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Factors Affecting Academic Performance of Undergraduate Nursing Students at Pak Swiss Nursing College and Hassan College of Nursing Swat

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Abstract

Background: The educational outcomes of nursing undergraduate students stem from individual characteristics, institutional practices, and external environmental elements. Knowledge of these determinants is essential for achieving better educational results and lowering nursing program attrition.

Aim: This study examined which elements impact academic achievement rates for BSN nursing students enrolled at Pak-Swiss Nursing College and Hassan College of Nursing Swat in Pakistan.

Methods: Between July and November 2024, researchers conducted a quantitative cross-sectional survey that selected 185 nursing students randomly. Subjects responded to self-administered structured questionnaires that examined demographic information, study habits, financial constraints, clinical stress, and institutional support. SPSS software version 26.0 was used to run statistical analyses that included descriptive statistics, independent t-tests, and Pearson correlation methods.

Results: Research participants mainly consisted of male subjects (95.1%) within the age range of 20–24 years (95.1%) who reported being unmarried (95.1%). Key findings included the following: Students who studied with their peers ranked highest as those who significantly benefited from positive influences (75.1%), followed by peer collaboration (73.5%). Students' performance suffered due to clinical stress (67.5%) and financial limitations (45.9%). Test results showed that individual study time contributed significantly more to GPA scoring ($r = 0.42$, $p < 0.001$) than working together with fellow peers.

Conclusion: The attainment of academic success among nursing students depends on their study routines, their institution's backing, and their ability to manage stress. To boost student performance, specific interventions should be combined with study skills workshops, financial assistance programs, and faculty training efforts.

Keywords: academic performance, nursing students, study habits, clinical stress

Introduction

Undergraduate nursing students demonstrate their readiness to excel in clinical work and develop as professionals through their academic achievements. (1). Several influential personal

and institutional alongside environmental elements dramatically shape the academic results of undergraduate nursing students. (2). This educational setting defines academic success through quantitative measures such as examination results and grading and clinical assessment scores demonstrating students' nursing aptitude and adaptability. (3,4,5). Undergraduate nursing students encounter different barriers stemming from demanding classes, practical clinical experience, and psychological pressures that influence their academic achievements. (6). Identifying these determining factors allows educators and policymakers to create specific interventions that improve learning conditions and cut down attrition numbers while developing skilled upcoming nursing professionals. (7).

The educational achievements of undergraduate nursing students remain a worldwide priority because they determine the quality of medical treatment provided to patients. Academic success among students is defined through three main categories, which include the individual factors combined with environmental and institutional factors. (8) Nursing education worldwide faces challenges, starting from high student attrition, insufficient review, and insufficient practical training experiences. According to the World Health Organization, quality nursing education remains essential when creating competent healthcare professionals. (9) Several research projects in the United States, United Kingdom, Australia, and Canada show why it is vital to identify behaviors that affect nursing students during their academic years. Research on these influencing factors can help develop strategies that will improve academic results for nursing students while preserving student retention levels. (10)

Each student brings unique qualities such as academic background accomplishments, intrinsic drive, self-confidence, and learning approach when joining educational institutions directly influencing their academic abilities. Japanese research on nursing students demonstrated that their self-efficacy and motivational levels acted as vital indicators for academic success. Family support alongside socioeconomic conditions exert influence on academic outcomes. (11) Research conducted in Pakistan revealed family backing and economic standing as essential elements that predict undergraduate nursing students' successful completion of studies. (12) Among teacher-related variables, teaching strategies, feedback, and instructional help are fundamental aspects of academic progress.

Evaluating teaching quality and feedback practices by students at Australian nursing institutions directly affected their academic achievement. According to research done in the United Kingdom, nursing student academic achievement benefits directly from proper teacher support. (13) The effectiveness of teacher-student relationships directly advances student motivation and engagement levels. (14) Despite the existing research, the academic performance area remains under-studied about undergraduate nursing students' multiple contributing factors. (15) Prior academic performance shows strong evidence as a primary performance determinant for Indian nursing students. (16)

The need for good pre-entry credentials and relevant academic preparation reveals its value to achievement outcomes. Nursing students' Academic success depends substantially on how they learn and their individual learning preferences. According to research results, students in South Korea demonstrated measurable relationships between their learning styles and their academic achievement outcomes. (17) This relationship between parental education background and nursing students' academic achievement outcomes has been investigated in the United States. Research reveals that parents' education level affects academic motivation and self-efficacy among current students (18). Self-efficacy and with emotional intelligence play vital roles in nursing students' academic progress. Australian research demonstrates that students' emotional intelligence strongly indicates how well they perform academically (19).

