels, while appraised stressors and coping strategies were interpreted at high levels. These findings suggest that respondents frequently experienced academic demands, perceived stressors as challenging, actively utilized coping mechanisms, and still maintained a very good level of academic functioning and well-being. The present study affirms Kokotsaki (2023), which emphasized that doctoral students develop adaptive coping strategies and resilience while navigating rigorous academic environments. Similarly, the findings support Xu et al. (2024), who noted that doctoral students may sustain positive well-being despite substantial academic pressures when adequate coping resources and support systems are present. However, the findings contradict Barbayannis et al. (2022), which associated higher academic stress with poorer mental well-being, as respondents in the present study still demonstrated very high academic well-being despite elevated environmental demands and appraised stressors.

Research Question 2: Correlation of Environmental Demands, Appraised Stressors, and Coping Strategies with Academic Well-Being.

Table 2. Correlation Table (N = 400)

Variable	<i>r-value</i>	<i>p-value</i>	Academic Well-Being of Doctoral Students	
			Decision	Interpretation
Environmental Demands	.36	.000	Reject Ho	Weak positive, significant correlation
Appraised Stressors	.44	.000	Reject Ho	Moderate positive, significant correlation
Coping Strategies	.37	.000	Reject Ho	Weak positive, significant correlation

Level of Significance: .05, Decision Rule: Reject Ho if $p < .05$

Table 2 delineates the correlation results between the exogenous variable, environmental demands, the mediating variables, appraised stressors and coping strategies, and the endogenous variable, academic well-being. It also reports the corresponding *r*-values, *p*-values, decisions on the hypotheses, and their interpretations. The above table shows that environmental demand obtained a *p*-value of .000, which was lower than the .05 level of significance, leading to the rejection of the null hypothesis. The computed *r*-value of .36 indicated a weak positive correlation, implying that higher environmental demands were associated with higher academic well-being among doctoral students. Similarly, appraised stressors yielded a *p*-value of .000, which was also below the .05 level of significance; thus, the null hypothesis was rejected. Its *r*-value of .44 reflected a moderate positive correlation, suggesting that higher appraised stressors were linked with higher academic well-being. Meanwhile, coping strategies obtained a *p*-value of .000, which was lower than the .05 level of significance, leading to the rejection of the null hypothesis, while the computed *r*-value of .37 indicated a weak positive correlation, implying that greater use of coping strategies was associated with higher academic well-being. Environmental demands, appraised stressors, and coping strategies all established significant positive relationships with the academic well-being of doctoral students, denoting that higher levels of these variables were associated with better academic well-being. Among the three variables, appraised stressors demonstrated the strongest relationship with academic well-being, while environmental demands and coping strategies exhibited weaker positive correlations. The statistically significant positive relationships between environmental demands, appraised stressors, coping strategies, and academic well-being among doctoral students affirm a prior study signifying that academic stress and demands may function as manageable and constructive challenges that promote student well-being when accompanied by adaptive coping strategies and positive appraisal (Fang et al., 2025). Consistent with Xu et al. (2024), the positive association between environmental demands and academic well-being indicates that engagement with academic responsibilities may be experienced by doctoral students as meaningful and manageable

challenges that nurture persistence, growth, and academic engagement through the interaction between environmental conditions and students' coping capacities within supportive academic ecosystems. In contrast to the present finding, Kumar et al. (2025) proposed that environmental demands and academic stressors may not always function as manageable and constructive challenges, as excessive workloads, publication pressures, financial difficulties, supervisory conflicts, and work–life imbalance can overwhelm doctoral students' coping capacities and negatively affect their academic well-being through burnout, emotional exhaustion, psychological distress, and reduced motivation.

Research Question 3: Academic Well-Being as Influenced by Environmental Demands, Appraised Stressors, and Coping Strategies.

