

PERCEIVED EFFECTIVENESS OF PEER LEARNING AMONG UNDERGRADUATE NURSING STUDENTS, PESHAWAR: A DESCRIPTIVE CROSS-SECTIONAL STUDY.

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ABSTRACT

BACKGROUND: Traditionally, learning in nursing education was teacher-centered, but now with the advancement in teaching-learning methodologies, peer learning has gained popularity and acceptance in nursing education. It is a two-way learning process that provides joint benefits to all learners involved. It also brings positive effects such as autonomy, self-confidence, critical-thinking skills, deeper understanding, and leadership abilities which support the learners in their academic and professional sphere. Despite its importance, scarce literature is available on the subject particularly in the context of undergraduate nursing students, Peshawar.

OBJECTIVE: : This study aims to measure the perceived effectiveness of peer learning among undergraduate nursing students, Peshawar.

METHODOLOGY: :A descriptive cross-sectional study was conducted in three nursing institutes in Peshawar. Using convenience sampling technique, 228 students were included in the study. A questionnaire was adopted and modified for the context. Cronbach's alpha was calculated to be 0.81 after conducting a pilot study. Data was analyzed on SPSS version 20.

RESULTS: The study indicated that a significant percentage of undergraduate students (67.11%) perceived peer learning as highly effective, whereas 32.02% considered it as moderately effective while an exceedingly small percentage (0.87%) saw it as ineffective. Chi-square test was applied to find out any significant association between the demographic variables and peer learning, it was significant ($p < 0.001$) between the institute where the students were enrolled in and peer learning.

CONCLUSION; Overall, the study proved that peer learning is a highly effective teaching-learning strategy among nursing students and has remarkable benefits.

KEYWORDS: :Peer Learning, Perceived Effectiveness, Undergraduate Nursing Students.

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INTRODUCTION

traditional methods, which were teacher-centered and were known as non-peer learning.¹ There is a growing demand to improve the learning environment of nursing students particularly in the resource limited setting, to facilitate them to acquire clinical skills, academic proficiency and grow as professionals.² To achieve these goals nursing education must be effective. The transition from teacher-centered teaching and learning to student-centered teaching and learning and replacing the passive strategies such as mentoring with active strategies such as case-based studies, classroom assignments and simulation correlates in the same direction.³ One such teaching-learning strategy gaining popularity is peer learning. Peer Learning is an educational framework that emerges from the scholars of social learning such as Bandura, Piaget and Vygotsky; it stems from the idea that human relations and interpersonal dynamics are the source for structuring knowledge-building and understanding¹ A student who thinks critically and follows the principle of self-regulation can learn new perspectives.³ As a strategy, Peer learning is highly efficient and meaningful, beneficial and pleasant at the same time, as the learners are more engaged and positive regarding the whole learning process. Peer-learning schemes now exist on all continents and hold references

for students of all cultures".⁴ Moreover, it is a cost-effective strategy that is becoming essential for the process of learning in educational institutes.

Peer learning is defined in a study as "the acquisition of knowledge and skills through active helping and supporting among status equals or matched companions. It involves people from similar social groupings who are not professional teachers helping each other to learn and learn by doing so".⁵ Another study defines peer learning as a "two-way reciprocal learning activity" that has perks for both the parties included in the learning process. It can be both formal and informal.⁶ According to Boud's explanation, the characteristics of peer learning include:(A) "Working with others", acquiring a sense of responsibility for themselves and others in the enhancement of interdependent skills. (B) "Critical inquiry and reflection", exchanging information about the current ways of thinking and reexamining skills. (C) "Communication and articulation of knowledge, understanding and skills", growing through testing ideas on other people. (D) "Managing learning and how to learn", collaborating with each other to solve problems, identifying needs and making an action plan to meet those needs. (E) "Self and peer assessment", giving feedback to others and taking their feedback into account and having an environment where an individual can compare

themselves to others.⁷ In relation to peer learning, a new theory of paralogy or peeragogy is originating which states that peer learning provides the learners with an opportunity to exchange knowledge, share responsibility and power collaboratively with others.⁸

