

Research Paper

Factors Influencing Coping Strategies Among University Students: A Quantitative Study



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Citation Rances DC, Refugio ABC, Santos AJC, Siy SMS, Sumbilon HNA, Villanueva SDC, et al. Factors Influencing Coping Strategies Among University Students: A Quantitative Study. *Iranian Journal of Health Sciences*. 2026; 14(3):249-256. <http://dx.doi.org/10.32598/ijhs.14.3.1111.7>

 <http://dx.doi.org/10.32598/ijhs.14.3.1111.7>

Article info:

Received: 24 Jan 2026

Revised: 05 May 2026

Accepted: 26 May 2026

ABSTRACT

Background and Purpose: University students experience academic demands that may affect their coping strategies and overall well-being. This study aimed to analyze the factors influencing coping strategies among young adults, particularly in terms of vaping and family type.

Materials and Methods: This quantitative cross-sectional study examined factors influencing coping strategies among 617 university students in Northern Mindanao selected through stratified random sampling. A researcher-made questionnaire was used to assess respondents' demographic characteristics and coping strategies, including vaping, stress eating, and binge-watching. Data were collected after obtaining informed consent and analyzed using t-tests and ANOVA to determine differences in coping strategies according to respondents' characteristics.

Results: A total of 617 university students participated in the study. Male respondents had significantly higher vaping scores (mean=1.95) compared to females (mean=1.37) with a highly significant difference ($P<0.01$). No significant differences were found between males and females in stress eating ($P=0.067$) and binge-watching ($P=0.775$). Furthermore, hours of sleep, family structure, academic workload, and total academic units enrolled showed no significant influence on stress eating, binge-watching, and vaping behaviors ($P>0.05$).

Conclusion: Male students demonstrated significantly higher vaping behavior than female students, while stress eating and binge-watching showed no significant differences according to sex. In addition, hours of sleep, family structure, academic workload, and total academic units enrolled were not significantly associated with the coping strategies examined in this study.

Keywords: Adaptation, Psychological, Students, Universities, Stress, Psychological, Health behavior

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Introduction

University education brings both positive experiences and significant challenges. Academic demands that exceed a student's capabilities often lead to an overwhelming workload driven by the pressure to excel in examinations and academic requirements. These pressures negatively affect students' adjustment and coping mechanisms, ultimately influencing their overall well-being [1, 2]. Managing these academic demands may evoke negative emotional, cognitive, behavioral, and physiological responses when students experience excessive strain or burden [3].

A crucial factor in understanding how college students handle these demands is their choice of coping techniques. These strategies reflect how students manage challenges and unpleasant emotions. Research has shown that students who engage in negative coping strategies, such as substance abuse, experience greater difficulties compared to those who utilize positive coping mechanisms, such as socialization and physical activity [4, 5].

The impact of academic stress on students' lives is substantial and may affect various aspects of health and academic functioning. Several studies [6-8] reported that academic stress contributes to depression, headaches, sleep disturbances, and decreased psychological well-being. Higher levels of stress were also associated with poorer academic performance and lower grades [9]. Therefore, understanding and managing these stressors are essential for promoting students' academic success and overall well-being.

Recent studies have emphasized the increasing prevalence of academic stress among college students worldwide. According to the 2015 American College Health Association-National College Health Assessment survey, approximately three out of four college students reported feeling overwhelmed by academic responsibilities [10]. Similarly, 87% of Gen Z college students in the United States identified education as their primary source of stress [11]. These findings highlight the growing need to investigate coping strategies utilized by university students in managing academic-related stress.

Coping behaviors among university students may differ according to individual and environmental factors, such as sex, sleep patterns, family structure, and academic workload. Understanding these differences is important in identifying how students manage academic-related

stress and challenges. Despite the growing concern regarding coping behaviors among young adults, limited studies have simultaneously examined vaping, stress eating, and binge-watching among university students in the Philippine setting.