Table 3. Regression Table (N = 400)

Academic Well-Being of Doctoral Students							
Variable	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.	Decision	Interpretation
	<i>B</i>	St. Error					
(Constant)	.82	.22	–	3.63	.000	–	–
Environmental Demands	.14	.04	.18	3.73	.000	Reject Ho	Positive significant influence
Appraised Stressors	.48	.09	.27	5.44	.000	Reject Ho	Positive significant influence
Coping Strategies	.35	.06	.25	5.57	.000	Reject Ho	Positive significant influence

Model Summary: $R = .53$ | $R^2 = .28$ | $F(3, 396) = 51.14$ | $p = .000$, Level of Significance: .05, Decision Rule: Reject Ho if $p < .05$

It can be gleaned on table 3 the regression analysis examining the influence of environmental demands, appraised stressors, and coping strategies on academic well-being. The table includes the relevant coefficients, significance values, and decisions. As shown in the findings, environmental demands registered a standardized beta coefficient of .18 and a t -value of 3.73, demonstrating a positive influence on the academic well-being of doctoral students. Likewise, appraised stressors recorded a standardized beta coefficient of .27 and a t -value of 5.44, revealing a positive influence on academic well-being. Coping strategies also yielded a standardized beta coefficient of .25 and a t -value of 5.57, signifying a positive influence on academic well-being. Since all variables generated p -values of .000, which were lower than the .05 level of significance, the null hypothesis was rejected. Overall, the regression analysis revealed that the model was statistically significant, with an $F(3, 396) = 51.14$ and a p -value of .000, indicating that environmental demands, appraised stressors, and coping strategies collectively influenced the academic well-being of doctoral students. Correspondingly, the coefficient of determination showed that 27.90% of the variance in academic well-being was explained by the combined influence of the variables, with the model revealing moderate explanatory power. Environmental demands, appraised stressors, and coping strategies all displayed positive and significant influences on the academic well-being of doctoral students, which suggests that each variable contributed to academic well-being. Among the variables, appraised stressors emerged as the strongest influence, followed by coping strategies, whereas environmental demands showed the weakest influence. The results pointing to the significant individual and combined influence of environmental demands, appraised stressors, and coping strategies on academic well-being among doctoral students support the findings of Mahsood et al. (2025), who explained that doctoral students' well-being is shaped by the interaction of academic demands, resilience, coping resources, social support, and institutional conditions that help students manage stress and maintain positive functioning. Similarly, the positive influence of environmental demands, appraised stressors, and coping strategies on academic well-being indicates that doctoral students may sustain academic engagement, persistence, and psychological well-being when academic demands are supported by adaptive coping strategies, resilience, and supportive academic environments that facilitate effective stress management (Kokotsaki, 2026). This differs from the findings of Pérez-Jorge et al. (2025), who argued that environmental demands and academic stressors may not always contribute positively to student well-being, as persistent academic pressure and unmanaged stress can produce psychological distress, emotional exhaustion, and diminished well-being among university students.

Research Question 4: Structural Model of Academic Well-Being.

Table 4. Best-Fit Model on Academic Well-Being Among Doctoral Students

Index	Criterion	Model		
		Model 1	Model 2	Model 3
<i>CMIN/DF</i>	< 5.00	3.52	2.56	1.11
<i>p-value</i>	> .05	.000	.000	.293
<i>NFI</i>	> .95	.87	.88	.97
<i>TLI</i>	> .95	.82	.89	.99
<i>CFI</i>	> .95	.90	.92	1.00
<i>GFI</i>	> .95	.94	.95	.98
<i>RMSEA</i>	< .05	.08	.06	.02
<i>P-close</i>	> .05	.000	.045	.997