A study suggested peer learning is related to developing confidence, competence and reducing stress and anxiety in the clinical placements and at the academic level.⁹ A study conducted in 2020 in USA on undergraduate nursing students sums up the experience of peer tutors such that most of them claimed that their communication skills with each other along with their psychomotor skills were increased, participants also disclosed that their critical thinking skills were improved and that their peer tutoring exposure would be extremely beneficial in their forthcoming nursing practice. Another study presented the learner perspective where the participants suggested that peer learning was easygoing, more individualized, and effectively conveyed, which made the subject more accessible to the students. Moreover, it improves efficiency in achieving academic goals and outcomes by reducing the burden on faculty. Clinical placements are also an integral part of nursing education, and it is vital to prepare the students for the trials and tribulations they will face in their professional practice.^{10,11} Nursing students often encounter significant challenges during clinical placements, including lack of preparedness, limited analytical skills, unclear learning objectives, and reduced motivation. To address these issues, educational institutions are increasingly adopting peer learning as a supportive framework, enabling students to enhance their clinical competencies through collaborative engagement with peers, faculty, and mentors.¹¹ Such supportive and collaborative relationships allow students to share learned skills by demonstrating them to each other which further contributes to their development and clinical knowledge.^{12,13} A study also highlighted its positive effects such as autonomy, self-confidence, critical thinking skills, deeper understanding self-evaluating skills and leadership abilities.⁵ The pedagogical value of peer learning stems from more engaging, participatory and active learning experiences.⁶ This value originates from the spontaneity that peers feel towards each other, approaching peers for guidance often resulted in reduced performance anxiety.⁴ This non-structured and laid-back ambiance promotes students to be more expressive and open about ambiguities and misinterpretations, permitting them to discover and implement strategies to address these misconceptions.^{5,6} Therefore, it is of great interest to generate more knowledge about peer learning as it provides a conducive environment for the development of student abilities.

The aim of this study is to explore the concept of peer learning among undergraduate nursing students, addressing the existing gap in literature, with the objective of highlighting its potential benefits and encouraging its formal integration into nursing education programs. Considering the mentioned benefits of peer

learning in the literature it is pivotal that more study should be done in nursing education specifically in Peshawar, Pakistan related to peer learning in terms of excelling in the clinical as well as academic realms.

METHODOLOGY:

A descriptive cross-sectional study was conducted in three nursing institutes of Peshawar for three months from August 2024 to November 2024. Using convenience sampling, a sample of 210 was calculated by Raosoft sample size calculator from a known population of 460. To overcome non-response 21 was added to the sample size (n=231), wherein 228 responded and 3 failed to respond to the study. Undergraduate nursing students of the 3rd and 4th year were included in the study while those who refused to sign the written consent were excluded from the study. Data was collected using a structured questionnaire that was adopted from "Learning with Each other: Peer Learning as an Academic Culture among Graduate Students in Education"⁴ and "Nursing Students' Perceptions about Peer Assisted Learning and Seminar in Pediatric Nursing at International University of Africa, Sudan".¹³ The questionnaire was contextually amended, and Cronbach's alpha was calculated to be 0.81 after conducting a pilot study on 22 nursing students. The Questionnaire had 26 questions to measure perceived effectiveness on a 5-point Likert Scale ranging from strongly agree to strongly disagree, for the further simplification of analysis the 5-point Likert scale was condensed to a 3-point Likert scale and effectiveness was measured.

Data was analyzed using statistical package for social sciences (SPSS) version 20. In descriptive statistics, mean and standard deviation was calculated for continuous data and frequencies and percentages were calculated for categorical variables. In inferential statistics chi-square was applied for the association between categorical variables.

Students who met the requirements were provided with the questionnaire, and they were informed about the research's practical significance. Consent forms were signed by the participants. Confidentiality of provided data was strictly maintained, and participants' anonymity was guaranteed throughout the study.

Ethical approval with reference no. RCN/IRB/120/2024 was obtained from the Institutional Review Board of Rehman College of Nursing on 16/08/2024.

RESULTS

A total of 210 respondents participated in the study with the ratio of males (64%) being higher than that of females (36%). As far as the study year is concerned 48.2% were from the 3rd year while 51.8% were from the 4th year. The respondents belonged to three different institutes as shown in **Table 1**. The mean age of the participants was 22.6±1.22 years as shown in **figure 1**.

