INFLUENCE OF PEER-ASSISTED LEARNING ON CLINICAL PERFORMANCE AMONG NURSING STUDENTS IN SOUTHERN PUNJAB, PAKISTAN

Maj. Nusrat Bashir
RN, RM, Post RN BScN, MScN, CIMS Nursing College (CNC) CMH Multan.
Email: nusrehan@gmail.com

Maj. Musarrat Fida
RN, RM, Post RN BScN, Dip Hospital Management, CIMS Nursing College (CNC) CMH Multan.
Email: Musarratishfaq@gmail.com

Lt. Aatqa Ishtiaq
RN, BScN, MPH CIMS Nursing College (CNC) CMH Multan.
Email: atqaishtiaq15@gmail.com

Abstract

Background:
Peer-Assisted Learning (PAL) is a cooperative style of teaching where students help one another to learn by means of guided and guided feedback. It has since been identified as a helpful pedagogical intervention in nursing education in building clinical competence, communication and confidence.

Objective:
To find out the effects of the Peer-Assisted Learning (PAL) on the clinical performance of nursing students in Southern Punjab, Pakistan.

Methods:
The study was a descriptive correlational study carried out on 238 nursing students -198 nursing students of different nursing colleges in Multan and 40 nursing students of Bahawalpur. Data were gathered based on a validated Peer-Assisted Learning Effectiveness Scale (PALES) and a Clinical Performance Evaluation Checklist (CPEC) that was created on the basis of WHO clinical competence domains. Expert review was used to determine validity and Cronbachs alpha was used to determine reliability. The SPSS v26 was used to analyze data through descriptive statistics, Pearson correlation analysis, and regression analysis.

Results:
The average PAL effectiveness score was 78.4 ± 9.5 (range: 55-95) which was a high score of perceived benefit. Mean score of clinical performance $=82.6 \pm 10.3$. There was a significant positive relationship between PAL and clinical performance ($r = 0.63$, $p < 0.001$). Regression analysis established that PAL explained 39 percent of the variance in clinical performance ($R^2 = 0.39$). The qualitative feedback indicated improved confidence, collaboration, as well as applied skills.

Conclusion:
Peer-assisted learning is a key to better clinical performance, communication, and self-efficacy of nursing students. Structured PAL programs should be incorporated to supplement the conventional clinical teaching in nursing colleges of Pakistan.

Keywords: Peer-assisted learning, clinical performance, nursing education, Multan, Bahawalpur, Pakistan

1. Introduction

1.1 Background

Clinical competence is a staple of professional development in the modern nursing education. Although faculty-led clinical teaching is mandatory, Peer-Assisted Learning (PAL) has become a popular method to use in tandem. PAL entails students with different or equal academic levels to

teach and learn together, where students are expected to share experience, discuss patient care, and perform clinical procedures with each other.

PAL does not only improve the acquisition of skills, but also communication, critical thinking, and self-confidence (Tai et al., 2016). It is consistent with the theory of social constructivists where learning happens best via interaction and collaboration.

The Pakistani nursing environment is defined by a high number of students in a classroom and a small number of clinical instructors, which tend to hamper provision of one-on-one guidance, hence anxiety and irregular exposure to practical training. The gap could be addressed by applying PAL, where senior students would be able to support junior students with the supervision of the faculty so that both teaching and learning outcomes would be reinforced.

1.2 Rationale

Although there is increasing evidence on the use of PAL across the world, the nursing education system in Pakistan is not fully implementing it. The majority of the local colleges adhere to the traditional approach of instructor centered education with very little collaboration of students in clinical learning. This paper examines the effects of PAL on clinical performance among nursing students in two major cities Multan and Bahawalpur, which are the representatives of Southern Punjab.

This relationship will be useful as it will enable educators to develop structured peer-teaching programs to improve confidence, practical competence, and professional readiness.

