

Stress and Academic Burnout among Nursing Students: A Regression Analysis

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Abstract. Attending nursing school is challenging. Students enrolled in a nursing program often complain of being academically burned out. As an educator, seeing, interacting with, and teaching learners suffering from burnout is tough. Nurse educators must be aware of this issue and act toward its resolution. Stress is a known predictor of burnout (Hwang & Kim, 2022). However, a gap exists in that current studies were focused on assessing these factors from countries outside the Philippines and only in the context of public educational institutions. Therefore, this article aims to close the gap by elucidating how stress predicts academic burnout in nursing students at both public and private colleges. The inquiry was participated in by 719 nursing students from 4 private and state universities in the Philippines, utilizing modified standardized questionnaires and a 5-point Likert scale. Pearson Product Moment Correlation and linear regression were also employed as statistical tools. The results revealed that student nurses were experiencing high levels of stress ($M=3.89$, $SD=.977$) and academic burnout ($M=3.65$, $SD=1.10$), implying that nursing learners studying in universities suffered from burnout and academic stress. Moreover, personal inadequacy, fear of failure, and inadequate study facilities were predictors of academic burnout, signifying these elements as crucial in shaping the students' psychological well-being. Recognizing the factors causing academic burnout among student nurses is a significant step toward enhancing the quality of education. Furthermore, policymakers, administrators, and educators can develop and implement regulations that advocate for a healthier school life by understanding students' challenges.

Keywords: Academic burnout; Academic stress; Nursing students.

1.0 Introduction

Attending nursing school is challenging. Students enrolled in a nursing program often complain of being tired, exhausted, or worse, academically burned out. Scholastic burnout is characterized by physical, emotional, and mental fatigue from continuous and severe scholastic pressure. It often results from an imbalance between the demands of academic work and the student's capacity to cope with those demands. Student nurses often experience stress in their studies due to heavy workloads from campus classes and clinical rotations, time constraints in making and submitting brain-draining requirements, reprimands from stern clinical instructors with high academic standards, and much more. Seeing, interacting with, and teaching learners suffering from burnout is tough. Nurse educators must be aware of these current issues and act toward their resolution.

According to a recent research study by Ma et al. (2022), 85.3% of nurses enrolled at a Chinese institution experienced significant to severe academic stress, while 36.1% indicated emotional tiredness. In addition, in a correlational study, Liasi et al. (2021) discovered that 16.3% of students enrolled in a medical program were experiencing burnout, and 42.1% had moderate to high stress. Similarly, Haile et al. (2019), in an inquiry of medical

students in Ethiopia, stated that 34% had academic burnout, with 79.9% being academically stressed from class dissatisfaction and uninteresting lectures. Based on these findings, stress is a significant predictor of academic burnout. However, a gap exists in that current studies were focused on assessing these factors from countries outside the Philippines and only in the context of public educational institutions. Therefore, this article aims to close the gap by elucidating how stress predicts academic burnout in nursing students at both public and private colleges.

This study aimed to examine stress as a predictor of academic burnout among student nurses. This report addresses the following research inquiries: First, what is the level of academic stress among student nurses in terms of fear of failure, interpersonal difficulties with teachers, personal inadequacy, teachers' poor teaching methods, and inadequate study facilities. Second, what is the level of academic burnout among student nurses? Third, is there a significant relationship between academic burnout and academic stress? Lastly, which variables, singly or combined, best predict academic burnout in student nurses? Moreover, this inquiry aims to test the following hypothesis: H_{01} : there is no significant relationship between academic burnout and academic stress, H_{02} : no predictor variable best predicts academic burnout in student nurses.

This study may provide university policymakers, administrators, guidance and counseling departments, and nursing educators evidence of complex relationships between academic burnout and stress. By understanding students' challenges at school, these groups can develop and implement regulations that advocate for a healthier school life. Student nurses may also become aware of the factors that affect their mental well-being and can find ways to cope and manage their situations. With the findings of this paper, the body of knowledge in the field of nursing education and psychology that future investigators may use to bridge the gaps of previous studies and construct methodologies for utilization in future research is presented.