Health education quality during clinical placements is a vital determinant of academic results. Research conducted in Canada established that clinical placements were a significant factor that directly improved nursing student academic achievements. (20) Research in the United States demonstrates that nursing students benefit from competent faculty members who serve as academic achievement promoters. (21) This study investigates three performance-related

factors among undergraduate nursing students: student characteristics, home conditions, and teacher attributes. (22)

Methodology

The research took place between July 2024 and November 2024 using a cross-sectional quantitative survey design to study BSN nursing students at Pak-Swiss Nursing College and Hassan College of Nursing Swat. A sample population of 300 was determined to need 169 participants according to statistical calculations that required an additional 10% increase to 185 participants to minimize possible errors. To compute the sample size, the RaoSoft calculator implemented a 5% error margin with a 95% confidence interval and a 0.05 significance level. Simple random sampling served as the technique to select participants. Students enrolled in their second, third, and fourth year of BSN were eligible to participate in the study, provided they agreed to participate. However, students who were unwilling to join were excluded from the study. New research explored how different variables influence the academic achievements of nursing students in their undergraduate studies.

Data Collection Procedure

A structured questionnaire was distributed to random participants from Pak-Swiss Nursing College and Hassan College of Nursing Swat throughout July to November 2024. Before data collection started, the IRB Pak Swiss Nursing College provided permission and every partaking student provided written informed consent. The questionnaire had its validity and reliability established through pretesting, and it contained sections about participant demographics and academic performance determinants. Research assistants who received proper training distributed questionnaires to students in their classrooms at scheduled breaks while providing specific guidance and being present to answer questions. Data collection staff collected and checked the completeness of filled questionnaires while providing anonymous identification through numbered codes. The principal investigator supervised the entire data collection process to guarantee adherence to ethical guidelines alongside methodological consistency.

Data analysis procedure

The research data analysis was performed with SPSS version 26.0 through descriptive statistics and inferential analysis. The descriptive analysis showed categorical variable data by distribution frequencies and percentages, while continuous variables provided means with standard deviations. The researcher conducted independent t-tests with $p < 0.05$ and 95% CI to evaluate the mean pain scores of both groups that received the breath-holding intervention and standard care. This analysis included objective observer ratings and subjective self-reported pain measurements.

Analysis and Result

Demographic Characteristics of Participants

Statistical data from 185 study participants revealed a majority male population at 95.1%,, while 95.1% of these individuals were within the 20-24 age bracket and unmarried (95.1%). A majority of research participants belong to their third academic year (51.9%) while living in accommodations outside of hostels (73.5%) along with being unemployed (77.8%). The data reveals that students in the 30-50k income bracket form the largest group (33.0%), while 56.2% receive financial support from their parents.

Table 1: Demographic Characteristics of Participants (N=185)

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	176	95.1
	Female	9	4.9

Age Group (years)	20-24	176	95.1
	25-29	9	4.9
Year of Study	2nd Year	33	17.8
	3rd Year	96	51.9
	4th Year	56	30.3
Marital Status	Unmarried	176	95.1
	Married	9	4.9
Residence	Non-hostelized	136	73.5
	Hostelized	49	26.5
Parental Education	Illiterate	77	41.6
	Primary Education	27	14.6
	Secondary Education	39	21.1
	Higher Education	42	22.7
Employment Status	Unemployed	144	77.8
	Part-time Employed	41	22.2
Monthly Household Income	<20k	39	21.1
	20-30k	40	21.6
	30-50k	61	33.0
	>50k	45	24.3
Dependents on Parents	None	104	56.2
	1-3	60	32.4
	3-6	21	11.4

Figure 1: Participants Year of Study.