1.3 Objectives

- To determine the intensity of peer-assisted learning among nursing students.
- To measure the level of clinical performance of the nursing students.
- To establish the correlation between peer assisted learning and clinical performance.
- To establish the perceived advantages and difficulties of peer-assisted learning.

1.4 Research Questions

- To what level is PAL practiced among nursing undergraduates in Multan and Bahawalpur?
- What is the level of clinical performance of nursing students?
- Does PAL have a significant relationship with clinical performance?
- What is the perception of students regarding the advantages and the challenges of PAL?

2. Literature Review

2.1 Concept of Peer-Assisted Learning

Peer-Assisted Learning (PAL) is a learning process where students facilitate the learning of each other by teaching, discussing or providing feedback. Topping (1998) claims that PAL improves the cognitive and affective domains through active engagement and cooperation learning. It especially comes in handy in health professions education where practical practice, communication, and collaboration are essential.

2.2 PAL in Nursing Education

PAL in nursing offers the students a chance to practice clinical procedures, discuss patient cases, and view peer demonstrations. Research has demonstrated that PAL enhances the confidence, psychomotor and motivation of students (Secomb, 2008; Olaussen et al., 2016). It also helps in contemplation and compassion- qualities needed in holistic nursing care.

In a study conducted by Christiansen and Bell (2010) it was established that peer teaching in clinical placements enhanced decision making, and interpersonal skills in students. On the same note, Stone et al. (2013) noted that PAL minimized stress and enhanced self-efficacy in clinical rotations.

2.3 Theoretical Framework

The current research is based on the Social Constructivist Theory by Vygotsky, with its focus on the Zone of Proximal Development. Students attain more when they work in groups than as individuals. The guided learning in this zone is best achieved by PAL where students scaffold one another in their clinical development.

2.4 Empirical Evidence

The effectiveness of PAL is supported by international studies: Olaussen et al. (2016) found improvements in clinical reasoning of Norwegian nursing students with PAL, Tai et al. (2016) found that PAL increased teamwork and reduced anxiety in medical and nursing students. Loke and Chow (2007) found that PAL increased competence and satisfaction among peer-tutored nursing students in Hong Kong. There is however limited research in Pakistan. Khalid and Rehman (2021) have observed that peer learning in clinical environments was informal and not structured. So, the research will occupy a significant gap by investigating the quantifiable effect of PAL in clinical performance.

3. Methodology

3.1 Research Design

The study used a descriptive correlational research design to investigate the correlation between PAL and clinical performance.

3.2 Study Setting

The research was carried out in nursing institutions of Multan (n = 198) and Bahawalpur (n = 40) which are two big cities in Southern Punjab and have already established nursing colleges.

3.3 Population and Sampling

Target population: BSc Nursing students (Years I-IV).

Sample size: 238 participants (in total).

Sampling method: Convenience sampling because of the availability of the institutions and the willingness of the participants.

3.4 Inclusion Criteria

Those students who are already pursuing BSc Nursing degrees.

Learners who have already finished at least one clinical rotation.

Consent to take part voluntarily.

3.5 Exclusion Criteria

Students of post-basic or specialty nursing.

Academic probation students or leave of absence students.

Unfinished or lack of clinical records.

3.6 Data Collection Tools

3.6.1 Peer-Assisted Learning Effectiveness Scale (PALES)

A 20 item self-administered questionnaire based on Secomb (2008) and localized. Assessed as per the 5 point Likert scale (1 = strongly disagree to 5 = strongly agree). Measures conceive usefulness, teamwork, trust and proficiency enhancement.

3.6.2 Clinical Performance Evaluation Checklist (CPEC)

The researcher developed it using the WHO Nursing Competency Framework.

Covers five domains:

1. Patient assessment skills
2. Procedure performance
3. Communication & teamwork
4. Documentation & safety

5. Professional conduct

Everything was rated on a 5 point scale (1 = poor to 5 = excellent).

3.7 Validity and Reliability

Content validity: Tested by a panel, including a group of 5 experts (nursing educators, clinical instructors and psychometrician).