Table 4 presents the model fit indices for the three structural models evaluated in relation to academic well-being among doctoral students, providing a basis for assessing the adequacy of each model using established goodness-of-fit criteria. Model 1 partially met the goodness-of-fit criteria, as reflected by its *CMIN/DF* value of 3.52 and *GFI* value of .94, although several other fit indices remained below the acceptable threshold. Model 2 likewise failed to fully satisfy the goodness-of-fit criteria, yielding a *CMIN/DF* value of 2.56 and *GFI* value of .95; however, despite the improvement in some indices compared to Model 1, it still demonstrated inadequate overall model fit. In Model 3, the hindrance appraisal indicator was removed from the latent variable of appraised stressors, as its very low mean score of 1.52 directed that doctoral students rarely perceived their academic demands as hindrances, consistent with its failure to meaningfully contribute to the construct, as evidenced by its non-significant loading with a *p*-value of .334 and a negligible standardized estimate of $-.05$. Following this respecification, Model 3 satisfied all goodness-of-fit criteria, yielding a *CMIN/DF* value of 1.11, *p*-value of .293, *NFI* of .97, *TLI* of .99, *CFI* of 1.00, *GFI* of .98, *RMSEA* of .02, and *P-close* of .997, thereby confirming that it demonstrated the best fit among the proposed models. Among the three models tested, Model 1 and Model 2 each exhibited only partial fit, although Model 2 showed modest improvement over Model 1 in several fit indices. In contrast, after the removal of the hindrance appraisal indicator, which failed to load meaningfully onto its construct, Model 3 achieved superior fit across all indices and validated the sequential mediation pathway wherein environmental demands influenced appraised stressors, which in turn affected coping strategies, and coping strategies subsequently influenced academic well-being, reflecting an ordered mediation process. The final structural model therefore supports the stress and coping framework by demonstrating that doctoral students' academic well-being develops through the interaction of environmental conditions, appraisal processes, coping mechanisms, and resilience-building experiences within academic ecosystems (Zhao et al., 2026). Aligned with this framework, the present study also affirmed the findings of Fitriyah et al. (2026) by showing that supportive academic environments and adaptive coping resources advanced resilience development and enhanced academic well-being among doctoral students through more effective management of academic stress. On the other hand, Guo and Liu (2026) suggested a different pattern of relationships in which environmental demands and stress appraisal may not always lead to adaptive coping and positive well-being outcomes, as prolonged academic pressures, financial burdens, career uncertainty, and limited institutional support can intensify psychological distress and weaken coping effectiveness among doctoral students.

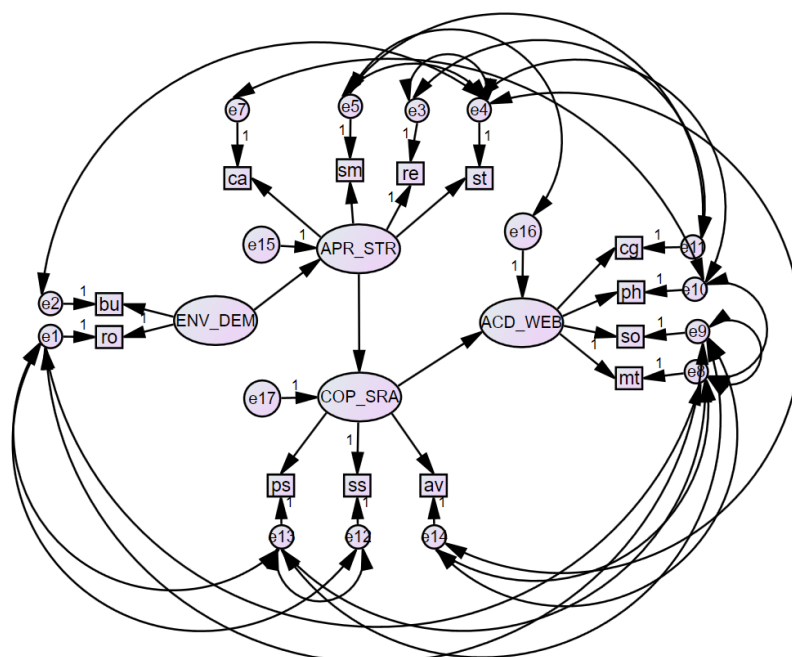


Figure 1. Best-Fit Model of Academic Well-Being

Legend:

ENV_DEM – environmental demands	ro – routine	st – strain	ph – physical
APR_STR – appraised stressors	ca – challenge appraisal	ps – problem solving	so – social
COP_SRA – coping strategies	ha – hindrance appraisal	ss – seeking social support	mt – material
ACD_WEB – academic well-being	sm – stress mindset	av – avoidance	
bu – busyness	re – resilience	cg – cognitive	

On Challenges. The participant experienced multiple role demands as a teacher, mother, wife, and church servant, where academic, professional, family, and religious responsibilities continuously competed for her time and energy. This supports the quantitative finding that environmental demands have a significant positive correlation with academic well-being, as her engagement with these overlapping demands was associated with sustained functioning rather than withdrawal. She explained:

"I am not only a student, but also a public-school teacher, a mother, a wife, and a lector. Balancing these responsibilities is very challenging because I need to prepare lessons, take care of my children, attend doctoral classes, and work on my research all at the same time."