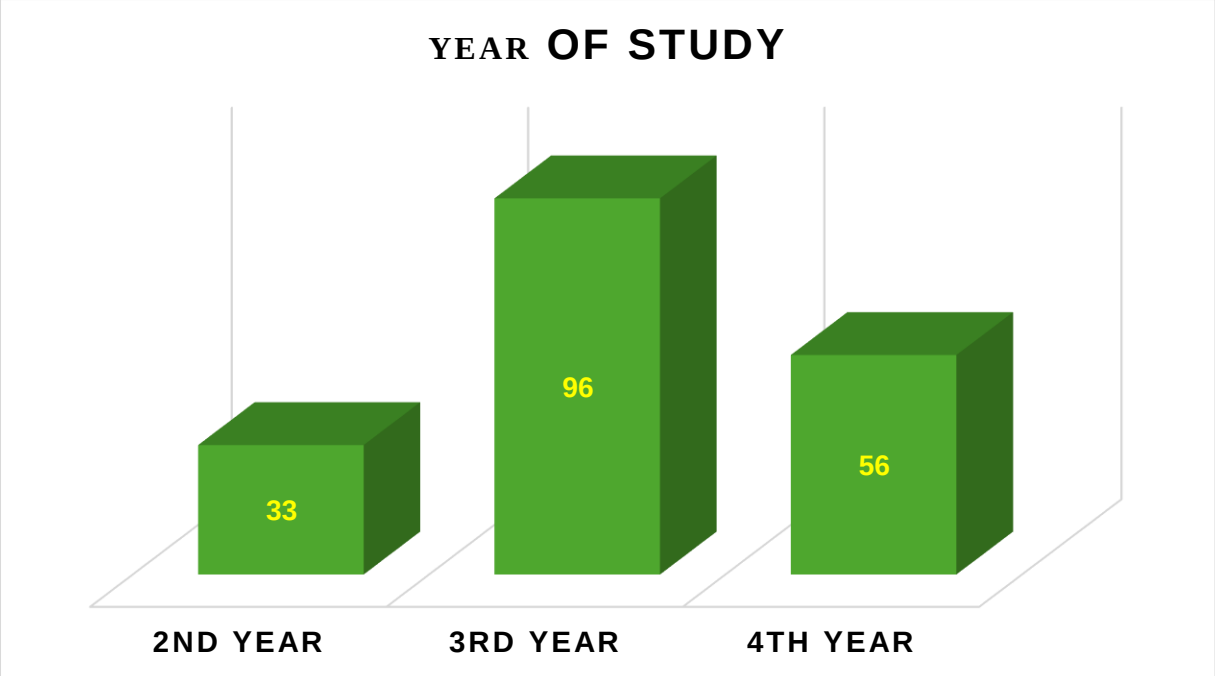


Figure 1 shows the distribution of participants by academic year. The highest proportion were from the 3rd year (96 students), followed by the 4th year (56 students) and the 2nd year (33 students). This indicates greater participation from more advanced nursing students.

Factors Affecting Academic Performance

Most students believe study habits along with peer collaboration enhance their academic performance, according to their responses (75.1% and 73.5%, respectively). Over sixty percent of respondents considered clinical stress and lecturer support significant factors. Since 29.8%

declared negative reactions to its effects, financial constraints generated split responses from students.

Table 2: Factors Affecting Academic Performance (Self-Reported)

Factor	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
Study Habits	32.4%	41.1%	15.7%	8.1%	2.7%
Clinical Stress	28.6%	38.9%	18.9%	10.3%	3.3%
Lecturer Support	25.4%	45.9%	16.2%	9.2%	3.3%
Peer Collaboration	35.1%	40.0%	12.4%	8.6%	3.9%
Financial Constraints	18.9%	27.0%	24.3%	20.0%	9.8%

Comparison of Academic Performance Between Colleges

Academic outcomes show statistically relevant variations between pupils at Pak-Swiss and Hassan College. Pak-Swiss students earned superior GPAs ($p = 0.022$) and exam scores ($p = 0.004$) and clinical performances ($p = 0.015$) than their peers. Academic performance data indicates that Pak-Swiss students achieve marginally superior results compared to their fellow students.

Table 3: Comparison of Academic Performance Between Colleges (Independent t-test)

Variable	Pak-Swiss (Mean ± SD)	Hassan College (Mean ± SD)	t-value	p-value	95% CI
GPA (4.0 Scale)	3.42 ± 0.51	3.28 ± 0.47	2.31	0.022	[0.02, 0.26]
Exam Scores (%)	78.6 ± 9.2	75.3 ± 8.7	2.89	0.004	[1.1, 5.5]
Clinical Performance	84.5 ± 6.8	82.1 ± 7.2	2.45	0.015	[0.5, 4.3]

Association Between Study Habits and GPA

As established through correlation analysis ($r = 0.42$, $p < 0.001$), academic performance demonstrated a moderate positive relationship to study hours per day. Scholarly resources use displayed a significant link to educational outcomes ($r = 0.35$, $p = 0.002$). Group study action showed an effect somewhat weaker than individual study hours yet remained statistically significant ($r = 0.28$, $p = 0.011$).

