

## SELF-ESTEEM AND CLINICAL REASONING SKILLS: A CORRELATIONAL STUDY AMONG UNDERGRADUATE NURSING STUDENTS"

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### Abstract

**Background:** Clinical reasoning confidence skill is a necessity for high-quality care and an essential part of professional competence, while self-esteem is the individual's subjective assessment of their own value and importance. We conducted the study to investigate the relationship between clinical reasoning competencies (CRC) and self-esteem in nursing students.

**Methodology:** The study was conducted in the nursing institutes of Khyber Pukhtankhwa, while the study participants were the undergraduate nursing students, using a cross-sectional analytical study design. The sample size of the study was 422 using purposive sampling technique. The data was collected through 2 valid and reliable questionnaires: for self-esteem, a 10-item Rosenberg scale, while for CRC, a 15-item CRC scale was used. The data collection process was started once permission was granted from the study setting. Data was analysed through MS Excel and SPSS 24. Informed consent was taken from each participant while the study was approved by the ethical review committee.

**Results:** The number of male participants was higher, 368 (87.6%) among the total participants of 422, while the age group 22-25 years old was also in the majority. In the total participants, the maximum number of students self-esteem was average 386 (91.6%), while 26 (6.2%) self-esteem was low, and 8 (1.9%). Otherwise, majority of the respondents CRC was normal 292 (69.5%), then high CRC 96 (22.9%), and 32 (7.6%) were poor.

**Conclusion:** On the basis of findings, the study concluded that self-esteem is associated with CRC, so students with high self-esteem would generally be more confident to deal with patient care and will be able to make decisions under pressure in the intense environment of the hospital

### INTRODUCTION

Education is regarded as a measure of a nation's social and economic advancement and well-being. In Pakistan, nursing programs are governed by the

Pakistan Nursing Council, which is registered with medical universities and the Higher Education Regulatory Authority (HERA) [1]. What

distinguishes nurses from other medical professions in their unique blend of science and art. Science necessitates observation and experimentation, which are used in nursing schools as the theories, evidence-based practices, and disease processes [2].

In order to guide therapeutic interventions, clinical reasoning competencies (CRC) is the systemic process of gathering and evaluating patient data, identifying trends, formulating conclusions, and reaching decisions [3]. The cognitive process and techniques needed to comprehend information, recognize patients' issues, and think clinically about clinical skills are all considered forms of clinical reasoning in nursing [4]. Nurses are known to make critical clinical decisions that have a big impact on patient care and their career [5]. Clinical reasoning relies on identifying the main points that are comprehensible based on the body of knowledge and philosophical ideas. These points can be found in patients' physiological and psychological changes, as well as through physical examination and patient history [6]. For nursing students moving from theoretical knowledge to practical application in real-world situations, the step of clinical reasoning is especially very important [7]. Nursing students' capacity to resolve issues in progressively complicated clinical scenarios is enhanced by clinical reasoning competencies (CRC). It is thought that CRC is a unique and dynamic process that enables safe nursing care and in-depth evaluation of patients' health concerns [8].

Self-esteem is the sum of the abilities and feelings that characterize how highly individuals regard or regard themselves [9]. A measure of self-knowledge is thought to be self-esteem. As a result, self-evaluation may be favourable or unfavourable. Higher self-esteem is regarded as a positive assessment of oneself, whereas low self-esteem is linked to a negative self-perception [10]. Nursing students engage with patients during clinical rotations, acting as carers, advocates, health promoters, and team players with patients and other clinical healthcare professionals. Self-esteem has a crucial role in the formation of psychological growth, which helps pupils manage challenging and stressful situations [11, 12]. Nursing students experience stress and anxiety during their first clinical days as they prepare to interact with

patients and clinical personnel. It takes some time for students to adjust to the concerned department, medical personnel, and patients; therefore, those students who are adept at coping mechanisms get through this phase, while others who are unfamiliar with the difficulties experience psychological stress [13]. Therefore the study was conducted with the aim to determine the relationship between clinical reasoning competencies and self-esteem among undergraduate nursing students.

### Methodology

The study was conducted among the undergraduate nursing students from private sector institutes of Khyber pukhtankhwa using cross-sectional descriptive design. The data was collected from the study participants from June to December 2024. The participants who were enrolled in 4 years Bachelor of science in nursing program, having clinical exposure of more than one month, and willing to be the participant were the inclusion criteria, while students of 1<sup>st</sup> semester and who were not willing were excluded from the study. The sample size of the study population was calculated through using online calculator by using 95% confidence level and 5% margin of error that was 425, using 3 participant were excluded as their data collection sheets were incomplete so the final sample were 422 using non-probability sampling technique.