Her husband's absence as a seafarer intensified these demands. She shared:

"His work is a big help financially, but his absence makes my responsibilities feel much heavier when academic deadlines and my duties at school and at home overlap."

A secondary informant, the participant's parent, validated the extent of these challenges, underscoring how academic stress shaped both emotional experiences and family interactions:

"Whenever she gets stressed, we just motivate her. When she is stressed, we get affected too—she shares with us what is stressing her out in her life. Mainly, whenever there are corrections or confusion regarding her dissertation, she comes to us to vent and sometimes cries."

As dissertation completion approached, institutional coordination and travel intensified her exhaustion. She recalled:

"There was a time when we were questioned and caught in a typhoon. This resulted in physical exhaustion, mental stress, and self-doubt."

These demands affected her academic well-being. She expressed:

"I am always tired. My focus becomes weak. Should I stop or continue? I am physically exhausted, mentally uncertain."

She also identified Statistics as a particularly stressful aspect, which shifted from a manageable challenge to an academic hindrance. However, consistent with the finding that appraised stressors have a moderate positive correlation with academic well-being, she perceived difficulties predominantly as challenges to work through rather than as obstacles that block progress. Overall, overlapping responsibilities produced cumulative pressure, physical fatigue, cognitive overload, and psychological strain, yet she continued to function and persist.

Evaluation of the doctoral student's experiences showed that stress emerged from the tension between overwhelming demands and limited coping resources. Simultaneous responsibilities as a teacher, mother, wife, church servant, and doctoral student alongside intense academic expectations gradually drained her physical, emotional, and psychological resources, resulting in emotional exhaustion, self-doubt, psychological strain, and chronic fatigue despite her persistence. These findings support Bing and Cai (2026), who explained that overlapping responsibilities heighten burnout and emotional exhaustion among doctoral students, and align with Valencia (2026), who emphasized that balancing academic, professional, and family obligations intensifies psychological strain and role conflict. In contrast, the findings oppose Lillelien et al. (2026), as grit and perseverance alone did not sufficiently buffer prolonged, multi-domain stress without adequate institutional support. The findings extend the Theory of Stress and Coping by showing that overlapping academic, professional, family, and community demands intensify one another and drain emotional and psychological resources when support is inadequate, producing persistent strain despite personal resilience. The findings therefore suggest incorporating multi-role interaction into the theory to better explain stress appraisal beyond single-domain assessments.

On Coping Strategies. Despite persistent challenges, she used coping practices that demonstrate the qualitative finding that coping serves as a key mechanism enabling students to continue despite physical and psychological strain. This aligns with the quantitative finding that coping strategies have a weak positive significant correlation with academic well-being. She explained:

"I keep a balance journal. I write everything daily. Most of all I crochet. Before sleeping I crochet to release stress, then I write everything down while praying."

Journaling, crocheting, and prayer helped her regulate stress and maintain emotional balance. Social and financial support also sustained her persistence, reflecting the qualitative finding that students draw strength from their faith and rely on material and practical support from their families. She stated:

"My family is my strongest support system. My children, colleagues, classmates, and professors motivate me. Financial support such as loans helped sustain my needs."

Regarding Statistics, she shared:

"I felt overwhelmed, but I prayed, asked for help, and my classmates supported me. Even during flooding, we continued attending class."

Material support from her husband, providing a laptop and internet, was also very helpful. Notably, consistent with the divergence noted in the findings, the quantitative data indicated very low levels of avoidance coping, yet the qualitative findings emphasized support seeking and faith-based coping as the more prominent responses to stress. Her coping strategies combined emotional, spiritual, social, cognitive, and material resources to sustain academic functioning despite persistent stressors.

