

FACTORS AFFECTING THE NURSING STUDENTS' ACADEMIC AND CLINICAL PERFORMANCE AND ATTRITION

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(Received, 14th January 2023, Revised 11th May 2023, Published 26th June 2023)

Abstract: *Academic performance is the prerequisite of clinical performance in nursing programs which are affected by various factors such as anxiety, lack of supervision, lack of facilities, and many more, resulting in attrition by many students. To evaluate the factors which affect the academic and clinical performance of nursing students in tertiary care institutes along with attrition. After getting REC approval, this study was conducted at the College of Nursing Nishtar Medical University Multan from December 02, 2022, to May 01, 2023. Both genders, ranging from 17-26 years of age, were included in this study. Those who refused to participate were not included. A self-structured questionnaire was formulated, and two field experts checked validity and reliability. Demographic data were depicted in frequencies (%ages), mean, and standard deviation. Association among various factors affecting academic and clinical performance and sociodemographic was checked using chi square in SPSS ver.21. The significance level was <0.05. The mean & SD of age in this study was 21.32+2.57. The association among factors and socio-demographic characteristics demonstrated the effect of these variables on the clinical and academic performance of nursing students, along with the attrition of their degrees. It was concluded that socio-demographic characteristics and attrition affect nursing students' academic and clinical performance.*

Keywords: Academic & Clinical Performance, Attrition, Nursing, Socio-Demographic

Introduction

Nursing demand escalated worldwide due to the shortage of nurses internationally by an aging population, stressing improvement in the healthcare system, especially in nursing (Reynolds et al., 2023). USA analysts have reported that the demand for nurses will increase in the next 8 years due to an approximately 22% increase in the worldwide aging populace. (Heidenreich et al., 2011) United Kingdom and Australian labor have reported an identical increase. Due to this increase in demand for nurses, the enhancement in enrolment of students in nursing is the basic step being adopted by various countries to meet this demand (Siela et al., 2008). The success rate of this strategy depends upon the quality of education provided to students as well as how much their academic & clinical performance is improved. The university's facilitation in producing competent graduates is one of the key elements in nursing students' academic and clinical performance. Various factors play a key role in nursing students' academic and clinical performance, along with their attrition (Beauvais et al., 2014).

The clinical performance of students is defined by the ability of the students to execute practical skills in their field in a competitive way during assessment

(Watson et al., 2002). Academic performance is students' progress in the theoretical aspect of a course or curriculum. How well students comprehend the basic and advanced concepts of their courses and how well they perform during their assessment. Knowledge of the subjects given to them by their mentor and the technique used to supervise them are the key elements of students' excellence (Lau et al., 2020; O'Connor, 2014).

Attrition is another factor that affects nursing students' academic and clinical performance (Chan et al., 2019). Attrition is the ability of students to enroll in one year of their academia who do not continue their education of that year or cannot reenroll in the following year of their academia (Ajoodha et al., 2020). Attrition degree is an economic loss for a university that affects their smooth execution of financial matters and is inevitable for a university or institution. Much research has been conducted to evaluate the performance of enrolled nursing students who do not drop out during their degree tenure (Biles et al., 2022; Hidalgo-Blanco et al., 2020). But there is a lack of research focusing on attrition degree students. This study aimed to evaluate the major factors affecting the clinical & academic performance

of nursing students and attrition. The current study focuses on the factors which affect students' competence level and the learning environment, which negatively impact their performance.

Methodology

The current study was conducted at the College Of Nursing Nishtar Medical University Multan. This study lasted six months, from December 01, 2022, to May 01, 2023. The WHO calculator calculated the sample size, which came to 88. Students of nursing between the age of 17 to 26 were included in this research. Participation of both genders was ensured. Those students who refused to show interest or participate were excluded from the study. Also, students with any stress or anxiety disorder were excluded. The main purpose of this research was made clear to those students who participated in the study. Informed consent was taken, and they were requested to complete a questionnaire.

The data collection tool used was self-structured. After the formulation of this questionnaire, the validity and reliability were checked by two experts in the field. The questionnaire included demographic data, e.g., age, gender, marital status, the economic condition of students, and questions specific to academic and clinical performance evaluation along with factors like stress, anxiety, teaching & clinical environment, the competence of supervisor, barriers to effective performance and reason of behavior, etc. 100% response rate of the questionnaire was attained by nursing students. Data were analyzed by using version 22 of SPSS. The demographic data was

manifested in frequencies, percentages, and mean and standard deviation. The chi square was used to analyze the association of factors affecting nursing students' clinical & academic performance concerning their socio-demographic characteristics. The level of significance in this study was kept at $p < 0.05$. The confidence interval was equal to 95% (CI=95%).