2.0 Methodology

2.1 Research Design

Research methods that were employed in the study included descriptive-correlational and causal approaches. Descriptive studies look at a population's characteristics, identify problems within a unit, an organization, or a population, or look at variations in characteristics or practices between institutions or countries (Siedlecki, 2020). Conversely, correlational design is a form of nonexperimental research that aids in predicting and explaining the relationships between variables (Seeram, 2019). Causal research identifies cause-effect relationships between independent and dependent variables (Blakeslee, 2020; Schenker & Rumrill, 2004). By making use of the descriptive-correlational causal-comparative research design, the study will satisfy the objectives of the study.

2.2 Research Locale

The research was carried out at the following institutions: Liceo de Cagayan University – Paseo del Rio Campus, Capitol University, Mindanao State University Campus, and Mindanao State University – Iligan Institute of Technology. The former are private universities, and the latter are state universities. The selected schools ensure that student nurses in opposing sectors are represented and fill the gaps of previous studies focusing only on private or public universities. Liceo de Cagayan University's Paseo del Rio Campus is located at Barangay Macasandig, Cagayan de Oro City, Misamis Oriental, whose landmark is the barangay's Rotunda Circle. The Paseo del Rio campus houses Liceo de Cagayan University's Paramedical programs, including those in nursing, pharmacy, medical technology, radiologic technology, physical therapy, occupational therapy, and the recently formed college of medicine. The survey was conducted explicitly at the College of Nursing on the 4th floor of the school building.

On the other hand, Capitol University is a non-sectarian, coeducational, and private university located at Corrales Extension, Cagayan de Oro City, proximal to the Agora Bus Terminal and huge malls like Gaisano City Mall and Ayala Centrio Mall. It operates with the authority of CHED for its tertiary, graduate, and postgraduate programs. Its College of Health Sciences is one of the oldest and most established nursing schools in Cagayan de Oro City and Mindanao, contributing many highly qualified, disciplined, and deeply committed registered nurses. Moreover, Mindanao State University-Main Campus (Pamantasan Pampamahalaan ng Mindanao) is a state university system in Marawi, Philippines. It is the first state university in Mindanao, Philippines, established through Republic Act 1387 (as amended). It is also the second state-sponsored institution in the country, following

the University of the Philippines. The College of Health Sciences at the university provides a Bachelor of Science in Nursing (BSN) and a degree in Midwifery. The College of Health Sciences envisions being the country's leading college, offering excellence in various health (paramedical) programs and undertaking community extension, research, and health services. It is committed to the health development of the global community.

Finally, MSU-IIT is a public, coeducational research university in Iligan City, Philippines. It is part of the Mindanao State University system and became the first self-governing institution of Mindanao State University in 1975 after being created in 1968 by Republic Act 5363. MSU-IIT offers secondary, undergraduate, and postgraduate education programs. This institution's College of Nursing (CON) has consistently ranked among the country's top three performing nursing schools through the National Nurse Licensure Examination (NLE).

2.3 Research Participants

The study participants were level 3 and 4 student nurses from different campuses of the College of Nursing. Specifically, level 3 and level 4 nursing learners were selected because these populations of students have already experienced most of what nursing education has to offer in terms of classroom and clinical situations. Academic stress and burnout levels in junior and senior student nurses are incomparable to students in earlier years (Valero-Chilleron et al., 2019). The students included in the study were those with regular status, which means their studies were strictly in line with the curriculum, and there were no records of failing marks or incomplete and dropped subjects. Those irregular students and transferees were excluded from the inquiry. Furthermore, the nursing learners had no mental or psychological discrepancies, which enabled them to participate in the survey; participating in the investigation requires a calm and sound mind with sufficient critical thinking skills. Students who were deemed psychologically unhealthy were excluded or advised to withdraw their participation. The inquiry employed a proportionate stratified random sampling to determine the number of participants. The total population was divided into four groups corresponding to the different university campuses involved in the study. The total population of students was 1446 from the four universities. Using the Raosoft sample size calculator, the total sample size achieved was 719. The specific number of populations, sample, and percentage of the participants are presented in the table below.

