

Research Paper

Stress Coping Strategies in Filipino Nursing Students:
The Role of Personality Type

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ABSTRACT

Background and Purpose: Nursing education with intense academic and clinical demands often leads to high levels of stress among students. To cope with stress, students use different strategies, influenced by personal factors and personality type. This study aimed to explore the use of stress coping strategies among Filipino nursing students and investigate the role of individual characteristics and personality traits.

Materials and Methods: This is a descriptive cross-sectional study. A total of 149 third-year nursing students from the College of Nursing in Cagayan de Oro City, Philippines, were selected using a stratified random sampling method. Data collection was done in March 2024 using a self-report questionnaire including a socio-demographic form (sex, birth order, family monthly income), a coping strategies inventory, and the Myers-Briggs type indicator (MBTI). Statistical analyses were conducted using independent t-tests and one-way analysis of variance.

Results: There were no statistically significant differences in coping strategies based on sex, birth order, or family income ($P > 0.05$). However, significant differences were observed based on personality types; those with a Judging type had significantly higher mean scores in two problem-focused (Mean=3.13; $P=0.001$) and meaning-focused (mean=3.20, $P=0.004$) coping strategies compared to those with a perceiving type (Mean=2.93 and 2.96, respectively), but not in the emotion-focused coping strategies ($P=0.685$). The differences in problem-focused, emotion-focused, and meaning-focused coping scores between introverted and extroverted types were not significant ($P > 0.05$).

Conclusion: Personality traits, particularly the judging versus perceiving types, significantly influence Filipino nursing students' stress coping strategies. These findings highlight the potential benefits of incorporating personality-based approaches in designing stress management programs for nursing students.

Keywords: Nursing students, Stress, Coping behavior, Personality, Individuality

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Introduction

Nursing education is one of the most challenging and stressful programs worldwide, emphasizing the mastery of complex medical concepts and the application of clinical skills in patient care [1]. The stress experienced by nursing students is primarily due to heavy academic workloads [2, 3]. Other stressors such as financial difficulties and family expectations also contribute to students' psychological strain [2]. Perceived stress refers to the subjective experience of psychological pressure or mental burden when the demands exceed the ability to cope [4, 5]. Students adopt various coping strategies that are often shaped by their personality traits [6]. Algorani and Gupta [7] categorized coping strategies into four types: Problem-focused, emotion-focused, meaning-focused, and social coping. However, the effectiveness and preference for these strategies vary depending on each student's stress levels and personality [8]. To understand the personality differences, the Myers-Briggs type indicator (MBTI) is used, which classifies individuals across four dichotomies: Extraversion vs introversion, sensing vs intuition, thinking vs feeling, and judging vs perceiving. The MBTI provides insights into how individuals process information, make decisions, and manage stress. Other personal factors, such as sex, ordinal position, and family income, also influence students' coping strategies. For instance, research suggests that females are more likely to use emotion-focused coping strategies and seek social support, while males often rely on themselves and may turn to alcohol use or tobacco smoking [9]. Birth order may also affect personality and coping. According to Adler's theory [10], firstborns tend to be reliable and achievement-oriented; middle children are often social and adaptable; youngest children are outgoing and attention-seeking; and only children tend to be mature, perfectionistic, and responsible.

While previous studies have separately examined perceived stress, coping strategies, or personality traits among students, scant research has explored how these variables interact with each other, specifically in nursing students. Most studies have focused either on the academic pressures or individual coping behaviors, but lack an integrated approach that considers personality traits as potential predictors of coping strategies and overall psychological well-being. This study addresses this gap and aims to examine the use of stress coping strategies among third-year nursing students in the Philippines and the role of personality types and sociodemographic

factors such as sex, birth order, and family income, offering a nuanced understanding that can inform targeted mental health interventions in nursing education.

Materials and Methods

Study design and participants

This is a quantitative descriptive study with a cross-sectional design. Quantitative research allows for collecting data at a single point in time and describing patterns and associations among the variables without establishing causality [11]. This study was conducted at the College of Nursing in Cagayan de Oro City, Philippines. The study population consists of Level 3 nursing students of this college studying for a bachelor's degree in the academic year 2023-2024. These students had been enrolled in a curriculum consisting of 26 academic units for the first semester and 25 units for the second semester (51 units in total for the school year). The inclusion criteria were official enrollment as a regular nursing student in the college and having the same academic demands and curriculum load. The students from other levels, programs, or institutions, and the irregular students with no same academic structure were excluded. Out of 241 eligible students, 149 respondents were included. The sample size was determined using Cochran's formula, considering a 5% margin of error at a 95% confidence level. A stratified random sampling method was used for selecting participants, dividing the population into strata based on sex. This sampling procedure ensured that both male and female nursing students were adequately represented in the study, allowing for reliable generalization of findings across the target population. A master list of all regular third-year nursing students was used to randomly select respondents based on predetermined proportions through a computer-based randomizer. Participation was voluntary, and no incentives were provided.