Table 1: Demographic profile of the respondents.

VARIABLES		frequency	percentage
Gender	Male	146	64
	Female	82	36
Study Year	3 rd	110	48.2
	4 th	118	51.8
Institutes	Institute A	79	34.6
	Institute B	52	22.8
	Institute C	97	42.5

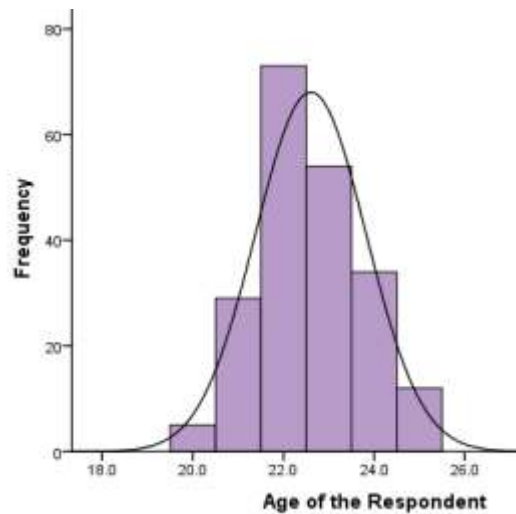


Figure 1: Mean age of the respondents

The responses of participants to the 26-item questionnaire are shown in **Table 2**. Responses were collected on a 5-point Likert Scale which was further merged into a 3-point Likert scale and effectiveness was measured.

Table 2: Responses regarding the items of Questionnaire in terms of percentages.

A significant percentage of participants (82.9%) strongly agreed that they feel happy when their peers provide them feedback on their assignment. A considerable percentage (42.2%) found the peer learning environment stressful and uncomfortable while around (78.9%) believed that they benefitted from peer learning.

Q#	DESCRIPTION	PERCENTAGES		
1.	I do feel embarrassed to ask my peers for new knowledge and information.	44.7	8.8	46.5
2.	I do feel happy with the comments of my peers on my assignments and presentation.	8.7	8.3	82.9
3.	I learned a lot from the participation of my peers during lectures.	4.0	11.4	84.6
4.	Peer learning improved my abilities in teaching others.	4.9	15.4	79.8
5.	My peers possess skills and knowledge which encourage me to learn from them.	7.0	20.2	72.8
6.	I feel that my peers are not better than me.	42.9	26.8	30.2
7.	I ask my peers for information before faculty.	18.8	23.2	57.8
8.	My peers always look for me to search for information and new knowledge.	24.1	30.3	55.7
9.	I do not think that peer learning is one of the important skills for my current or future career.	48.6	21.5	29.8
10.	Scientific meetings, seminars and workshops contribute to the spread of peer learning in the academic environment.	10.0	17.5	72.4
11.	I trust in what is being learned from my peers.	7.0	18.0	75.0
12.	Peer learning pressurizes me to compete with my peers.	13.6	27.2	59.2
13.	Courses include activities that contribute to the spread of peer learning.	7.4	25.0	67.5
14.	Peer learning helped me clarify and deepen my understanding of a topic.	4.9	19.3	75.9
15.	Learning with peers assisted me to utilize my time effectively.	8.8	16.2	75.0
16.	Peer learning improved my ability to communicate effectively.	9.6	14.9	75.5
17.	Peer learning encouraged me to take on the leadership role.	7.4	17.1	75.4
18.	Peer learning enhanced my demonstration skills.	4.3	11.0	84.7
19.	Peer learning increased my self-confidence.	4.9	14.0	81.0
20.	Peer learning encouraged me to reflect on my own performance.	9.6	10.5	79.9
21.	I feel peer learning will help me in my clinical practice.	5.2	16.7	78.0
22.	Peer learning improves social interaction/ teamwork between group members.	7.0	16.7	76.7
23.	I always rely/depend on my peer for my studies.	32.0	22.4	45.6
24.	Peer learning environment is uncomfortable and stressful.	43.0	14.9	42.2
25.	The peer learning environment encouraged me to ask/discuss content freely with my peers.	6.1	16.2	77.7
26.	I believe that I benefitted from peer learning.	6.6	14.5	78.9

Responses were recorded on a 5-point Likert scale and mean was computed for each respondent, which was expressed in percentages as shown in figure 2. The “Likert Scale Interval”

(1.00-1.80 = strongly disagree, 1.81-2.60 = disagree, 2.61-3.40 = neutral, 3.41-4.20 = agree, 4.21-5.00 = strongly agree) was used to analyze the data.