Table 1. *Distribution of Participants from Each University*

Participants	Population	Sample Size	Percentages (%)
University A	549	227	31.6
University B	450	208	29.0
University C	236	147	20.4
University D	211	137	19.0
Total	1446	719	100

2.4 Research Instrument

This study used two adopted and modified questionnaires to fit the study's goals. The first part of the survey tool is the Academic Stress Scale, improved by Rajendran and Kaliappan (1990), which was initially a 40-item survey tool used to assess academic stress. The investigator narrowed the statements down to 25 and modified them to provide an appropriate assessment of the variable. This second part of the questionnaire is divided into five sub-parts: fear of failure (7 items) previously 8 but 1 statement was omitted due to low reliability, interpersonal difficulties with teachers (9 items), personal inadequacy (8 items), teachers' poor teaching methods (7 items) and inadequate study facilities (9 items). This tool was adopted in a recent study by Berdida (2023), which explained the association between academic stress and self-directed learning of nursing students.

Lastly, the second part of the questionnaire is the Academic Burnout Scale by Maslach et al. (1997), a 16-item survey tool measuring academic burnout. The investigator has narrowed the statements to 10 because questions related to decreased academic achievement were excluded. After further scrutiny of the said concept, the investigator has improved and finalized 20 statements to assess the phenomenon, including the addition of physical and physiological manifestations of academic burnout. Maslach's Burnout Inventory/Scale has been a widely used tool in measuring the level of academic burnout of nursing students in recent studies (Chen et al., 2023; Ghods et al., 2023; Batista et al., 2021; Wang et al., 2021; Lopes & Nihei, 2020; Fard et al., 2020; Valero-Chilleron et al., 2019). The researcher's dissertation adviser evaluated the survey tool for content and face validity to ensure the questionnaire items were related to the research problems. Additionally, three nursing education, psychology, and research experts further verified the questionnaire items to determine whether they were relevant

to the research problems. A reliability assessment of the instrument was conducted through a pilot test. 30 level 2 student nurses answered the questionnaire items. Moreover, the reliability of the survey items was determined using Cronbach's alpha of more than 0.70 and illustrated as follows: fear of failure = 0.824, interpersonal difficulties with teachers = 0.849, personal inadequacy = 0.881, teachers' poor teaching methods = 0.846, inadequate study facilities = 0.821, and academic burnout = 0.956.

2.5 Data Gathering Procedure

The following procedures were applied to facilitate data gathering: First, the investigator asked permission to initiate research and obtained a letter of approval from the Deans of the College of Nursing of the respective study universities. The survey questionnaire and the consent letter were transcribed into Google Forms and distributed online via email. The investigator chose this survey distribution method because of the participants' unavailability due to non-uniformed schedules of classes and clinical duties. This approach also benefitted the participants because they could respond to the survey at their convenience and with no time constraints. The letter of consent to the participants contained a detailed explanation of the terms and ethical considerations that serve as protection from data misuse and abuse. Moreover, the informed consent form was placed on a separate page before the questionnaire so the participants could withdraw their participation by not confirming with the designated page. Data gathering commenced once the study university confirmed its participation in the investigation. Once the participants had all responded, the investigator meticulously tallied the responses and sent them to the university statistician for comprehensive data processing and analysis, ensuring the highest standards of accuracy and reliability.

2.6 Ethical Considerations

This study adhered to ethical standards. A survey instrument and participant consent letters were attached to the manuscript before it was sent to the Liceo Research Ethics Board (LREB). If the ethics board approved the study's procedures and techniques, they were done ethically. The purpose of the study and the specific dates of participation (October–November 2024) are detailed in the informed consent statement. The possible benefits and drawbacks, including issues with anonymity and concealment, were also communicated to the participants. However, the investigator assured the participants their data was in good hands with the safety measures discussed below. The researcher also stressed the significance of participants knowing that their involvement was optional and that they might withdraw or decline at any moment, mainly if they were sick or unable to complete the survey. The participants were also guaranteed anonymity and that the information given to the investigator was confidential. In addition, the investigator's computer was used to store the files containing the participants' information and answers, and the emails containing these files were erased as soon as the investigator received them. Furthermore, the researcher stated that there was no bias or conflict of interest in this investigation and that all data was open and honest. The participants were also given no incentives because they were informed that their participation was voluntary.