This study analyzed the factors influencing coping strategies among young adults. Specifically, the researchers sought to determine the relationship between respondents' characteristics, including sex, hours of sleep, family structure, academic workload, and coping strategies, such as vaping, stress eating, and binge-watching. The novelty of this study lies in the simultaneous examination of multiple coping behaviors and influencing factors among university students in Northern Mindanao, Philippines, an area that remains limited in existing local literature.

Materials and Methods

Research design

This study utilized a quantitative cross-sectional design to examine the factors influencing coping strategies among young adults. The study investigated the relationship between respondents' characteristics, including sex, hours of sleep, family structure, and academic workload, and coping strategies, such as vaping, stress eating, and binge-watching using inferential statistical analyses, including t-test and ANOVA. Similar to the study conducted by Ramachandiran and Dhanapal [12], the present study employed a quantitative approach to describe relationships between stress-related variables and coping behaviors among university students.

Sample, sample size, and sampling technique

The respondents in this study were randomly selected young adults attending a university in Northern Mindanao during the 2023–2024 school year. The inclusion criteria were male and female students aged 18 years and older. The exclusion criteria included students diagnosed with eating disorders, undergoing psychological treatment, or having dietary restrictions due to medical conditions. The researchers utilized a stratified random sampling technique to ensure equitable representation across population strata, thereby enhancing the accuracy and fairness of the sample. Cochran's formula was employed to determine the sample size for each year level in the college, resulting in a total sample size of 617 students or respondents drawn from the college's four levels: 185 students from level 1, 141 from level 2, 152 from level 3, and 139 from level 4.

Data collection process

After securing approval from the university authorities, informed consent was obtained from the respondents prior to data collection. The survey questionnaire was administered online through a QR code to ensure confidentiality and convenience for the participants.

Instrument

A researcher-made questionnaire was utilized in this study. The instrument underwent face and content validation by three experts prior to data collection. A pilot test involving at least 30 respondents was conducted to assess the reliability and feasibility of the questionnaire. The questionnaire consisted of two sections: The first section included 13 items regarding demographic characteristics and academic workload, while the second section contained 15 items assessing coping strategies related to stress eating, binge-watching, and vaping using a 4-point Likert scale. Scores ranged from 1 to 4 for each item, with higher scores indicating greater utilization of the coping strategy. The questionnaire demonstrated excellent internal consistency, with Cronbach's α values of 0.91 for stress eating, 0.917 for binge-watching, and 0.934 for vaping.

Data analysis

Descriptive statistics were used to summarize the respondents' characteristics. Inferential statistics, including independent t-test and analysis of variance (ANOVA), were utilized to determine significant differences in coping strategies according to respondents' characteristics. Effect sizes were also considered in interpreting the magnitude of significant differences observed in the study.

Results

A total of 617 university students participated in the study. The respondents were categorized according to sex, hours of sleep, family structure, year level, and current total number of academic units enrolled.

Table 1 presents the t-test results of respondents' coping strategies according to sex. No significant differences were observed between males and females in stress eating ($P=0.067$) or binge-watching ($P=0.775$). However, vaping showed a highly significant difference according to sex ($P<0.01$), with male respondents obtaining higher mean scores than females (Table 1).

Table 2 presents the ANOVA results of respondents' coping strategies according to hours of sleep. The findings revealed no significant differences in stress eating ($P=0.125$), binge-watching ($P=0.804$), and vaping ($P=0.895$) according to respondents' average hours of sleep.

Table 3 shows the ANOVA results of respondents' coping strategies according to family structure. The results indicated no significant differences in stress eating ($P=0.772$), binge-watching ($P=0.724$), and vaping ($P=0.219$) based on family structure.

Table 4 presents the ANOVA results of respondents' coping strategies according to year level. No significant differences were found in stress eating ($P=0.585$), binge-watching ($P=0.387$), and vaping ($P=0.197$) among the different year levels.

Table 5 presents the ANOVA results of respondents' coping strategies according to the current total number of academic units enrolled. The findings showed no significant differences in stress eating ($P=0.593$), binge-watching ($P=0.777$), and vaping ($P=0.169$) according to the current total number of academic units enrolled.