Results

The mean & SD of age in this study was 21.32±2.57 and the frequency of participants between age group were 31(35.3%) whereas of 21-23 & 24-26 were 48(54.5%) and 09(10.2%) respectively. Male gender frequency was 21(23.8%), and 67(76.2%) females were in the current study. 49(55.7%) was the Frequency of those participants who were single, and those who were married were 39(44.3%). Based on the education of parents of participants, there were 28(31.8%) who had a matriculation level of education, and frequencies of those who had intermediate, bachelor, and masters were 24(27.3%), 12(13.6%) and 24(27.3%) respectively. Of those participants who had no transport issue to reach their institution, 30(34.1%) and the same was the Frequency of those who had transport issues that were affecting their academic and clinical performance, whereas 28(31.8%) participants reported this factor as to some extent which was affecting their performance. From the perspective of socioeconomic status, there were 31(35.2%) participants who had low levels of SES, whereas the Frequency of medium and high levels of SES were 39(44.3%) and 18(20.5%), respectively. (Table: 01)

Table:01 Demographic Data

<i>Variable</i>		<i>Frequency</i>	<i>%ages</i>
<i>Age</i>	<i>17-20</i>	31	35.3
	<i>21-23</i>	48	54.5
	<i>24-26</i>	09	10.2
<i>Gender</i>	<i>Male</i>	21	23.8
	<i>Female</i>	67	76.2
<i>Marital Status</i>	<i>Single</i>	49	55.7
	<i>Married</i>	39	44.3
<i>Level of Parents Education</i>	<i>Matric</i>	28	31.8
	<i>Intermediate</i>	24	27.3
	<i>Bachelors</i>	12	13.6
	<i>Masters</i>	24	27.3
<i>Transport Issues</i>	<i>Yes</i>	30	34.1
	<i>No</i>	30	34.1
	<i>To some extent</i>	28	31.8
<i>Socioeconomic Status</i>	<i>Low</i>	31	35.2
	<i>Medium</i>	39	44.3
	<i>High</i>	18	20.5

The Frequency of responses based on intrinsic- causes of anxiety- in clinical areas, such as fear of making

mistakes, was 23(26.1%), lack of competency 32(36.4%), lack of experience 18(20.5%), and fear of

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clinical environment 15(17%) respectively. Situations that- cause anxiety in -clinical area showed Frequency of response in sub-items such as clinical assessment during -examination (20(22.7%), strict supervision 34(38.6%), death of patient 15(17%) and practicing in intensive care unit 19(21.6%) which affect the student performance on their clinical aspect. The Frequency of other factors, such as shortage of staff in the

hospital that affects the clinical-learning, Common missing resource that affects clinical practice, Factors that negatively affect clinical practice, Factors that negatively affect clinical practice, Participant reported reason, Participant reported behaviors, and Barriers preventing effective performance in clinical practice are depicted in table:02.

Table: 02 Frequency of various factors which affect the academic and Clinical performance of nursing Students of Tertiary Hospitals

Variable	Frequency	%age	
<i>Intrinsic causes of anxiety in clinical areas</i>	Fear of making mistakes	23	26.1
	Lack of competency	32	36.4
	Lack of experience	18	20.5
	Fear of the clinical environment	15	17.0
<i>Situations that cause anxiety in the clinical area</i>	Clinical assessment during the examination	20	22.7
	Strict supervision	34	38.6
	Death of patient	15	17.0
	Practicing in the intensive care unit	19	21.6
<i>Shortage of staff in the hospital affects clinical learning</i>	No	47	53.4
	Yes	41	46.6
<i>The common missing resource that affects clinical practice</i>	Lack of competent clinical instructors, tutors, and Coordinators	13	14.8
	Inadequate physical resources (skills laboratory, library, and classrooms)	15	17.0
	Lack of teaching facilities in the clinical area	26	29.5
	Lack of funds for learning materials	26	29.5
	Inadequate number of patients	08	9.1
<i>Factors that negatively affect clinical practice</i>	The non-supportive environment due to many patients	36	40.9
	Practicing under stressful situations	27	30.7
	Inadequate PPE (personal protective equipment)	19	21.6
	Caring for serious patients	06	6.8
<i>Participant reported reason</i>	Shortage of nurse tutor or someone to guide in the clinical area	32	36.4
	Inadequate learning resources	27	30.7
	Inadequate supervision	13	14.8
	Inadequate lectures	16	18.2
	Favors sharing of knowledge, experience and Different ideas among students.	28	31.8
	Creates good interpersonal relationships and good cooperation among students	16	18.2
	Motivates and improves self-confidence among students	11	12.5