3.0 Results and Discussion

3.1 Level of Academic Stress among Student Nurses

Table 2 presents the Summary of Mean Scores for the Level of Academic Stress among Student Nurses. As shown in the following table, the academic stress level among student nurses was high, with a mean score of 3.89 and a standard deviation of .977. Likewise, the stress level was high regarding fear of failure, followed by personal inadequacy, interpersonal difficulties with teachers, poor teaching methods, and inadequate study facilities.

Table 2. Summary of Mean Scores for the Level of Academic Stress among Student Nurses

Academic Stress	Mean	SD	Description	Interpretation
Fear of failure	4.28	0.83	Agree	High
Interpersonal difficulties with teachers	3.85	0.97	Agree	High
Personal inadequacy	3.92	0.94	Agree	High
Teachers' poor teaching methods	3.84	0.99	Agree	High
Inadequate study facilities	3.57	1.14	Agree	High
Overall Mean	3.89	0.977	Agree	High

Legend: 4.51-5.00 Strongly Agree/Very High Academic Stress, 3.51-4.50 Agree/High Academic Stress, 2.51-3.50 Neutral Moderately/High Academic Stress, 1.51-2.50 Disagree/Low Academic Stress, 1.00-1.50 Strongly Disagree/Very Low Academic Stress

Student nurses experienced significant academic pressure due to fear of failure, particularly in exams, return demonstrations, and case presentations. Alabduljabbar et al. (2022) linked this fear to heightened stress levels, as failure is not an option for aspiring healthcare professionals. Interpersonal conflicts with faculty and clinical instructors further intensified stress. Wang and Xian (2024) emphasized that such conflicts impact student motivation, engagement, and well-being. Nursing students strive to impress instructors, fostering a high-pressure learning environment. Personal inadequacy also contributed to academic stress, mainly due to difficulty focusing during study periods. Ghods et al. (2023) associated inefficacy and self-doubt with increased stress. Liasi et al. (2021) found that personal inefficacy impaired concentration, negatively affecting performance. The rigorous nursing curriculum amplifies these pressures, including exams, demonstrations, and clinical interactions.

Poor teaching methods, such as inflexible deadlines and unsupportive instruction, further stressed students. De la Fuente et al. (2021) reported that rigid teaching exacerbated stress during the COVID-19 pandemic, highlighting the need for adaptive teaching strategies. Nursing students rely heavily on instructors, making ineffective teaching a significant barrier to learning. Inadequate study facilities and resources also contributed to high stress. Jagodics and Szabó (2023) found that limited access to study spaces, technology, and academic materials negatively impacted student engagement and mental health. Sufficient classrooms and study areas can minimize disruptions and enhance learning.

3.2 Level of Academic Burnout among Student Nurses

Table 3 shows the Level of Academic Burnout among Student Nurses. The overall mean score of $M = 3.65$ indicates high academic burnout. The standard deviation ($SD = 1.10$) suggests data variability. These results highlight that student nurses experience significant burnout due to excessive workload and emotionally demanding situations.

Table 3. Level of Academic Burnout among Student Nurses

Variable	Mean	SD	Description	Interpretation
Academic Burnout	3.65	1.10	Agree	High

Fard et al. (2020) and Aguayo et al. (2019) confirm that academic burnout occurs when students feel emotionally drained, depersonalized, and have diminished personal accomplishment. It stems from chronic academic stress and is shaped by individual, institutional, and contextual factors. Bauernhofer et al. (2019) further note that burnout symptoms worsen with excessive workload and study engagement. Given their demanding schedules, student nurses often juggle academic tasks and clinical duties, leading to burnout from overwork and difficulty balancing personal affairs. Similar patterns are seen in medical students, with burnout peaking during graduation due to overwhelming workloads (Kilic et al., 2021; Shadid et al., 2020).