Discussion

This study aimed to examine the factors influencing coping strategies among university students, particularly stress eating, binge-watching, and vaping, in relation to sex, hours of sleep, family structure, year level, and academic workload. The findings showed that vaping behavior significantly differed according to sex, whereas stress eating and binge-watching did not demonstrate

Table 1. T-test results of respondents' level of coping strategies according to sex

Parameter	Level of Coping Strategies					
	Stress Eating		Binge-watching		Vaping	
Sex	Mean	P	Mean	P	Mean	P
Male	2.85	0.067 NS	2.76	0.775 NS	1.95	<0.01**
Female	3.05		2.79		1.37	

* Highly significant. NS: Not significant.

Table 2. ANOVA results of respondents' level of coping strategies according to mean hours of sleep

Parameter	Level of Coping Strategies					
	Stress Eating		Binge-watching		Vaping	
Hours of Sleep	Mean	P	Mean	P	Mean	P
1-3	3.39		2.96		1.6	
4-5	2.96	0.125 NS	2.77	0.804 NS	1.52	0.895 NS
6-7	2.94		2.77		1.53	
8 hours and above	3.12		2.72		1.74	

NS: Not significant.

significant differences. Additionally, hours of sleep, family structure, year level, and academic workload were not significantly associated with the coping strategies examined in this study.

The higher vaping behavior among male respondents was consistent with previous studies reporting that men were more likely to use e-cigarettes than women [13]. Among adults in the United States, men demonstrated higher rates of e-cigarette use compared to women [13]. Younger individuals often perceive e-cigarettes as less harmful and use them for enjoyment or stress relief [14]. Neuroimaging findings also suggest that men's reward systems may respond more strongly to smoking-related stimuli, which may contribute to increased vaping tendencies among males [15].

In contrast, no significant sex differences were observed in stress eating and binge-watching behaviors. Previous studies reported that women were more likely than men to engage in stress eating as a coping response [16]. How-

ever, the present findings did not support this difference, suggesting that both male and female students may similarly utilize food-related coping behaviors during stressful situations. Similarly, available statistics on binge-watching behaviors indicated relatively comparable viewing patterns between males and females [17]. The limited local literature regarding binge-watching among university students highlights the need for further investigation in the Philippine context.

Regarding hours of sleep, the present study found no significant association between sleep duration and coping strategies. Previous studies suggested that sleep quality and eating behaviors may have a reciprocal relationship [18]. However, findings by Siraj [19] also reported no significant relationship between binge-watching and sleep quality among college students, which supports the current results. These findings may indicate that coping behaviors among university students are influenced by multiple psychological and environmental factors beyond sleep duration alone.

Table 3. ANOVA results of respondents' level of coping strategies according to family structure

Parameter	Level of Coping Strategies					
	Stress Eating		Binge-watching		Vaping	
Family structure	Mean	P	Mean	P	Mean	P
Nuclear family (mother, father, child)	2.99		2.82		1.58	
Single parent family	2.87		2.63		1.74	
Extended family	3.1	0.772 NS	2.79	0.724 NS	1.26	0.219 NS
Grandparents	2.87		2.53		1.93	
Stepfamily (non-biological relationship with one/or members of the family)	3.20		2.50		1.00	

NS: Not significant.

Table 4. ANOVA results of respondents' level of coping strategies according to year level

Parameter	Level of Coping Strategies					
	Stress Eating		Binge-watching		Vaping	
Year level	Mean	P	Mean	P	Mean	P
1 st	3.06	0.585 NS	2.76	0.387 NS	1.56	0.197 NS
2 nd	3.03		2.67		1.33	
3 rd	3		2.92		1.72	
4 th	2.86		2.79		1.57	

NS: Not significant.

Table 5. ANOVA results of respondents' level of coping strategies according to the total number of units

Parameter	Level of Coping Strategies					
	Stress Eating		Binge-watching		Vaping	
Current Total Number of Units	Mean	P	Mean	P	Mean	P
17-25	2.94	0.593 NS	2.83	0.777 NS	1.75	0.169 NS
25-29	2.97		2.8		1.45	
29-31	3.07		2.73		1.48	

NS: Not significant.