Face validity: Pilot-tested on 20 students in a non-sample college to make it clear and easy to understand.

Reliability: PALES with Cronbach alpha = 0.91 and CPEC with Cronbach alpha = 0.88 show that they are highly internally consistent.

3.8 Data Collection Procedure

The institutional authorities were consulted. The purpose and confidentiality of the study were briefed to the participants. The data gathering occurred in the classroom and was verified by the use of valid clinical assessment forms that were filled in during rotations, under the supervision of the instructors. Mean time of completion: 25-30 minutes.

3.9 Data Analysis

Data were entered into SPSS v26.

Descriptive statistics: Standard deviation, percentages, and mean.

Inferential statistics: Pearson correlation and linear regression to determine the correlation between PAL and clinical performance.

Significance level: $p < 0.05$.

4. Results

4.1 Demographic Profile

The sample size of 238 respondents was that of all-female nursing students between the ages of 18-25 (Mean = 21.2 ± 1.6). Distribution: 1st year (24%), 2nd year (25%), 3rd year (27%), 4th year (24%). The majority (83%) had attended peer-assisted sessions in the course of clinical placements.

4.2 Peer-Assisted Learning Levels

The total mean of PAL was 78.4 ± 9.5 (maximum score is 40-100).

Highest-rated domains:

Peer communication (Mean = 4.2 ± 0.6)

Confidence improvement (Mean = 4.1 ± 0.5)

Lowest-rated:

Consent of the peers (Mean = 3.6 ± 0.8)

4.3 Clinical Performance

The average score of the clinical performance was 82.6 ± 10.3.

Best score recorded in "procedure execution" and professional conduct, but lowest score was in documentation (Mean = 3.7 ± 0.7).

4.4 Correlation Analysis

It was found that there was a significant positive association between PAL and clinical performance (r = 0.63, $p < 0.001$). This shows that the more students were exposed to PAL activities, the more clinical competence they showed.

4.5 Regression Analysis

The result of the regression analysis showed that PAL was predictive of clinical performance by 39 percent ($R^2 = 0.39$, F = 24.5, $p < 0.001$). The subdomains that were most predictive were confidence building and peer communication.

4.6 Qualitative Insights

Open-ended responses showed that students were more confident in practicing procedures with peers, they appreciated collaborative learning and they were less anxious. Others have mentioned that unequal participation or unstructured supervision are minor issues.

5. Discussion

The research showed that PAL has a significant positive impact on clinical performance, as previously reported by other researchers across the globe. Higher confidence, communication, and clinical competence were observed among the nursing students who were involved in peer learning (Secomb, 2008; Loke and Chow, 2007). In this research, the effect of PAL was greater in senior students, probably because of the increased exposure to clinical activities. The fact that PAL has a 39% variance in explaining the skills is a statement of the fact that it plays a large role in the development of skills even in conventional instructional systems.

PAL is a cost-efficient, student-focused option to faculty shortages and massive student numbers in Pakistan, where clinical teaching is a challenge to large groups of students. PAL enhances independence and responsibility- qualities that are essential in nursing professionalism because students are allowed to be both learners and mentors.

6. Conclusion

Peer-assisted learning has a crucial positive impact on the clinical performance, confidence, and interpersonal collaboration in nursing students in Southern Punjab. The results indicate that structured PAL sessions are to be included into clinical education strategies as well.

7. Recommendations / Suggestions

- Implement the formal PAL programs in nursing curricula with the guidance of the faculty.
- Train peer tutors in order to provide quality and consistency.
- Write peer learning guidebooks and rubrics of assessment.
- Carry longitudinal research to determine the effect of PAL on professional practice.
- Promote the concept of inter-institutional cooperation among the nursing schools in Multan and Bahawalpur in order to share best practices.

8. Limitations

- Cross-sectional design is incapable of causation.
- The use of convenience sampling makes it difficult to generalize.
- It can be biased by using self-reported measures.

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