Data collection process was started after taking permission from different study setting, therefore valid and reliable study questionnaire were used for data collection in two steps as demographic data and 2 structured questionnaire. The first questionnaire used for self-esteem was Rosenberg self-esteem questionnaire that contain 10 items having 4 point Likert scale, while the score of item 2,5,6,8 and 9 were reversed and Cronbach alpha score was 0.81 [14]. The score rang from 0 to 30, where Score 20 and below—Poor self-esteem, Self-esteem ranges from 21 to 30 for average self esteem, Score between 31 and 40. high self-esteem. The second questionnaire was clinical reasoning competencies checklist that contains 15 items having 5 point Likert scale while the Cronbach alpha of the questionnaire was 0.90 [15].

The data were analyzed through Microsoft excel and SPSS 22, Categorical data was presented as

proportions, and continuous data as means with standard deviations. Chi-square test was applied to identify association of self-esteem with clinical reasoning competencies. The study was approved from ethical review committee, and informed consent was taken from each participant. Moreover ethical guidelines to protect participant identity and maintain confidentiality were strictly followed.

### Results

The total participants were n=422 where majority of the participants were male 368 (87.6%), age group 22-25 years were 209 (49.8%), semester 4 students were 150 (35.7%), living in village 264 (62.9%), studying in public college 408 (97.1%), singles 386 (91.9%) and experience of 1-2 months 305 (72.6%).

<b>Table 1: Demographic data of the participants</b>		
	<b>Frequency 422</b>	<b>%</b>
<b>Gender</b>		
Male	368	87.6
Female	52	12.4
<b>Age</b>		
18-21 years	201	47.9
22 - 25 years	209	49.8
26 and above	10	2.4
<b>Semester</b>		
2	131	31.2
3	5	1.2
4	150	35.7
7	125	29.8
8	9	2.1
<b>Living in</b>		
village	264	62.9
city	156	37.1
<b>College status</b>		
private	408	97.1
Public	12	2.9
<b>Martial status</b>		
Single	386	91.9
Married	34	8.1
<b>Clinical Experience</b>		
1-2 months	305	72.6
3 to 5 months	86	20.5
6 and above months	29	6.9

### Self-esteem and clinical reasoning competencies among the participants

Table 2 demonstrated that majority of the participants self-esteem was moderate 386 (91.6%), followed by low self-esteem 26 (6.2%), and little

number of participants self-esteem was high 8 (1.9%). On the other hand the maximum number of participants clinical reasoning competencies was average 292 (69.5%), followed by high competencies

96 (22.9%), and 32 (7.6%) of participants clinical competencies were poor (See table 2).

**Table 2: Level of self-esteem and clinical reasoning competencies among participants**

Self-Esteem	Frequency (%)	Clinical reasoning competencies	Frequency (%)
Low self-esteem	26 (6.2%)	Poor competencies	32 (7.6%)
Moderate self-esteem	386 (91.9%)	Average competencies	292 (69.5%)
High self-esteem	8 (1.9%)	High competencies	96 (22.9%)

**Association of self-esteem with clinical reasoning competencies**

Table 3 illustrated that clinical reasoning competencies is associated with self-esteem (P-0.000).

**Table 3: Association of self-esteem with clinical reasoning competencies**

		Self esteem			P-value
		Low	Moderate	High	
Clinical reasoning competencies	Low	0	32	0	0.000
	Average	13	279	0	
	High	13	75	8	

**Discussion**

The set of abilities and feelings that determine how highly someone regard or regard ourselves is known as self-esteem [10].The purpose of the study was to determine the self-esteem among nursing students and its association with clinical reasoning competencies.

