



Original Article

Association of Clinical Caring Competencies of Nursing Students with Academic Performance: A Multi-Institutional Study

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ABSTRACT

Nursing students work closely with patients, therefore clinical assignments are regarded as an essential component of nursing education. **Objective:** To analyze the clinical caring competencies of undergraduate nursing students. **Methods:** The study design was cross-sectional descriptive having a sample size of 122 students. The nursing students' information was gathered after one months of clinical duties. Three categories, each using a seven-point Likert scale, were used to collect the data. The questionnaire was validly and reliable, while informed consent was taken from each participant and data analysis was performed through SPSS 22.0. **Results:** The majority of participants was male (87%) in the study, while the maximum number of students belong to age group 18–21 age range (52.7%), and all the students belong to 4th semester. The majority of the students' academic performance was good (51.1%), followed by average performers (37.4%), and poor performers (11.5%). In all the three domains of clinical competencies the score of patience was high 3.7 ± 0.89 , followed by courage domain 3.5 ± 0.88 and cognitive domain 3.4 ± 0.59 . **Conclusions:** There was significant difference between gender groups in cognitive and patience domain while no significant difference in courage domain, while between age groups there were no significant difference between cognitive and patients while there was significant difference in courage domain. The study also established that courage a patient is strongly positive correlated with cognitive domain while negative weak with age, gender and GPA.

INTRODUCTION

Care is the essence of nursing profession, that is the foundation of nurse-patient relationship [1]. The word "care" is associated with the nursing profession since it is often believed that nurses provide and practice care. One of the fundamental components of nursing that requires both clinical and intellectual expertise is caring [2]. As a result, clinical responsibilities and classroom instruction

are part of the nursing design [3]. Nursing schools play a crucial role in upholding the notion of care because they train future nurses who will be highly qualified and deliver high-quality care [4]. Because clinical assignments require students to engage directly with patients, they are seen as an essential component of nursing education. The development of caring competencies—a term used to

describe the attitude and behaviour required for professional growth—is essential to establishing the nurse-patient relationship [5]. The knowledge and abilities of the nursing student have a significant impact on the interaction between the student and the patient since a greater understanding will enable the student to develop appropriate compassionate behaviour and patient trust [6]. In clinical domains, higher authorities in the health care sector continue to priorities clinical capabilities. The core of nursing is compassion, which emphasizes inborn values including accepting accountability for one's own acts and showing respect for others [7]. Students studying nursing believe that a clinical learning environment ought to be nurturing and encouraging [8]. Nursing education and other educational programme teach us the art of human care. Because nursing students will be the future providers of care, it is seen to be crucial for nursing educators to evaluate and impart to them the value of care in nurse-patient relationships. Lack of skills and compassion would continue to be a barrier for those students when they transitioned from student to professional nurse, as the provision of high-quality treatment is correlated with compassion and an indication of an organization's value [9]. Leininger's notion of cultural care introduced the idea of caring to nursing theory [10]. Theorist "Jean Watson" and Hildegard Peplau, who created the interpersonal connections theory, both made contributions to the notion of care in 1997 by proving that "human cannot be viewed as an object and cannot be isolated from self, others, nature, or a large workforce" [11]. All of the nursing theorists' models were centered on providing care. Students must overcome any obstacles and challenges that may arise during the care-giving process. Research has indicated that a number of factors might negatively impact providing care, including work-related stress and burnout, sociocultural influences, nursing students' workload, students' anxiety of dealing with patients, and students' incapacity to operate clinical procedures and biomedical equipment [12, 13]. In cultures that value care in the clinical learning environment, nursing students have a sense of fulfillment, purpose, gratitude, and satisfaction with their work, according to Desmond et al., and Sanvik et al., also noted that achieving learner objectives, doing activities, and developing clinical skills are often the sole priorities in a clinical learning setting [14, 15].

According to our research, the exposure to clinical responsibilities enhanced the competencies. Additionally, throughout time and with experience, nursing students' clinical competence grew progressively. Consequently, the study's goal was to determine the undergraduate nursing students' capacity for compassion after clinical rotations.