Data collection

Data collection was conducted from March to April 2024. We used an online survey, which is cost-effective, quick, and simple to administer, and provides anonymity and data accuracy [12]. After obtaining approval from the Dean of the College of Nursing and explaining the study objectives to all participants, a consent form detailing the study, risks, data privacy, and the right to withdraw was signed by all participants. Then, a pre-survey assessed whether respondents were currently or had previously experienced perceived stress, identifying those for further assessment of their coping strategies.

The instrument measured socio-demographic characteristics (sex, birth order, family monthly income), the MBTI score, and preferred coping strategies (problem-focused, emotion-focused, and meaning-focused strategies). Using a checklist, two validators from the psychology department evaluated the instrument's feasibility and validity. After approval, a pilot study on 30 third-year nursing students was conducted to test the instrument's reliability. These students were not included in the final data collection.

Data analysis

The researchers employed t-tests and ANOVA to examine the difference in students' preferred coping strategies based on their characteristics such as personality traits, sex, and birth order. Specifically, ANOVA was used to compare the means of multiple groups, while the t-test was used to compare two groups.

Results

Participants included 149 third-year nursing students. The t-test results (Table 1) revealed no significant differences in problem-focused coping ($P=0.103$), emotion-focused coping ($P=0.161$), or meaning-focused coping ($P=0.273$) based on sex. These findings suggest that there were no statistically significant differences in coping strategies between male and female respondents. The ANOVA results (Table 1) for coping strategies

based on birth order showed no significant differences in problem-focused, emotion-focused, or meaning-focused coping ($P>0.05$). Similarly, the ANOVA results (Table 1) for coping strategies based on family monthly income showed no significant difference in any coping strategies ($P>0.05$). Table 2 presents the ANOVA results for coping strategies based on personality type (MBTI score). The scores of problem-focused and emotion-focused coping strategies were not significantly different across different MBTI personality types. However, the meaning-focused coping score showed a significant difference ($P=0.019$).

Table 3 shows the t-test results for coping strategies based on introverted (individuals who prefer solitude and focus on internal thoughts) and extroverted (individuals who are energized by social interactions and external stimuli) personality types. The differences in problem-focused ($P=0.188$), emotion-focused ($P=0.298$), and meaning-focused ($P=0.096$) coping scores were not significant ($P\geq 0.05$), suggesting that introverted and extroverted nursing students prefer similar coping strategies.

Table 4 presents the t-test results for coping strategies based on judging and perceiving personality types. The differences in problem-focused ($P=0.001$) and meaning-focused ($P=0.004$) coping scores were significant ($P=0.001$). However, there was no significant difference in emotion-focused coping score ($P=0.685$), indicating that nursing students with judging and perceiving per-

Table 1. Mean scores of coping strategies categorized by sex, birth order, and family monthly income

Variables	Profile	Preferred Coping Strategies					
		Problem-focused		Emotion-focused		Meaning-focused	
		Mean	P	Mean	P	Mean	P
Sex	Male	2.97	0.103	2.62	0.161	3.15	0.273
	Female	3.07		2.72		3.06	
Birth order	Eldest child	3.03	0.634	2.65	0.729	3.03	0.698
	Middle child	3.1		2.72		3.09	
	Youngest child	2.99		2.69		3.13	
	Only child	3.06		2.76		3.17	
Family monthly income	≤24,000 Php	3.03	0.959	2.82	0.406	3.17	0.482
	24,001-145,000 Php	3.04		2.68		3.05	
	>145,000 Php	3.05		2.65		3.14	

Php: Philippine peso.