Table 4: Association Between Study Habits and GPA (Pearson Correlation)

Variable	Correlation Coefficient (r)	p-value
Study Hours/Day	0.42	<0.001
Use of Resources	0.35	0.002
Group Study	0.28	0.011

Discussion

The research results reveal essential information about what affects the academic results of BSN nursing students in Pakistan. This study showed a majority of male students among the enrolled BSN nursing students who broadly differ from the worldwide nursing education demographics where women usually predominate. (23). Most study participants demonstrated young adult status while unmarried as they received financial support from parents and off-campus residence, which might affect their study habits and academic dedication. Research subjects demonstrated divergent opinions about financial limitations as a hindrance to academic success, suggesting that economic difficulties affect school performance at different quantitative levels based on personal situations. 23, 24).

Scientific study methods combined with group academic assistance proved to be the strongest factors enhancing student performance because they improve knowledge acquisition and information retention. Research evidence supports the notion that clinical stress emerges as the primary challenge for students despite past findings about clinical rotation-associated anxiety.

Economic stress affects some medical students, whereas other students possess enough support to offset their financial challenges. (25).

The research established that students at Pak-Swiss Nursing College performed better academically than Hassan College students across all metrics, including grades, exam grades, and clinical responsibilities. (23). Further investigation should analyze the institutional resources, teaching quality, and student support systems, which appear to lead to this suggested difference. The analysis established three factors that increase GPA performance: individual study time outperforming collaborative study time, resource utilization, and study hours as additional contributors. (25). The results differ from several investigations, which highlight peer learning as equally or more potent than independent study, possibly because of cultural or environmental factors involved in students' study approaches. (26, 27).

Support measures must be implemented to assist nursing students through dedicated study skill education, financial benefits, and stress relief programs. Applying equality programs within institutions produces results that reduce learning differences between educational centers. Further research should investigate the fundamental causes of these result variations and determine the extended educational effects of academic support efforts in nursing programs. This study provides valuable insights about nursing education challenges, which can direct educators and policymakers to implement effective strategies for boosting student success in comparable educational environments. (28, 29,30)

Conclusion

Conclusion The study assessed influential elements that affect BSN nursing students' educational achievements at two Pakistani educational institutions. Results showed that most students who studied at the institutions were male students who were predominantly youthful unmarried individuals who received financial support from their families. Findings from the study showed that academic performance results from study habits and peer collaboration and clinical stress but financial issues created variable outcomes. The students at Pak-Swiss Nursing College achieved better GPA scores, examination results, and clinical accomplishments than Hassan College students, demonstrating different institutional help and resource levels. The relationship between students' time spent studying independently showed better results in academic performance than studying as a group.

Recommendation:

Recommendations The collected data enables the following proposals for improving nursing students' academic achievements: Universities need to run educational programs about ideal methods for studying alongside tasks of time organization and test readiness to boost student learning efficiency. To reduce financial stress for disadvantaged students, institutions should provide scholarships and stipends or allow them to take part-time work opportunities. Educational institutions need to establish counseling services and stress-relief programs that aid students in dealing with their clinical demands and academic workload. The institutions demonstrating lower academic metrics should analyze and improve their teaching methods, faculty education standards, and learning resource availability to match superior educational institutions. Although individual study proved most effective for learning achievement, peer study groups remain acceptable as they promote shared knowledge development.

Limitations

Limitations This research has several significant limitations that must be noted despite its findings. Two institutions formed the research sample, which may fail to display the complete spectrum of nursing students throughout Pakistan. Self-Reporting Bias occurred because participants answered questionnaires through self-reporting, which made their responses vulnerable to social desirability and recall bias influences. An evaluation constraint comes from the Cross-Sectional Design structure because it allows examination of only instantaneous data,

making long-term causal association assessment and trend analysis impossible. The high male concentration in the study population falls short of revealing what female nursing students face in their studies since females constitute the majority of working nurses worldwide. The research failed to measure additional factors that could affect performance even though teaching quality, institutional policies, and prior academic experience showed potential impact on performance.

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