Grounded in the Theory of Stress and Coping, coping strategies emerged as continuous efforts to regulate stress and sustain functioning amid persistent demands. The participant relied on personal regulation practices, social support, spiritual coping, and instrumental resources to maintain emotional balance and perseverance despite emotional exhaustion and psychological weariness. These experiences reinforce Mercer and Thomas (2024), who noted that doctoral researchers often rely on multiple coping mechanisms to manage persistent academic stress, and echo Agarwal et al. (2024), who highlighted the

importance of family and peer support in reducing stress among doctoral students. In contrast, the findings differ from Feizi et al. (2024), as despite prolonged stress, the doctoral student never expressed intentions to quit and instead sustained persistence through strong purpose and relational support. The theory is enhanced by showing that coping operates as an integrative system of emotional, behavioral, social, spiritual, and resource-based processes. Rather than isolated responses, these strategies worked together to sustain functioning and persistence despite continuing strain, suggesting that coping should be understood as a dynamic, multi-layered system maintained throughout the academic journey.

On Insights, Realizations, and Values Developed. Her account evolved from recounting struggles to emphasizing the meaning developed through those experiences. This reflects the finding that engagement with academic responsibilities, when managed effectively, contributes to sustained functioning. She reflected:

"I realized I am stronger than I thought. The journey taught me patience, perseverance, and determination. Difficulties are part of success because without them I would not have grown. Discipline and faith in God are important. Resilience grows when we continue moving forward."

Adversity became viewed not merely as hardship, but as a source of personal, academic, and professional growth. This finding strongly converges with the sequential mediation model, wherein environmental demands influence appraised stressors, appraised stressors affect coping strategies, and coping strategies subsequently influence academic well-being. Her coping strategies include journaling, prayer, time management, and seeking support functioned as mechanisms for reflection, emotional regulation, meaning-making, and sustained engagement. Faith provided grounding, while discipline and determination guided her management of competing responsibilities. The qualitative data further enriched the findings by identifying additional influences such as social support, faith, and personal values that shaped her academic experience. Resilience emerged not as a fixed trait but as a developing capacity strengthened through repeated encounters with difficulty and continuous decisions to move forward.

The Theory of Stress and Coping proposes that prolonged interaction between demands and coping processes may lead to personal development. The doctoral student's experiences strengthened resilience, deepened self-awareness, and reshaped values such as perseverance, discipline, balance, purpose, and faith, while academic struggles became manageable through prayer, help-seeking, peer support, and persistence. These findings are consistent with Heron et al. (2023), who reported that doctoral students often experience identity reconstruction and personal transformation through academic struggles, and support Xie et al. (2026), who emphasized reflective practice and meaning-making as foundations of resilience and stronger self-authorship in doctoral education. In contrast, the findings contradict White et al. (2023), as meaningful growth and strengthened values still emerged despite limited institutional support, highlighting the sustaining influence of strong internal resources. The present study enriches the theory by emphasizing that sustained stress may lead not only to restored functioning but also to value formation, identity development, and deeper self-understanding. Prolonged engagement with challenges strengthened resilience, positive reframing, and values such as perseverance and faith, suggesting that sustained stress can produce transformative developmental outcomes.

Extent of Corroboration Between Quantitative and Qualitative Findings. Both quantitative and qualitative findings converged to show very high environmental demands with a mean score of 3.45, busyness at 3.45, and routine at 3.46, with the participant describing role overload from balancing teaching, childcare, doctoral classes, and research. High coping utilization was reflected in a mean score of 2.88 through prayer, family support, and encouragement from peers and professors, while very high academic well-being was shown in a mean score of 3.53, illustrated by the participant's realization, *"I am stronger than I thought."* Quantitative results also indicated high appraised stressors with a mean score of 2.53, very low strain at 1.54, and a very high stress mindset at 3.83, consistent with the participant's reports of exhaustion and self-doubt. A nuanced divergence emerged as avoidance coping was quantitatively very low with a mean score of 1.63, and while qualitatively secondary, it still appeared in the participant's remarks about forgetting stress or going to sleep. Complementarity revealed unmeasured protective factors such as faith, discipline, perseverance, and meaning-making, explaining how the participant transformed challenges into growth. Together, the integrated findings offer a comprehensive understanding of doctoral students' academic well-being amid persistent demands.