Table 2. Mean scores of coping strategies categorized by personality type (MBTI)

Personality Type	Preferred Coping Strategies					
	Problem-focused		Emotion-focused		Meaning-focused	
	Mean	P	Mean	P	Mean	P
INTJ	3.14		2.78		3.27	
INFJ	3.18		2.75		3.16	
ISTJ	3.01		2.7		3	
ISTP	2.84		2.51		2.71	
INTP	3.04		2.53		2.73	
INFP	2.95		2.6		2.82	
INFJ	3.29		2.65		3.25	
ISFP	2.89		2.51		3.12	
ENTJ	3	0.108	2.62	0.731 ns	3.31	0.019
ENFJ	3.08		2.74		3.34	
ESTJ	3.06		2.45		2.74	
ESTP	2.8		2.8		3.17	
ENTP	2.59		2.59		2.71	
ENFP	3.08		2.85		3.26	
ESFJ	3.11		2.61		3.48	
ESFP	2.88		2.89		2.98	

Abbreviation: ISTJ: Introverted, sensing, thinking, judging; ISFJ: Introverted, sensing, feeling, judging; INFJ: Introverted, intuitive, feeling, judging; INTJ: Introverted, intuitive, thinking, judging; ISTP: Introverted, sensing, thinking, perceiving; ISFP: Introverted, sensing, feeling, perceiving; INFP: Introverted, intuitive, feeling, perceiving; INTP: Introverted, intuitive, thinking, perceiving; ESTP: Extraverted, sensing, thinking, perceiving; ESFP: Extraverted, sensing, feeling, perceiving; ENFP: Extraverted, intuitive, feeling, perceiving; ENTP: Extraverted, intuitive, thinking, perceiving; ESTJ: Extraverted, sensing, thinking, judging; ESFJ: Extraverted, sensing, feeling, judging; ENFJ: Extraverted, intuitive, feeling, judging; ENTJ: Extraverted, intuitive, thinking, judging.

sonalities use different problem-focused and meaning-focused coping strategies, but use similar emotion-focused coping strategies.

Discussion

In nursing education, preserving mental health through effective coping strategies is vital for academic performance and holistic development. Understanding how different personal and demographic variables affect stress responses in nursing students enables institutions to design targeted interventions to foster their resilience and mental well-being. The results of this study showed that although females had slightly higher mean scores in problem-focused and emotion-

focused coping strategies, there were no statistically significant differences in preferred stress coping strategies between male and female nursing students. However, literature suggests women often rely more on emotion-focused strategies and seek help more frequently [9], consistent with Lazarus and Folkman's stress and coping theory, which highlights the role of individual appraisals and available resources. McMahon et al. [13] reported that women utilize both problem- and emotion-focused coping strategies, while men are more inclined toward meaning-focused coping strategies.

The findings also indicated that birth order in the family did not significantly influence nursing students' stress coping strategies. Regardless of being the eldest,

Table 3. Mean scores of coping strategies categorized by introverted and extroverted personality types

Personality Type	Preferred Coping Strategies					
	Problem-focused		Emotion-focused		Meaning-focused	
	Mean	P	Mean	P	Mean	P
Introverted	3.07	0.188	2.66	0.298	3.03	0.096
Extroverted	2.99		2.73		3.18	

middle, youngest, or only child, the students employed similar problem-focused, emotion-focused, and meaning-focused coping strategies. According to Adler's theory of birth order, individuals may develop specific traits due to family dynamics [14]. Firstborns are often seen as responsible and achievement-oriented, while middle children are adaptive and diplomatic [14]. Our result suggests that academic stress may override the impact of birth order, reinforcing Lazarus' idea that coping is situational rather than trait-dependent [15].

Based on family monthly income, no significant difference in preferred stress coping strategies of nursing students was found. This outcome suggests that the students' stress management techniques were not notably influenced by their families' economic status. Duarte et al. [16] acknowledged that the relationship between socioeconomic status and coping strategies may vary based on cultural and contextual factors, while Yang et al. [17] argued that income does not consistently predict coping behavior. The absence of significant differences in the present study reinforces the idea that individual agency and academic pressure may play a greater role than financial status in shaping coping behaviors among nursing students.