METHODS

In order to investigate the clinical competences of undergraduate nursing students in a chosen institution in the district of Swat, Khyber Pukhtankhwa, a cross-sectional descriptive study design was employed. Data from two institutes were gathered using a random sample technique. The sample size was determined using an internet calculator with a 95% confidence level and a 5% margin of error, coming out to be 131. The inclusion criteria for the study were students from affiliated and registered institutes, having perform one-month clinical duty and are agree to be the participants of the study. Students who perform duty 3 months ago or more, students who are absent during data collection and those who are not willing to be voluntary participant are excluded from the study. The health foundation (provincial department), which is in charge of facilitating the nursing institutions' ability to carry out their clinical responsibilities at government hospitals, has an MOU with the relevant hospital. Then, because each nursing college has many batches of students, nursing institutes collaborate with connected hospitals to distribute nursing students in different departments for different months. The study employed Nkongho's 2003-designed Caring Ability Inventory (CAI) as its tool [16]. The instrument has three dimensions: cognitive (14 items), courage (13 items), and patience (10 items) having 7-point Likert scale from 1 (completely oppose) to 7 (fully agree). The researcher discovered that its dependability ranged from 0.67 to 0.80 (Cronbach alpha) [17]. All the 13 items of courage are reversed, while the cutoff values were: Low caring ability (4.5 and below means score), High (4.6 and above). Academic performance of the study was analyzed through the student's final GPA from the previous semester was included in the data collection. The GPA scores of the students were then grouped based on predetermined cutoff values, such as: GPA greater than 3.41 was good academic performer. GPA ranging from 2.81 to 3.40: average performer. Under 2.80 GPA, Poor performance. The proposal and checklist are review by ethical review committee (EB/DR/23/-17), while permission was taken from each institute for data collection. The confidentiality would be maintained and the participation of the students are voluntary and they have the choice to leave study any time are explained to each student, while informed consent was taken from each student to be voluntary participant of this project. Descriptive and inferential statistics of the study was calculated using SPSS 20. Frequency and percentage were calculated for categorical variables while for continuous variables mean and standard deviation was calculated. Independent t-test and ANNOVA was calculated for differences of caring competencies within the groups of demographic data.

Pearson correlation test was applied to investigate the association of caring competencies with academic performance and demographic data.

RESULTS

The study comprised 131 participants in total. Male students made up the majority of participants ($n = 114$; 87%), while female students made up the minority ($n = 17$; 13%). The bulk of the students in the age group were between the ages of 18 and 21 (52.7%), $n = 69$; those between the ages of 22 and 25 (45%) $n = 59$; and those who were 26 years of age and older (2.3%) $n = 3$. The survey encompassed a total of 119 students from semester 4, the majority of them (90.9) were enrolled in private colleges. There were more pupils in rural areas ($n = 111$, 84.8%) than in urban areas ($n = 20$, 15.2%)(Table 1).

Table 1: Demographic data of the participants

Characteristics	Categories	Frequency (%)
Gender	Male	114 (87%)
	Female	17 (13%)
Age	18 To 21 Years	69 (52.7%)
	22-25 Years	59 (45%)
	26 And Above Years	3 (2.3%)
Status of College	Public	12 (9.1%)
	Private	119 (90.9%)
Semester	4th Semester	131 (100%)
Living	Urban	20 (15.2%)
	Rural	111 (84.8%)

Among all participants, the majority of students (51.1%) were high achievers, followed by average performers (37.3%) and low achievers (11.5%)(Figure 1).

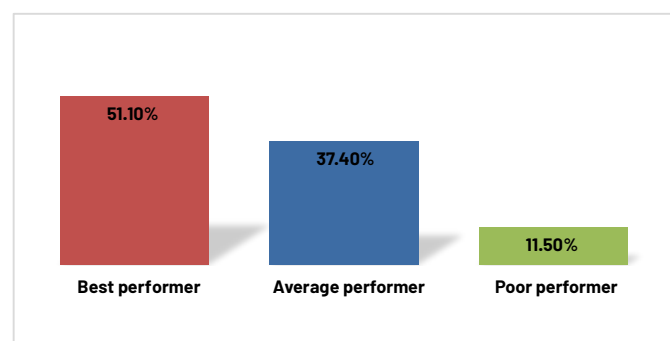


Figure 1: Academic performance of the participants

The overall caring ability of the students was low in all the three domains. The courage domain scored 3.5 ± 0.88 , the patience domain 3.7 ± 0.89 , and the cognitive domain's mean score 3.4 ± 0.59 . Compared to female students, the male participant's score was higher at 3.49 ± 0.55 . The male respondents scored higher on the competency domain (3.47 ± 0.81) than on the patient domain (3.78 ± 0.93), and on the courage domain (3.62 ± 0.92) than on the female students (3.23 ± 0.53). While there was a difference in mean

score, there was no significant difference in the courage domain (0.083) between the gender groups, there was a significant difference in the cognitive domain (0.000) and patient domain (0.030)(Table 2).