In the current study the number of male participants were 368 (87.6%) than female 52 (12.4%), the age group 22 to 25 years were higher in numbers 209 (49.8%), followed by the age group 18-21 years that were 201 (47.9%) and age group 26 and above were 10 (2.4%). Students belong to semester 4<sup>th</sup> were in majority 150 (35.7%), followed by semester 2 students 131 (31.2%), while students in semester 3<sup>rd</sup> were minimum in number 5 (1.2%). Students who have clinical experience of 1-2 months were higher in number 305 (72.6%), followed by students having 3 to 5 months were 86 (20.5%), and students having experience more than 6 months were 29 (6.9%). A study conducted in Khyber pukhtankhwa Pakistan have same selection of demographic data where the number of male participant were higher 65.4% than female 34.6%, majority of the participants 62.2% age group were 22 to 25 years, and the maximum number of participant were from semester 7 and 8 39.5% [9]. Another study conducted in Pakistan also revealed that the total participants were male nursing students, while students belong to age group 16-22

years were in majority 54.8%, and 81.9% were single participants [16]. An Indian study completed in 2022 revealed that in demographic data majority of the participants were female 81.9%, while age group 19-20 years were higher 61%, and students of 4<sup>th</sup> year were in maximum numbers 31.0% [17].

In the present study the maximum number of students self esteem was moderate 386 (91.9%), followed by low self-esteem 26 (6.2%), while the students having high self-esteem were only 8 (1.9%). Moderate self-esteem in nursing students may be influenced by academic success and failure, social media use, and support from family, peers, and teachers. They recognize their value and acknowledge their imperfections, while cultural values modesty and humility. A study conducted in Khyber Pukhtankhwa Pakistan revealed in line findings where majority of the students (91.8%) reported average self-esteem, followed by higher and then lower esteem [9]. Another study also reported similar results where the maximum number of nursing students self-esteem was moderate [18]. The results are consistent with a study that found that most students (52.2%) had average levels of self-esteem [19].Additionally, the findings were comparable to a study in which the majority of students (73.3%) had normal levels of self-esteem, followed by low self-esteem (23.8%) and high (2.9%) [17]. The results are also in line with a study that found that average self-

esteem was held by 54.7% of respondents, followed by high and low [20]. Moreover a study conducted in Sawabi Pakistan revealed that the maximum number of nurses (75.9%) self-esteem was high, while 20% were average or normal while the remaining (3.66%) were reported low [21].

In the present study the maximum number of participants clinical reasoning competencies was average 292 (69.5%), followed by high competencies 96 (22.9%), and 32 (7.6%) of participants clinical competencies were poor. It may be due to CRC can be impeded by clinical rotations that provide insufficient practical experience. It's possible that students won't have the chance to handle complicated or varied patient cases, which is crucial for developing clinical judgement. It's possible that many students don't get enough instruction in reflective thinking, problem-solving, or setting priorities. Clinical teachers and preceptors differ in their calibre and level of involvement. A student's capacity to think critically or reason effectively in the moment may be hampered by stress and a fear of making mistakes. A similar study conducted in Pakistan illustrated that the overall CRC scored  $59.7 \pm 8.98$ , which is a good score. The reason behind that score was because students begin working in clinical settings in their second semester and are supervised by their instructors and nursing staff when they engage with patients. The majority of Khber Pukhtankhwa students complete their clinical practicum in government-run hospitals, where they are free to provide care while surrounded by skilled and experienced nursing staff [8]. according to a similar study, which shows that the participants' mean score was also good  $60.0 \pm 8.9$  [22]. Through a thorough nursing program rather than a single event, nursing students enhance their competencies [60]. Clinical reasoning was linked to the integration of nursing practice and knowledge in this "becoming a nurse" process [23]. The geriatric medicine curriculum created by Yamadala (2016) incorporated problem-based learning, which allowed medical students to experience real-world scenarios and have a thorough understanding of how to solve issues pertaining to aged patients. After taking part in the Community Parametric Program, which involved them interacting with real patients, pharmacology

students' problem-solving skills increased, according to another study [24].

The study have several limitations, the study was conducted in one province, while students perform clinical in private and public sector hospitals therefore the findings related to clinical practicums and educational experiences have limited generalizability. Moreover the study design was the cross-sectional design that limited causal inferences; thus, future studies should employ longitudinal designs to determine the relevant factors definitively.

### Conclusion

The study concluded that majority of the nursing students have normal CRC, so by strengthening their clinical reasoning, nursing students can benefit from organized teaching and learning strategies that bridge the gap between theory and practice. On the other side self-esteem was also moderate that so students with higher self-esteem are more confident, have a lower stress level, and are energetic, good problem solvers. Moreover self-esteem is associated with clinical reasoning competencies, in future effective nursing education strategies and tactics for enhancing clinical reasoning competency can be developed using our findings. Additionally, the current findings may aid in the creation of educational initiatives grounded in research.

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