



ORIGINAL ARTICLE

## Personality Traits and Stress Coping Mechanisms Among Nursing Students During Thesis Preparation



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### ABSTRACT

**Introduction:** Thesis preparation is a mandatory academic requirement that often becomes a significant source of stress among students. Individual differences in personality traits may influence how students cope with academic stress. Effective stress coping strategies are essential to help students manage psychological pressure during thesis completion.

**Objectives:** This study aimed to analyze the relationship between personality traits and stress coping mechanisms among nursing students during thesis preparation.

**Methods:** This study employed a quantitative correlational design with a cross-sectional approach. A total of 152 respondents were selected using a purposive sampling technique. Data were collected using structured questionnaires measuring personality traits and stress coping mechanisms. Statistical analysis was performed using the Spearman’s rho correlation test with a significance level of  $p < 0.05$ .

**Results:** The findings indicated that the majority of students exhibited extroverted personality traits and tended to use positive stress coping mechanisms. A statistically significant relationship was found between personality traits and stress coping ( $p < 0.05$ ), suggesting that personality characteristics influence how students manage stress during thesis preparation.

**Conclusions:** Personality traits are significantly associated with stress coping mechanisms among nursing students. Students with more adaptive personality characteristics tend to use more positive coping strategies, which may support successful thesis completion.



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## Introduction

Thesis preparation is a mandatory academic requirement for undergraduate students and represents one of the most demanding stages in higher education. It differs from structured coursework because it requires independent learning, critical thinking, and the ability to manage complex academic tasks with limited supervision. This transition often places considerable psychological pressure on students, making thesis completion a major source of academic stress (Barbayannis et al., 2022; Beiter et al., 2015; Pascoe et al., 2020).

Academic stress during thesis preparation may arise from various factors, including time constraints, academic workload, limited supervision, and uncertainty regarding research outcomes. When students perceive that these demands exceed their coping capacity, psychological distress may occur, negatively affecting emotional stability, motivation, and academic performance (Barbayannis et al., 2022; Insantuan et al., 2026; Majerová & Sokolová, 2025; Pascoe et al., 2020).

Stress is defined as a psychological response to demands that are perceived as overwhelming or beyond an individual's ability to cope. In this context, coping strategies play a critical role in determining how individuals respond to stress. Coping refers to the cognitive and behavioral efforts used to manage stressful situations (Carver & Connor-Smith, 2010; Compas et al., 2017). Adaptive coping strategies help individuals maintain psychological balance and function effectively, whereas maladaptive coping can worsen stress and lead to negative outcomes (Compas et al., 2017; Hadi et al., 2025; Irfan et al., 2025).

Individual differences, particularly personality traits, are important factors influencing coping mechanisms. Personality reflects stable patterns of thinking, feeling, and behavior that shape how individuals perceive and respond to stressors (McCrae & Costa Jr., 2008; Vollrath, 2001). Students with more extraverted and conscientious personality traits tend to seek social support and actively engage in problem-solving, which may facilitate more adaptive coping strategies. Conversely, individuals with higher levels of neuroticism or introversion are more likely to experience negative affect and to rely on avoidance or

emotion-focused coping responses (Carver & Connor-Smith, 2010; Guadalupe & DeShong, 2025; Kaiseler et al., 2012).

Empirical studies have demonstrated that personality traits are significantly associated with coping strategies. Individuals with adaptive personality characteristics are more likely to employ problem-focused coping, whereas those with less adaptive traits tend to use avoidance or emotion-focused coping (Guadalupe & DeShong, 2025; Iqra, 2024; Kaiseler et al., 2012). Moreover, coping effectiveness has been shown to influence mental health outcomes, including anxiety and stress levels among students (Schreiner, 2018; Shan & Xu, 2025; Thomas et al., 2024).

Recent research also indicates that academic stress among students has increased due to higher educational demands, competitive learning environments, and disruptions such as the COVID-19 pandemic (Barbayannis et al., 2022; Pascoe et al., 2020). Students who lack effective coping mechanisms are at greater risk of psychological distress, burnout, and decreased academic performance (Barbayannis et al., 2022). These findings suggest that coping strategies play a crucial role in maintaining students' psychological well-being in higher education settings.

Despite the growing body of research on academic stress and coping, relatively few studies have specifically examined the relationship between personality traits and coping mechanisms in the context of thesis preparation. Most existing research focuses on general academic or examination-related stress rather than the unique challenges associated with independent research work and final-year projects (Beiter et al., 2015; Pascoe et al., 2020). This gap highlights the need for further investigation, particularly among nursing students who must balance thesis demands with clinical responsibilities and professional preparation (Ab Latif & Mat Nor, 2019; Ahmed & Mohammed, 2019).

Understanding the relationship between personality traits and stress coping mechanisms is essential for developing targeted interventions to support students' mental health and academic success. Identifying how personality influences coping can help educators and healthcare professionals design more effective support

systems, such as stress-management training, mentoring, and counseling, for students who are engaged in thesis preparation (Pérez-Jorge et al., 2025; Thomas et al., 2024). Therefore, this study aimed to analyze the relationship between personality traits and stress coping mechanisms among nursing students during thesis preparation.