The findings also suggested that family structure was not significantly associated with stress eating, binge-watching, and vaping behaviors. Previous studies proposed that family instability and experiences, such as divorce may increase stress levels and contribute to binge-watching behaviors as a coping mechanism [20]. Family support and interconnectedness were also reported to influence vaping behaviors among young adults [21]. However, the present study did not observe significant differences according to family structure, possibly indicating that coping behaviors among university students are shaped by broader personal and social influences beyond family composition.

Similarly, year level and academic workload did not significantly influence the coping strategies examined in the study. Previous research indicated that academic stress and burnout may increase throughout academic progression [22], and exposure to academic demands may contribute to stress among university students [23]. Anxiety associated with academic stress may also encourage disengagement coping behaviors, such as excessive eating [24]. Moreover, increasing age among university students has been associated with binge-watching tendencies [25], while vaping behaviors have

been reported among young adults aged 18–25 years old [26]. Despite these observations in previous literature, the present findings suggest that coping behaviors may remain relatively similar across year levels and academic workloads.

Previous studies have also shown that increased academic demands may influence students' coping behaviors [27]. Academic procrastination and attempts to avoid perceived academic pressures have been associated with binge-watching behaviors among students [28]. Additionally, unhealthy eating behaviors have been linked to academic stress and adverse health outcomes among university students [29]. However, the current findings suggest that the number of academic units alone may not be a sufficient predictor of stress eating, binge-watching, or vaping behaviors.

The findings of this study have implications for nursing practice, education, and community health initiatives. Healthcare professionals and educators may benefit from developing programs that promote healthy coping strategies and stress management among university students regardless of sex, family structure, year level, or academic workload. Preventive interventions focus-

ing on vaping awareness, healthy lifestyle behaviors, and mental health support may help improve students' overall well-being.

This study has several limitations. First, the study utilized a cross-sectional design, which limits the establishment of causal relationships among variables. Second, the data were collected using a self-reported questionnaire, which may be subject to response bias. Third, the study was conducted in a single university in Northern Mindanao, which may limit the generalizability of the findings to other student populations. Future studies may consider including multiple institutions and additional psychosocial variables to further explore coping behaviors among university students.

Conclusion

The study's analyses revealed insightful patterns regarding coping strategies among young adults. While gender significantly influenced vaping behavior, stress eating and binge-watching did not show significant differences based on sex. Additionally, factors, like hours of sleep, family structure, academic workload, and units enrolled did not significantly impact coping strategies. These findings suggest that young adults tend to utilize similar coping mechanisms regardless of these variables. From a clinical perspective, individualized counseling and interventions tailored to specific coping behaviors are crucial for promoting healthier stress management strategies. Further research could explore the nuanced interactions between coping strategies and diverse influencing factors to enhance targeted support for individuals navigating stress-related challenges in university settings.

Ethical Considerations

Compliance with ethical guidelines

This study was approved by the Research Ethics Board of **Xavier University**–Ateneo de Cagayan, Cagayan, Philippines (Code: XU REC Package No. NSG-2024001287). Informed consent was obtained from all participants before their inclusion in the study.

Funding

This research did not receive any grant from funding agencies in the public, commercial, or non-profit sectors.

Authors contributions

Conceptualization, data analysis, and writing the original draft: Desiree C. Rances, Adrian Bruce C. Refugio, Alfonso Joaquin C. Santos, Stuart Michael A. Siy, Gabrielle R. Zapanta, Roviech John M. Echeveria, and Paolo B. Araune; study design and data collection, review and editing: Hayley Natalie A. Sumbilon, Sofia Dianne C. Villanueva, Abeguel D. Villegas, Ira Velle J. Vios, and Arrian Jhon L. Wahing; Data interpretation and investigation: Desiree C. Rances, Adrian Bruce C. Refugio, Abeguel D. Villegas, Ira Velle J. Vios, Arrian Jhon L. Wahing, and Gabrielle R. Zapanta; Final approval: All authors.

Conflict of interest

The authors declared no conflict of interest.

Acknowledgements

The authors would like to express their gratitude to all participants in this study for their time and cooperation.

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