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Participant reported behaviors	Reduces unfavorable behavior among students (delinquency, criminal behavior, use of drugs, and unwanted pregnancy)	12	13.6
	Reduces anxiety	07	8.0
	Provide good opportunities for clinical learning, assessment and supervision	08	9.1
	Facilitate positive communication between students, teachers, and Patients	06	6.8
Barriers preventing effective performance in clinical practice	Unsupportive environment	40	45.5
	Anxiety	34	38.6
	Inadequate Knowledge	14	15.9

When an association was found between various factors which affect the nursing students' academic as well as clinical performance in tertiary care hospitals/Institutes and socio-demographic characteristics, it was found that there is no association between the intrinsic cause of anxiety in clinical areas and Socio-demographic status of a student as $p > 0.05$ with mean \pm SD of 2.28 ± 1.04 . However, it was found that various situations that cause anxiety in clinical practice areas significantly

affected student performance as $p < 0.05$ with mean \pm SD 2.38 ± 1.06 . The only significant difference was found between the hospital staff shortage based on gender, marital status, and age, where the p-value was less than 0.05, along with attrition of degrees by many students due to their SES ($p < 0.05$). All other factors do not affect nursing students' academic and clinical performance, as depicted in Table 03.

Table: 03 Association between Sociodemographic Characteristics & various Factors that Affect the Academic & Clinical Performance

Variables	Mean \pm SD	Age (p-value)	Gender (p-value)	Marital Status (p-value)	SES (p-value)
Intrinsic causes of anxiety in clinical areas	2.28 \pm 1.04	0.51	0.81	0.74	0.44
Situations that cause anxiety in the clinical area	2.38 \pm 1.06	0.90	0.90	0.96	0.04
Shortage of staff in the hospital affects clinical learning	1.47 \pm 0.50	0.26	0.00	0.00	0.20
The common missing resource that affects clinical practice	3.01 \pm 1.19	0.02	0.38	0.24	0.47
Factors that negatively affect clinical practice	1.94 \pm 0.95	0.27	0.80	0.63	0.74
Participant reported reason	2.15 \pm 1.11	0.88	0.63	0.93	0.31
Participant reported behaviors	3.02 \pm 1.96	0.93	0.48	0.26	0.86
Barriers preventing effective performance in clinical practice	1.70 \pm 0.73	0.32	0.73	0.85	0.03
Attrition	1.74 \pm 0.92	0.42	0.06	0.56	0.01

Discussion

This study evaluated the effects of various factors that affect nursing students' academic and clinical performance in tertiary care hospitals/institutes. The result of this study demonstrated that the socio-demographic characteristics of nursing students, along with the shortage of hospital staff and common missing resources of hospitals, have a bad effect on the academic and clinical performance of nursing students in -tertiary care hospitals/institutes as well as

attrition which was affected by the socioeconomic status of students.

Jeffery et al. (2004) reviewed the literature on student attrition and retention in the nursing program, and they found that various factors affect student attrition and retention in their nursing degree, such as demographic (age, gender) and cognition. According to them, nursing has been a female dominant profession for the last four decades, and male students have had to do more struggle to complete their degrees and improve their academic performance and

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break social norms regarding nursing (Jeffreys, 2022). This study also reinforces our results.

Cheung & Au et al. (2011) conducted a retrospective study on 30 students in the 3rd and 4th years of nursing to evaluate the clinical performance of nursing students based on their anxiety levels. They used videos as a mood elevator and found that those students who were more anxious made more mistakes in their clinical performance during suture removal (Cheung and Au, 2011). This study is also in coherence with ours that anxiety negatively impacts students' academic and clinical performance.

A literature review was conducted by Pitt V et al. to evaluate the various factors which affect nursing students' performance (Academic & Clinical). They included 42 studies in their review and found that demographics, students' behavior, cognition, and personality are the major factors that affect their performance and attrition (Pitt et al., 2012). This study also supports the result of our research that demographic affects the attrition and clinical performance of tertiary care institute nursing students. Buhat-Mendoza et al. conducted a study to find the correlation between nursing students' academic performance and clinical performance. They revealed that the students of senior classes of BS nursing had higher academic performance, resulting in a higher level of clinical excellence. They reported that senior students get confidence and appreciation by working in a clinical environment, which improves their academic performance, which in turn further improves their clinical excellence (Buhat-Mendoza et al., 2014). This study is not in coherence with ours as they found no association among factors that affect performance, such as socio-demographics, anxiety, behaviors, and others.

This study's limitation was the low sample size and no comparison among nursing program academic years. A larger scale study should be conducted in which year-wise comparison and other attrition factors must be evaluated.

Conclusion

It is concluded from this study that socio-demographic as well as socioeconomic status affect nursing students' academic and clinical performance in tertiary care institutes.

Conflict of interest

The authors declared an absence of conflict of interest.

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