## Methods

This study employed a quantitative analytic correlational design with a cross-sectional approach to examine the relationship between personality traits and stress coping mechanisms among nursing students during thesis preparation. This design allows for the simultaneous measurement of independent and dependent variables at a single point in time to determine the association between variables.

The study population consisted of undergraduate nursing students who were in the final stage of their academic program and actively engaged in thesis preparation. A purposive sampling technique was applied to select participants who met the inclusion criteria. The final sample included 152 respondents. Inclusion criteria were students in their final semester, actively working on their thesis, and willing to participate in the study. Students who were not engaged in thesis preparation or provided incomplete responses were excluded.

The independent variable in this study was personality traits, categorized into introvert and extrovert types. Personality traits were defined as consistent patterns of behavior, thought, and emotion that influence how individuals respond to stress. The dependent variable was stress coping mechanisms, defined as cognitive and behavioral efforts used by individuals to manage stress during thesis preparation.

Data were collected using structured self-administered questionnaires. The personality questionnaire consisted of 9 dichotomous items (yes/no) used to classify respondents into introvert or extrovert categories. The stress coping questionnaire consisted of 7 dichotomous items measuring coping strategies, which were categorized into positive coping (problem-solving, seeking social support, and positive reappraisal) and

negative coping (avoidance, self-blame, and wishful thinking).

Prior to data collection, the instruments were reviewed for content validity and tested for reliability. All questionnaire items were found to be valid, and reliability testing indicated acceptable internal consistency. Data collection was conducted after obtaining informed consent from participants, and confidentiality was strictly maintained.

Data were analyzed using Statistical Package for the Social Sciences (SPSS). Descriptive statistics were used to summarize respondent characteristics and variable distributions. Inferential analysis was performed using the Chi-square test to examine the relationship between personality traits and stress coping mechanisms, as both variables were categorical. A significance level of  $p < 0.05$  was used to determine statistical significance.

Ethical principles were strictly followed throughout the study. Participants provided informed consent prior to participation. Anonymity was ensured by using coded data, and all information obtained was kept confidential. Participation was voluntary, and respondents had the right to withdraw at any time without any consequences.

## Results

A total of 152 respondents were included in this study. The majority of participants were aged between 18–40 years (96.1%), while a small proportion were aged above 40 years (3.9%). In terms of gender distribution, most respondents were female (59.2%), with males accounting for 40.8%. Regarding occupational status, slightly more than half of the respondents were non-government employees (53.9%), while 46.1% were government employees.

**Table 1. Demographic Characteristics of Respondents**

Variable	Category	n (%)
Age	18–40 years	146 (96.1)
	>40 years	6 (3.9)
Gender	Male	62 (40.8)
	Female	90 (59.2)
Occupation	Government employee	70 (46.1)
	Non-government	82 (53.9)

The distribution of personality traits indicated that the majority of respondents had extroverted personality characteristics

(69.1%), while 30.9% were categorized as introverted.

**Table 2. Distribution of Personality Traits**

Personality Traits	n	%
Introvert	47	30.9
Extrovert	105	69.1
<b>Total</b>	<b>152</b>	<b>100</b>

Regarding stress coping mechanisms, most respondents demonstrated positive coping strategies (82.9%), whereas 17.1% exhibited negative coping.

**Table 3. Distribution of Stress Coping Mechanisms**

Personality	Positive Coping	Negative Coping	Total
Introvert	29	18	47
Extrovert	97	8	105
<b>Total</b>	<b>126</b>	<b>26</b>	<b>152</b>

Inferential analysis using the Chi-square test revealed a statistically significant relationship between personality traits and stress coping mechanisms ( $p = 0.010$ ). These findings indicate that personality traits are significantly associated with the type of coping strategies used by students during thesis preparation.

## Discussion

The present study found a statistically significant relationship between personality traits and stress coping mechanisms among nursing students during thesis preparation. The findings indicate that students with extroverted personality traits were more likely to adopt positive coping strategies, whereas those with introverted traits tended to demonstrate less adaptive coping patterns. This suggests that personality plays a crucial role in shaping how students respond to academic stress, particularly during demanding tasks such as thesis completion.

These findings are consistent with the theoretical framework that personality traits influence cognitive appraisal and coping responses to stress. Personality determines how individuals perceive stressors and select coping strategies, with extroverted individuals more likely to engage in active coping and social support seeking, while introverted individuals may rely more on internal processing and avoidance strategies (Carver & Connor-Smith, 2010; Kaiseler et al., 2012). This mechanism explains why students with extroverted traits in this study demonstrated more positive coping behaviors.

The results also align with empirical studies showing that academic stress is highly prevalent among university students and is associated with psychological distress, including anxiety, depression, and reduced well-being (Barbayannis et al., 2022; Beiter et al., 2015; Pascoe et al., 2020). The process of thesis preparation, which requires sustained cognitive effort and independent problem-solving, further amplifies these stressors. Students who lack effective coping strategies are therefore more vulnerable to experiencing negative psychological outcomes.