In China, many nursing students experience emotional exhaustion, a key symptom of academic burnout, due to repeated stress and poor coping mechanisms (Ma et al., 2022; Wang et al., 2021; Kong et al., 2021). A similar trend was observed in Spain, where burnout symptoms increased as the academic year progressed (Valero-Chilleron et al., 2019). Additionally, five state universities in Brazil reported that 36.3% of students exhibited high burnout, particularly emotional exhaustion. These findings underscore the intense academic and emotional pressures faced by student nurses.

3.3 Relationship between Academic Burnout and Stress

Table 4 presents the Correlation Analysis between Students' Academic Burnout and Academic stress.

Table 4. Correlation Analysis between Students' Academic Burnout and Academic Stress

Variables	Academic Burnout			
	R-value	Effect Size	P-value	Remarks
Academic Stress	.541	Large	.000	Significant
Fear of failure	.434	Moderate	.000	Significant
Interpersonal difficulties with teachers	.341	Moderate	.000	Significant
Personal inadequacy	.529	Large	.000	Significant
Teachers' poor teaching methods	.378	Moderate	.000	Significant
Inadequate study facilities	.346	Moderate	.000	Significant

As depicted in the table, a moderate positive significant relationship exists between academic burnout, fear of failure, interpersonal difficulties with teachers, teachers' poor teaching methods, and inadequate study facilities. In addition, personal inadequacy and academic stress have a significant positive association with student nurses' academic burnout. Yildirim et al. (2023) confirm that burnout is strongly linked to fear of failure, with resilience and external motivation mediating this relationship. Wang and Xian (2024) found that a positive teacher-student relationship, supported by a conducive school climate, reduces student burnout. Similarly, Haile et al. (2019) reported that medical students' dissatisfaction with teaching methods, particularly during clinical rotations, contributed to burnout. A lack of student-centered activities and ineffective instruction heightened emotional exhaustion and depersonalization. Cornér et al. (2023) also found that inadequate supervision and unequal access to research support increased doctoral students' stress, exhaustion, and cynicism. Rahmatpour et al. (2019) linked academic burnout to factors such as interest in the field, GPA, and study habits, with disengaged and underperforming students being more prone to burnout. Lastly, Allen et al. (2021) identified stress as a key predictor of exhaustion and cynicism among graduate students, with sleep quality moderating some effects.

3.4 Predictors of Academic Burnout

Academic stress is a predictor of academic burnout among student nurses, according to the results of the multiple regression analysis (Table 5). The table shows that the R-value is .616, signifying a strong positive relationship between students' academic burnout and the independent variables used. The R² value of .379 implies that the significant predictor variables, namely Fear of failure ($p < .05$), Personal Inadequacy ($p < .05$), and Inadequate study facilities ($p < .05$), explained 37.9% of the variability of students' academic burnout. The probability value $p = 0.00$ of $F = 39.24$ indicates a statistically significant relationship between the student's academic burnout and the independent variables used.

Table 5. Regression Analysis of Predicting Academic Burnout of Student Nurses by Academic Stress

Predictors	Stand. Coeff. (B)	P-value	Remarks
(Constant)	--	.002	Significant
Fear of Failure	.175	.000	Significant
Interpersonal difficulties with teachers	.051	.200	Not Significant
Personal inadequacy	.324	.000	Significant
Teachers' poor teaching methods	.069	.094	Not Significant
Inadequate study facilities	.144	.000	Significant

Note: $R = .616$, Adjusted $R^2 = .379$, ANOVA for Regression: $F = 39.24$, $P = .000$

Dependent Variable: Academic Burnout

Meanwhile, the variable that significantly best predicted or influenced students' academic burnout is Personal inadequacy ($p < .05$, $Beta = .324$), followed by Fear of failure ($p < .05$, $Beta = .175$), and Inadequate study facilities ($p < .05$, $Beta = .144$) while the rest of the variables statistically failed to predict or influence students' academic burnout. These findings are confirmed by the statements of Ghods et al. (2023) that feelings of inadequacy are integral to academic burnout among nursing students. Their findings also introduced incompatible learning styles as an additional dimension exacerbating the inadequacy experienced by students, suggesting that mismatches between teaching methods and learning preferences can intensify feelings of ineffectiveness. Likewise, Çam and Öğülmüş (2021) found that Fear of failure was a critical variable predicting school burnout alongside GPA, perceived social support, and maladaptive perfectionism, highlighting its broad implications in educational environments. Correspondingly, Jagodics et al. (2023) applied the demand-resource framework to secondary school students and found that inadequate school resources were a key predictor of student burnout. While demands, such as excessive workload, positively correlated with burnout, adequate resources, such as supportive facilities and teacher involvement, mitigated these effects.