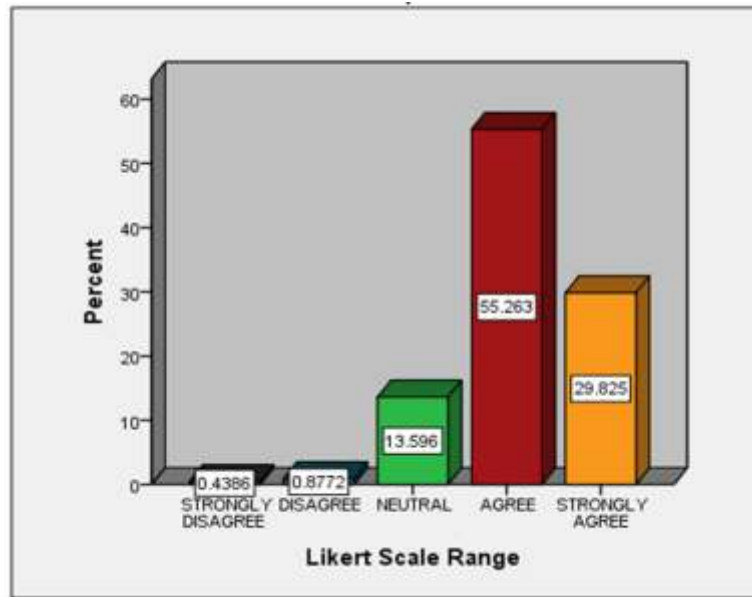


Figure 2: Average responses on a 5-point Likert scale regarding the overall items of the questionnaire

The 5-point Likert Scale was condensed into a 3-point Likert scale and effectiveness was measured. The intervals are: 1.00-2.33 = ineffective, 2.34-3.66= moderately effective, 3.67-5.00 = highly effective. Condensation was done to simplify the analysis; the responses were again expressed in percentages as

shown in figure 3. 67.11% of the respondents perceived peer learning as highly effective, whereas 32.02% considered it as moderately effective while an incredibly small percentage of respondents (0.87%) found it ineffective.

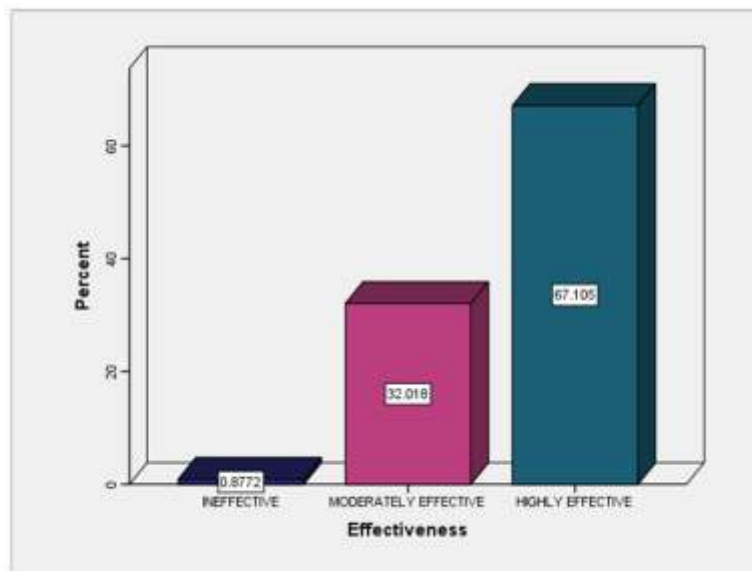


Figure 3: Perceived effectiveness of peer learning on a 3-point Likert scale

Chi Square test was applied to investigate any significant association between the demographic variables of the

respondents and peer learning, it was significant ($p < 0.001$) between the students' enrolled institute and peer learning.