Table 2: Caring competencies of the participants in 1st and 2nd point

Competencies	Cognitive	Patience	Courage
Overall Mean \pm SD Score	3.4 ± 0.59	3.7 ± 0.89	3.5 ± 0.88
Gender			
Male	3.49 ± 0.55	3.78 ± 0.93	3.62 ± 0.92
Female	3.47 ± 0.81	3.44 ± 0.49	3.23 ± 0.53
F (P-Value)	12.7 (0.000)	4.7 (0.030)	3.0 (0.083)
Age			
18 - 21 Years	3.48 ± 0.65	3.81 ± 0.85	3.66 ± 0.97
22 - 25 Years	3.52 ± 0.52	3.70 ± 0.93	3.52 ± 0.76
26 And above	3.28 ± 0.21	2.60 ± 0.11	2.38 ± 0.13
F (P-Value)	0.25 (0.772)	2.81 (0.064)	3.24 (0.042)

Courage is strongly positive correlated with patience and cognitive while negative weak with age, gender and GPA. Patience is strongly positive correlated with cognitive while negative weak correlated with gender, age and GPA. Cognitive is weak negative correlated with gender and GPA while positive with age (Table 3).

Table 3: Association of caring competencies with academic performance and demographic variables

Sr. No.	Variables	1	2	3	4	5	6
1	Gender	-	-.102	.174*	-.010	-.129	-.148
2	Age	-	-	.271**	.007	-.138	-.157
3	GPA	-	-	-	-.021	-.093	-.147
4	Cognitive	-	-	-	-	.684**	.731**
5	Patience	-	-	-	-	-	.877**
6	Courage	-	-	-	-	-	-

*. Correlation is significant at the 0.05 level (2-tailed)

**. Correlation is significant at the 0.01 level (2-tailed)

DISCUSSION

The current study involved 131 undergraduate nursing students in their fourth semester. In our study, the proportion of male participants was higher at 87% than that of female participants (13%). This contrasts with another study that found a higher proportion of female participants—89.33% than male participants (10.67%). While all of the participants in this study were from the same class (semester 4), the results of another study indicate that there were 120 participants in the third year, compared to 133 in the first and 118 in the second [18]. Patients are contacted by nursing students during clinical rotations. This experience is still unfamiliar and novel for incoming undergraduate nursing students, but with the help of preceptors, supervisors, and nursing educators, nursing students can acquire advanced skills that they can

put into practice. As time goes on, these respondents develop bonds with patients and understand that it is their moral and professional duty as nurses to advocate for their patients and offer high-quality care [19]. Our study's conclusions demonstrate that nursing students' high scores for courage and patience are a result of clinical experiences that promote both personal and professional fulfillment. The findings are consistent with those of a study that supported societal harmony and patient autonomy [20]. The male respondents had a higher mean score in all three caring competence categories than the female ones, with patience scoring well at 3.7 ± 0.89 , courage coming in second at 3.5 ± 0.88 , and cognitive scoring at 3.4 ± 0.59 . The results are consistent with the study that demonstrated good cognitive, patient, and courageous performance [17]. Additionally, the results aligned with those of a different study [21]. However, during clinical duties students gains and improve the cognitive, patience, and courageous skills. Improvement demonstrates that these institutes' nursing educators are crucial in helping these nursing students develop their capacity for compassion. Other research found that, with the exception of bravery, preceptor-ship enhanced nursing students' caring abilities [22]. The courage of study participants is associated with their experience of interacting with the patient and their sense of responsibility [17]. The courage mean score in our study was higher in the cognitive domain and lower in the patience domain, indicating good improvement. The findings report that courage and confidence among the study participants improve as a result of continuous clinical duties and providing a healthy environment that provides opportunities for students to interact with patients [23]. The respondents also mention that their caring competencies are enhanced as a result of the change in duty department every semester. Our study's results demonstrate that nursing students' caring competencies improved after completing clinical assignments. The findings are consistent with a study that demonstrates how nursing students' capacity for compassion increases year over year [18]. The study respondents mention that our clinical skills improve after a one-year period from the first day because we perform duty for one month to achieve our objectives of the 2nd semester and to observe the clinical practice of nurses. Other studies contradict our findings that report that after the advancement of students to the 3rd and 2nd years from the 1st year, we observe no improvement in their clinical skills [24-27].

CONCLUSIONS

The cognitive and patience domains showed a significant difference between gender groups, while the courage

domain did not show any significant differences. Similarly, the age groups did not show any significant differences in the cognitive or patience domains, but the courage domain showed significant differences. The research also found that courage has a strong positive correlation with patience and cognitive while having a weak negative correlation with age, gender, and GPA; patience and cognitive have a strong positive correlation while having a weak negative correlation with age, gender, and GPA; and cognitive has a weak negative correlation with age and gender and a positive correlation with GPA.

Authors Contribution

Conceptualization: SF

Methodology: SS, AS¹, AS²

Formal analysis: ZI, AS¹, NA

Writing-review and editing: ZI, SS, Z, SK, FA, JI

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

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