4.0 Conclusions

The study depicts that student nurses were experiencing high academic stress caused by high levels of fear of failure, interpersonal difficulties with teachers, personal inadequacy, poor teaching methods, and inadequate study facilities. Moreover, student nurses were suffering from high academic burnout. Additionally, the inquiry unveiled that academic burnout is positively associated with academic stress, fear of failure, interpersonal difficulties with teachers, personal inadequacy, poor teaching methods, and inadequate study facilities. However, it was found that academic burnout among student nurses is influenced by personal inadequacy, fear of failure, and poor study facilities. The well-being of the pupils is heavily dependent on these elements.

The following suggestions were put out in light of the study's findings and conclusions:

Policymakers at universities may choose to implement frameworks highlighting the significance of understanding the factors contributing to academic stress, including anxiety over failing, feelings of personal inadequacy, problems in relationships between instructors and students, and academic burnout. Counseling that is up to par may result from identifying these elements. A policy may also be applied that directs focus to providing adequate classrooms, study areas, facilities, equipment, and teaching aids to the College of Nursing to prevent unnecessary stress and aid in better learning for the student nurses. Policymakers may also heavily monitor the performance of their lecturers and clinical instructors, which requires necessary training or coaching on proper classroom management and effective teaching strategies.

University administrators may provide training for faculty members to recognize early signs of academic stress and burnout and coaching sessions to enhance teaching techniques and approaches to fostering a healthy relationship between teachers and students. They may also allocate resources to building enough classrooms, study areas, and teaching facilities, and supply the nursing department with ample equipment and teaching aids to help prevent academic stress and improve the class engagement of the student nurses. Moreover, the administrators may extend their reserves to make mental health services such as mental health counseling accessible to every student. University administrators may also develop a strict performance monitoring system for every lecturer and clinical instructor handling nursing subjects and coordinate with the College of Nursing to implement this initiative.

The Colleges of Nursing may cooperate with the university to monitor its faculty members' performance in teaching and classroom management and identify areas where supplementary training can be provided. Moreover, the colleges may facilitate coaching sessions regarding the right approaches to handling their students. Doing so may foster a better working relationship between teachers and their learners. The nursing departments may encourage their teachers to be stern in identifying early signs and symptoms of academic stress and burnout and coordinate with the university's guidance and counseling department to address the mental health concerns of the student nurses.

Student nurses dealing with academic stress and burnout may get intensive mental health treatment from the school's guidance and counseling services, with an emphasis on practical strategies for coping with these issues. Departments may also work with the School of Nursing to monitor and identify students experiencing mental health issues.

Nursing educators may prioritize educating their students about the signs and symptoms of stress and academic burnout and teach them techniques to reduce and manage it effectively. Lecturers and clinical instructors may also participate in training and workshops on effective teaching strategies and build a healthy academic bond with the students. The faculty may also try a more flexible approach to handling their learners and focus on nurturing the student nurses' well-being to combat the adverse effects of stress and burnout.

Student nurses experiencing stress and academic burnout may seek mental health counseling and fully take advantage of other services offered by the university's guidance and counseling departments. They may also connect with classmates or schoolmates who have the same experiences so they can express their feelings to people who can fully relate to them and share coping strategies and stress management practices.

Lastly, this paper's gaps and methodologies may become initial steps for interested researchers in propelling their papers to new heights. Future investigators may conduct experimental studies to evaluate the effectiveness of specific stress-reduction techniques, strategies, and practices on academic burnout.

5.0 Contributions of Authors

Christian V. Villan mainly constructed the manuscript with the approval and guidance of his research adviser Dr. Gloria M. Cunanan.

6.0 Funding

This research was self-funded by the primary author

7.0 Conflict of Interests

There is no conflict of interest.

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