DISCUSSION

The study explored the perceived effectiveness of peer learning among undergraduate nursing students in Peshawar, and peer learning is found to be an effective educational strategy. The findings revealed many peer-learning benefits which are consistent with previous studies that suggest peer-learning can have a major impact on students' academic and professional development. These findings align with the findings of previous studies.^{4,10,13}

The findings of the present study indicated a slight difference in the perception of the students when they were inquired about feeling embarrassed to ask their peers for information 44.7% disagree that they do not feel embarrassed which lines up with a previous study done on nursing students.¹⁰ Contrastingly, 46.5% agreed that they feel embarrassed to ask questions which is due to the fear of being judged by their peers and just some students being naturally shy and introverted.¹¹ The study also highlights the importance of peer learning in terms of deep understanding of a topic (75.9%), effective time management (75%) and development of effective communication skills (75.5%). These results are consistent with a descriptive study done in Sudan in 2022 and a qualitative study done in Islamabad in 2021, respectively. Additionally, 75.4% students agreed that peer learning encouraged them to take on the leadership role which are constant with previous studies wherein study participants believed that peer learning improved their ability to teach and lead others.^{13,14} Another aspect of our study highlights that 52.9% of the respondents agreed to the statement "peer learning pressurizes me to compete with my peers". A study of 2019 conducted in Canada encourages competition in a healthy way stating that "such pressure motivates students to investigate further if they do not know something".⁸ Analogous findings of another study bring forward disadvantages of such competition where the students might make unhealthy comparisons with their peers leading to feelings of being misunderstood and in turn getting hurt which may have an impact on their mental health.¹⁰ A considerable percentage in the present study, 45.6% rely/depend on their peers for studies, if the student is not exposed to prior independent learning, he/she may gain a wrong idea about dependency, especially in those conditions if the student is weak as evidenced by a study conducted in Islamabad.¹⁵

Furthermore, when asked about the peer learning environment 43% of the respondents disagreed that it is not uncomfortable and stressful, which correlates with a previous study where 90% of the participants find it enjoyable and comfortable.¹³ However, nursing students in another study find it uncomfortable and stressful because conflicts arise among students when they are incompatible in terms of their knowledge, education level or simply personalities.¹⁴ Another reason stated by a study is that some students feel peer learning does not match with their learning style, or they previously had negative experiences with it.¹⁰ In contrast some studies suggested that peer tutoring and learning may be a useful and cost-effective strategy to help

nursing students as they adjust to the challenges of academic demands in nursing programs.¹⁶

Our study depended on self-reported data; hence it is possible that due to recall bias the respondents may not have provided truthful or accurate answers. Another limitation is that the study was conducted in three institutes, and it could not generalize the findings to the entire population. As for strengths, the tools used were pilot tested and were found to be reliable. The study also supports peer learning as a low-cost model so it can also be implemented in resource-limited environment. The study opens doors for further research exploring the perceptions and experiences of faculty and clinical preceptors regarding peer learning.

CONCLUSION

Our study stands successful in proving the effectiveness of peer learning among undergraduate nursing students incorporating valuable benefits for the students and facilitating affective, cognitive, and psychomotor learning. It is recommended that peer-learning should be incorporated as a teaching-learning strategy by nursing institutes in their respective study modules. It is also suggested that peer learning should be integrated in the curriculum to maximize its benefits and foster a more interactive and inclusive academic environment for learning.

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REFERENCES

1. Kim SC, Jilapali R, Boyd S. Impacts of peer tutoring on academic performance of first year baccalaureate nursing students: A quasi-experimental study. *Nurse Educ Today*. 2021 Jan 1;96:104658.
<https://doi.org/10.1016/J.NEDT.2020.10465>
2. Markowski M, Bower H, Essex R, Yearley C. Peer learning and collaborative placement models in health care: a systematic review and qualitative synthesis of the literature. *J Clin Nurs*. 2021;30(11-12):1519-41.
<https://doi.org/10.1111/jocn.15661>
3. Haroon RM, Hussain S, Razaque MA, Razaque A. Relationship between peer versus non-peer learning and academic performance of nursing students in Karachi, Pakistan. *J Fatima Jinnah Med Univ*. 2024 Feb 20;17(2):67-71.
<https://doi.org/10.37018/JFJMU/RUK/3989>
4. Mustafa GMM. Learning with Each Other: Peer Learning as an Academic Culture among Graduate Students in Education. *Am J Educ Res [Internet]*. 2017;5(9):944-51.
Available from: <http://pubs.sciepub.com/education/5/9/3>
5. Ädel E, Löfmark A, Pålsson Y, Mårtensson G, Engström M,