There was no significant difference in the use of problem-focused and emotion-focused strategies between introverted and extroverted nursing students. This suggests that both personality types used these two strategies similarly, emphasizing that nursing students may adapt their stress coping strategies to meet situational

demands rather than rely solely on trait-based responses. Rooted in Jungian psychology, introverts are typically reflective and inwardly focused, while extroverts are energized by external stimulation. Despite these differences, both personality types in our study adopted active and emotional strategies, possibly due to the academic demands of nursing. However, a significant difference was found in the use of meaning-focused coping strategies, where introverts are more inclined to seek personal values in stressful situations. Yang et al. [18] explained that this coping method allows students to positively reframe negative experiences. Tuovinen et al. [19] supported this idea by describing introverts as introspective and analytical, while extroverts prefer more action-driven approaches. This supports the theoretical link between introversion and meaning-focused coping. Liu & Csikszentmihalyi [20] suggested that extroverts prefer group settings, while introverts may experience more social discomfort. Tuovinen et al. [19] clarified, however, that introversion does not imply a lack of social skills but rather a preference for familiar, small-group interactions. The findings suggest that stress coping strategies such as meaning-focused and problem-focused strategies are accessible and useful to both personality types, further affirming Lazarus and Folkman's theory that coping is dynamic and modifiable.

Our results also demonstrated a significant difference in problem-focused and meaning-focused coping between judging and perceiving personality types. Judging students, known for structure and planning, were more inclined to use strategies that addressed stressors

Table 4. Mean scores of coping strategies categorized by judging and perceiving personality types

Personality Type	Preferred Coping Strategies					
	Problem-focused		Emotion-focused		Meaning-focused	
	Mean	P	Mean	P	Mean	P
Judging	3.13	0.001	2.7	0.685	3.2	0.004
Perceiving	2.93		2.67		2.96	

directly and sought meaning in adversity. This reflects their cognitive preference for order, consistency, and closure. Choong and Varathan [21] and Kim and Han [22] noted that people with judging personality type often plan ahead and prefer routine, while Denomme [23] characterized perceiving individuals as more flexible and open to change. These traits may make the perceiving type more adaptable but less reliant on structured coping mechanisms. The difference underscores the importance of recognizing personality traits in designing stress management programs for nursing students.

Overall, our findings emphasize that personalized stress management interventions and mental health strategies for nursing students should consider not only their stress levels but also their personality traits and social contexts. The ability of students to use various coping strategies, regardless of gender, birth order, family income, or personality, suggests their flexibility and resilience. However, understanding how personality may influence their coping strategies can enhance the relevance and efficacy of support programs.

Conclusion

The Filipino third-year nursing students' preferred stress coping strategies are not significantly influenced by their sex, birth order, or family income, suggesting these demographic factors do not play a major role in how they manage stress. However, those with a judging personality are more inclined toward problem-focused and meaning-focused coping strategies than those with a perceiving personality. These findings emphasize the attention to personality traits in designing targeted stress management interventions for nursing students. Understanding how personality influences coping can enable teachers and counselors to better support students, fostering resilience and potentially improving academic and clinical performance.

Limitations

The findings of this study are limited to third-year nursing students from a single institution, which restricts the generalizability of the results to broader or more diverse populations. The study did not take into account the cultural influences on coping strategies, which could affect how stress is perceived and managed. Future research should explore more diverse populations and consider cultural contexts to provide a more comprehensive understanding of coping behavior. This study also did not control for other potential confounding variables

such as baseline stress levels, which could impact the relationship between coping strategies and personality traits. This limitation means that while significant relationships between variables were identified, the study does not establish causal links, and the findings should be interpreted as associative rather than causal. The reliance on self-reported data may also introduce bias, as responses could be influenced by social desirability or inaccurate self-assessment.

Ethical Considerations

Compliance with ethical guidelines

This study was approved by the Ethics Committee of [Xavier University-Ateneo de Cagayan](#), Cagayan De Oro, Philippines (Code: XU REC Package No.: NSG-2024001283). Participation in the study was voluntary, and respondents could refuse participation or discontinue their involvement at any time. Their decisions regarding participation were respected, and confidentiality was maintained. Informed consent was obtained from all participants before their inclusion in the study.

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Authors contributions

Conceptualization, data analysis and writing the original draft: Alyanna Jean E. Amante, Crystal Dawn T. Awitan, Paolo Araune, and Roviech John M. Echeveria IV; Study design, data collection, review and editing: Kyla Louise V. Baesa, Pamela U. Bangot, Kyla Srave T. Bantilan, Este Crecia E. Bullecer, Therese Marie U. Cababaras, and Lucyvelle O. Daraman; Data interpretation and the literature review: Princess Ann Catherine P. Dayrit, Kenisha Xanthe R. Estrada, Hans Quiren Leoncio III E. Fabela, and Azurim Michaela Fosgate; Final approval: All authors.

Conflict of interest

The authors declared no conflict of interest.

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