The integrated findings of the study corroborated Kumar (2025), who reported that doctoral students commonly experience intense academic pressures, multiple responsibilities, emotional exhaustion,

and difficulties balancing academic, professional, and family roles, while coping strategies and social support serve as important resources for sustaining well-being. This was reflected in the convergence of the present quantitative and qualitative findings, which demonstrated very high environmental demands, busyness, routine, and psychological strain associated with balancing teaching, childcare, doctoral coursework, and research responsibilities. A similar pattern emerged in relation to the findings of Muttaqiyathun (2025), lending support to the present results by showing that social support from family, peers, supervisors, and academic communities significantly enhanced the psychological well-being of doctoral students by reducing stress and burnout. In the same manner, the participant relied on prayer, family support, and encouragement from classmates and professors as coping mechanisms that strengthened resilience and contributed to very high academic well-being. Nevertheless, the present findings contradicted those of Graça and Brandão (2024), who found that positive and negative religious or spiritual coping were associated with diminished psychological well-being and lower life satisfaction among university students. In contrast, the current findings identified prayer, faith in God, discipline, perseverance, and meaning-making as protective factors that promoted resilience and sustained academic well-being despite persistent demands and exhaustion.

Modified Paradigm

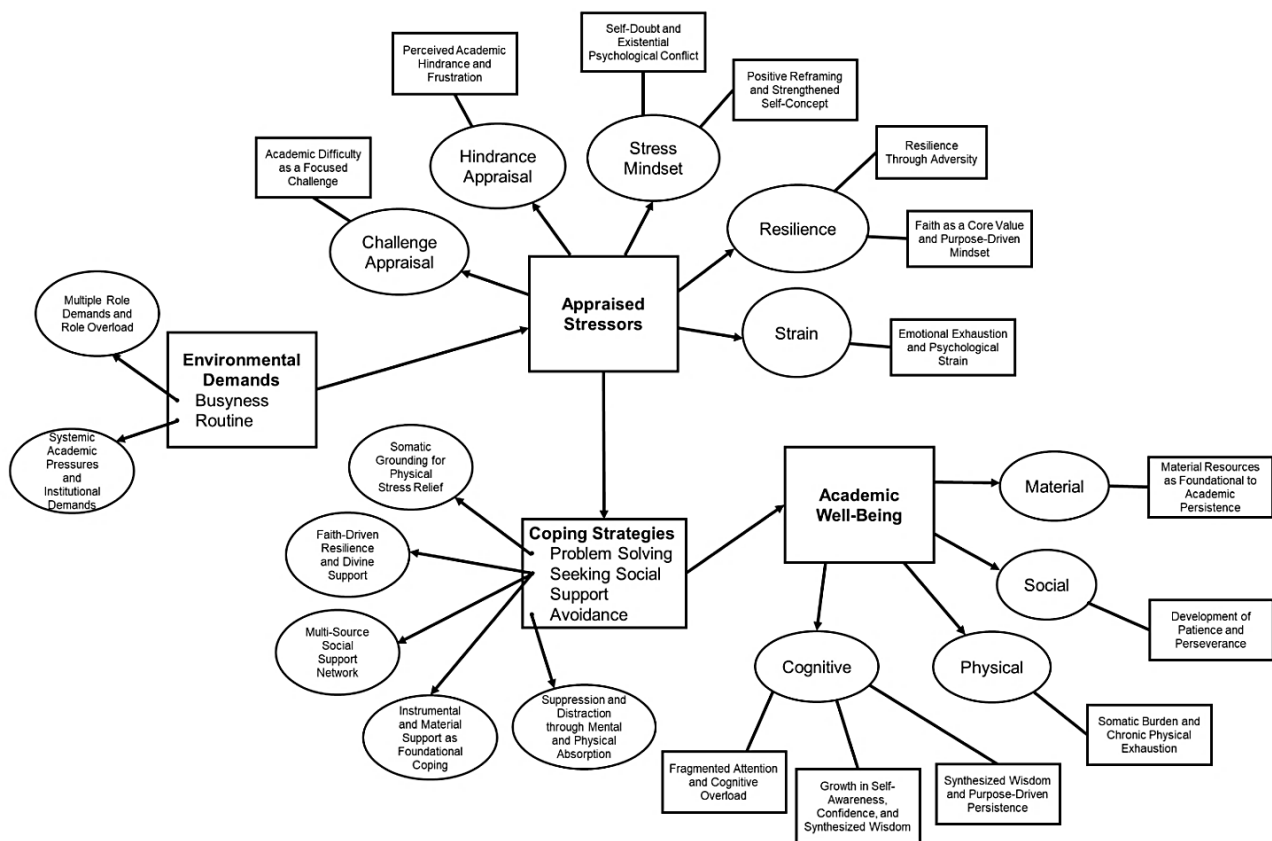


Figure 2. Modified Paradigm of Doctoral Students' Academic Well-Being through the Lens of the Theory of Stress and Coping Proposed by Lazarus and Folkman

Ethical Considerations

The researchers adhered to established ethical principles. Ethics clearance was first secured from the Society of Moral Integrity and Legal Ethics (SMILE) Board, confirming compliance with ethical, legal, and professional standards. Approval to conduct the research was as well obtained from relevant institutional offices. Participants were fully informed about the nature, purpose, and procedures of the study through an informed consent process to ensure voluntary participation. The researchers conducted the study with fairness, professionalism, and respect while recognizing the value of participants' contributions. Measures were implemented to minimize risks, protect privacy and identities, and maintain confidentiality of all information gathered. Participants were informed they could withdraw at any stage

without penalty. The researcher's ensured findings were presented accurately and transparently while upholding integrity and accountability throughout the research process.

Conclusions