Lindberg M. Health-promoting and -impeding aspects of using peer-learning during clinical practice education: A qualitative study. *Nurse Educ Pract.* 2021 Aug 1;55.

<https://doi.org/10.1016/j.nepr.2021.103169>

6. Yang L, Wang Y. Application of a peer learning and assessment model in an undergraduate pharmacy course. *BMC Med Educ.* 2023 Dec 1;23(1).

<https://doi.org/10.1186/s12909-023-04352-8>

7. Pålsson Y, Engström M, Leo Swenne C, Mårtensson G. A peer learning intervention targeting newly graduated nurses: A feasibility study with a descriptive design based on the Medical Research Council framework. *Journal of advanced nursing.* 2018 May;74(5):1127-38.

<https://doi.org/10.1111/jan.13513>

8. Zhang Z, Bayley JG. Peer learning for university students' learning enrichment: Perspectives of undergraduate students. *J Peer Learn.* 2019;12:61-74.

Available from: <https://ro.uow.edu.au/ajpl/vol12/iss1/5>

9. Flott E, Ball S, Hanks J, Minnich M, Kirkpatrick A, Rusch L, et al. Fostering collaborative learning and leadership through near-peer mentorship among undergraduate nursing students. *Nurs Forum (Auckl).* 2022 Sep 26;57(5):750-5.

<https://doi.org/10.1111/nuf.12755>

10. Nguyen-Thi HP, Truong AN, Le VT, Nguyen XT, Tran-Chi VL. The Relationship between Academic Performance, Peer Pressure, and Educational Stress as It Relates to High School Students' Openness to Seeking Professional Psychological Help. *Journal of Curriculum and Teaching.* 2024;13(1):83-101.

<https://doi.org/10.5430/jct.v13n1p83>

11. Vuckovic V, Landgren K. Peer learning in clinical placements in psychiatry for undergraduate nursing students: preceptors and students' perspective. *Nurs Open.* 2021 Jan 1;8(1):54-62.

<https://doi.org/10.1002/nop2.602>

12. Lim S, Min LX, Chan CJ, Dong Y, Mikkonen K, Zhou W. Peer mentoring programs for nursing students: A mixed methods systematic review. *Nurse Education Today.* 2022 Dec 1; 119:105577.

<https://doi.org/10.1016/j.nedt.2022.105577>

13. Galgam FAAR, Mohammed NEA, Amin NM, Nimer MJA. Nursing Students' Perception about Peer Assisted Learning and Seminar in Pediatric Nursing at International University of Africa, Sudan. *Saudi Journal of Nursing and Health Care.* 2022 Jul 25;5(7):149-55.

<https://doi.org/10.36348/sjnhc.2022.v05i07.004>

14. Muazam S, Farzana Majeed, Saima Mumtaz Khattak. Benefits

of Near-Peer Tutoring in Small Group Discussions: A Pilot Study. *Journal of Islamabad Medical & Dental College.* 2021 Mar 31;10(1):337-44.

<https://doi.org/10.35787/jimdc.v10i1.577>

15. Cowart AM. Exploring Perceptions of Peer Mentoring, Stress, and Confidence of Associate Degree in Nursing Student Mentors During Clinical Learning Experiences. William Carey University; 2023.

16. Kim SC, Jillapali R, Boyd S. Impacts of peer tutoring on academic performance of first-year baccalaureate nursing students: A quasi-experimental study. *Nurse Education Today.* 2021 Jan 1;96:104658.

<https://doi.org/10.1016/j.nedt.2020.104658>

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All the authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved



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