Furthermore, previous studies among nursing students have shown that clinical and academic demands significantly contribute to stress levels, and coping strategies play a key role in mitigating these effects (Ab Latif & Mat Nor, 2019; Ahmed & Mohammed, 2019). Positive coping strategies such as problem-solving, seeking social support, and positive reappraisal have been associated with better psychological adjustment, whereas negative coping strategies such as avoidance and self-blame are linked to poorer mental health outcomes.

Recent systematic reviews also support the finding that personality traits are strongly associated with coping styles and psychological well-being. Individuals with adaptive personality characteristics tend to utilize more effective coping strategies, which in turn contribute to higher life satisfaction and better mental health outcomes (Guadalupe & DeShong, 2025; Irfan et al., 2025). This indicates that coping serves as a mediating mechanism between personality and psychological outcomes.

In addition, academic stress has been shown to be influenced by multiple contextual factors, including academic workload, environmental demands, and individual psychological resources (Hadi et al., 2025; Iqra, 2024). Students who are unable to balance these demands may experience increased stress and maladaptive coping. This is particularly relevant in the context of thesis preparation, where students are required to work independently with minimal external structure.

The findings of this study also highlight the importance of adaptive coping strategies in promoting student well-being. Research has

shown that adaptive coping, combined with positive psychological factors such as hope and resilience, can significantly enhance mental health and academic success (Schreiner, 2018; Shan & Xu, 2025). Conversely, maladaptive coping strategies are associated with increased psychological distress and reduced academic performance (Pérez-Jorge et al., 2025; Thomas et al., 2024).

Moreover, qualitative evidence suggests that students experiencing high levels of academic stress often report emotional exhaustion, decreased motivation, and difficulties in managing academic responsibilities (Insantuan et al., 2026; Majerová & Sokolová, 2025). These findings reinforce the importance of identifying factors that influence coping strategies, including personality traits.

Overall, the findings of this study support the notion that personality traits are a significant determinant of stress coping mechanisms among students. The results indicate that enhancing students' coping skills and psychological readiness may improve their ability to manage academic stress effectively. Interventions aimed at promoting adaptive coping strategies, particularly among students with less adaptive personality traits, may help reduce stress and improve academic outcomes.

### Implication and limitation

The findings of this study have important implications for nursing education and student mental health support. The significant relationship between personality traits and coping strategies indicates that individual psychological characteristics should be considered in designing academic support programs. Educational institutions are encouraged to integrate stress management training, personality-based counseling, and coping skill development into academic guidance, particularly for students undergoing thesis preparation.

Healthcare professionals, including nurse educators, can play a crucial role in identifying students at risk of maladaptive coping and providing early interventions. Strengthening adaptive coping strategies such as problem-solving, emotional regulation, and social support utilization may help improve students' resilience and academic performance.

However, several limitations should be acknowledged. First, the cross-sectional design limits the ability to establish causal relationships between personality traits and coping mechanisms. Second, the use of self-reported questionnaires may introduce response bias and subjectivity. Third, this study did not explore other influencing factors such as social support, academic environment, and psychological resilience, which may also contribute to coping outcomes. Future research is recommended to employ longitudinal designs and include broader psychosocial variables to provide a more comprehensive understanding.

### Relevance for Practice

The findings of this study emphasize the importance of considering personality traits in supporting nursing students during thesis preparation. Educators and academic institutions should integrate personality-based approaches into student support systems, including stress management programs, mentoring, and counseling services tailored to individual psychological characteristics.

In practice, nurse educators can identify students with less adaptive personality traits who may be at risk of ineffective coping and provide targeted interventions such as coping skills training, emotional regulation strategies, and peer support programs. Strengthening adaptive coping strategies—such as problem-solving, seeking social support, and positive reappraisal—can help students better manage academic stress and maintain psychological well-being.

Additionally, embedding mental health support within academic environments, particularly during high-stress periods such as thesis preparation, may improve student resilience, reduce psychological distress, and enhance academic performance. These findings highlight the need for a holistic approach that combines academic guidance with psychological support to optimize student outcomes in nursing education.

### Conclusion

This study identified a significant relationship between personality traits and stress coping mechanisms among nursing students during thesis preparation, indicating that students with extroverted traits tend to employ more

adaptive coping strategies, while those with introverted traits are more likely to demonstrate less effective coping responses; therefore, personality plays a critical role in shaping how students manage academic stress, and strengthening coping skills alongside psychological preparedness is essential to support student well-being and facilitate successful thesis completion.

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### Author Contribution

Kiki Rokhmawati Azizah contributed to the study conceptualization, data collection, data analysis, and manuscript drafting. Ahmad Kholid Fauzi contributed to the study design, data interpretation, and critical revision of the manuscript. Tasrip contributed to data validation, manuscript review, and final approval of the manuscript. All authors approved the final version of the manuscript and agreed to be accountable for all aspects of the work.

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### Declaration of Conflicting Interest

The authors declare no conflict of interest.

### Declaration of Use of AI in Scientific Writing

The authors declare that generative AI and AI-assisted technologies were used to support language editing and grammatical refinement of the manuscript.

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