The integrated findings demonstrate that environmental demands, appraised stressors, and coping strategies collectively influence doctoral students' academic well-being through a sequential process in which adaptive appraisal and coping mechanisms help manage academic challenges. Quantitatively, the variables showed significant relationships with academic well-being, while the sequential mediation model confirmed the ordered pathway linking demands, stress appraisal, coping strategies, and well-being. Qualitatively, the participant described how overlapping responsibilities created emotional strain yet sustained academic functioning through faith, social support, self-regulation, and personal perseverance, reinforcing coping as a continuous and dynamic process. These integrated findings support and extend the Theory of Stress and Coping by demonstrating that academic well-being is strengthened through adaptive meaning-making, supportive relationships, and resilient coping amid academic adversity.

Recommendations

Based on the findings and conclusions of the study, several recommendations are offered. Higher education institutions and doctoral program administrators may strengthen structured support systems that address the multiple academic, professional, and personal demands experienced by doctoral students. Support mechanisms such as flexible academic arrangements, mental health services, peer-mentoring programs, writing support groups, and accessible financial or technological assistance may be enhanced to help sustain students' academic well-being. Doctoral students may actively develop and maintain adaptive coping strategies through self-regulation practices, meaningful social relationships, spiritual support, and effective time management. Students may likewise seek consistent communication and support from family members, peers, and academic supervisors to better manage overlapping responsibilities and emotional demands. Future studies may explore other variables such as supervisory quality, institutional support, financial stability, and cultural influences. Mixed-methods or longitudinal research may examine how resilience and coping develop over time across different doctoral populations and academic settings, including testing the sequential mediation model to establish causal ordering. Further research may examine why hindrance appraisal did not meaningfully contribute to the model, particularly whether this reflects a unique characteristic of doctoral students in the Philippine setting or a broader pattern requiring theoretical refinement. Given that faith, purpose, discipline, and meaning-making emerged qualitatively as protective factors not captured in the quantitative instruments, future studies may develop measures that integrate these spiritual and value-based dimensions into the framework of academic well-being. Additionally, because the best-fit model confirmed a sequential pathway from environmental demands to appraised stressors to coping strategies to academic well-being, future research may investigate whether additional variables such as supervisory support or financial stability further strengthen or alter this pathway across diverse doctoral populations.

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