

Original Article

Students' Experiences of Learning from their Peers using the Near Peer Assisted Learning Program (N-PAL-P) in a Private Medical College of Pakistan

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Abstract

Background: The rationale of our research was to explore the students' experiences of Learning from their Peers using the Near Peer Assisted Learning Program (N-PAL-P), so that it provides a future guideline for the implementation of N-PAL-P in our institution or any other institution as part of the curriculum.

Objectives: To explore the living experiences of undergraduate medical students in learning Otorhinolaryngology through Near Peer Assisted Learning Program (N-PAL-P) and to identify the perceived factors promoting and factors acting as barriers of N-PAL-P from both N-PAL-P tutors' and tutees' perspectives, within an academic year (2021-22), using structured qualitative data collection and analysis.

Methods: An open-ended Google form-based retrospective transcendental phenomenological research study was conducted at CMH Lahore Medical College, Lahore, for a duration of three months from 01 October 2022 till 31 December 2022. Purposive Sampling was done, and Otorhinolaryngology was chosen as the subject context since the primary investigator is the content and curricular specialist in this subject. The data was analyzed manually using the Stevik-Colaizzi-Keen method.

Results: Our study revealed that N-PAL-P participants reported enhanced learning, confidence, communication, and mutual support as key promoting factors, while time constraints, skill variability, limited resources, and inconsistent feedback emerged as major barriers. The credibility was ensured through triangulation with literature and participant groups, while confirmability was reinforced via member checking by an independent researcher.

Conclusions: Our study concluded that N-PAL-P facilitates enhanced learning, communication, confidence, and mutual academic support. Our findings support its formal integration into the undergraduate medical curriculum.

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Introduction

Peer-assisted learning (PAL) has shown promising results as an innovative teaching approach in medical and educational technology settings. This innovative educational technique involves students teaching



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students in small collaborative study groups and it has been found to enhance cognitive, psychomotor and affective domain development especially promoting self esteem and analytic thinking.¹ The literature exhibits that it improves academic performance and creates an informal student friendly environment with benefits to both peer leaders and learners.^{2,3} PAL has gained increasing interest in medical education due to growing student enrollment and limited teaching resources. This approach addresses teaching capacity issues and offers context-appropriate feedback. Studies have shown that PAL can be as effective as, or superior to, faculty-led teaching.⁴

The relationship between student and teacher was categorized as peer-to-peer or near-peer. The student-to-teacher ratio suited three groupings, named intuitively 'Mentoring' (1:1 or 1:2), 'Tutoring' (1:3-10), and 'Didactic' (1:>10). From this, six novel terms all under the heading of PAL are suggested: 'Peer Mentoring', 'Peer Tutoring', 'Peer Didactic', 'Near-Peer Mentoring', 'Near-Peer Tutoring', and 'Near-Peer Didactic'.⁵ The existing research studies on PAL have largely focused on cross-level PAL, where senior students tutor junior peers.⁶ However, same-level PAL or Near Peer Assisted Learning (N-PAL), has the potential to create a more equitable and supportive learning environment. This approach allows students to engage more freely, share knowledge, and develop a deeper understanding of the material without the hierarchical barriers often present in cross-level interactions.⁷ On exhaustive literature search a significant gap was found with regard to the impact of N-PAL-P on academic performance. Undergraduate medical education presents unique challenges, including the need for students to acquire a vast amount of knowledge in a short period and develop critical clinical skills. It is for these reasons that innovative educational strategies like N-PAL-P are crucial for supporting student success.⁸ In addition, most of the existing research originates from Western or high-resourced educational institutions and there is very limited data exploring the lived experiences of PAL participants in low to middle-income countries, particularly in South East Asian medical context. Furthermore, there is an even larger knowledge gap in addressing the promoting factors and inhibiting factors regarding the implementation of N-PAL-P in the specialized subjects like Otorhinolaryngology.

To address this gap, our study explores the 4th Year MBBS students' experiences of N-PAL-P so that it provides a guideline for the implementation of N-PAL-P in our or any other institution. Our study is expected to provide

the lived experiences of the students about the N-PAL-P and lead us to the factors Promoting or acting as Barrier of N-PAL-P. Improvement in such activities will ultimately help in producing a better lot of health professionals, ultimately resulting in better patient care.

The research question that we intend to answer through this study is: What are the living experiences of students towards Near Peer Assisted Learning Program (N-PAL-P) and how can this experience be improved?

Methods

An open-ended Google form-based retrospective transcendental phenomenological research study was conducted at the ENT department, CMH Lahore Medical College, Lahore. The duration of the study was 03 months (01 October 2022 to 31 December 2022). The study was conducted on fourth-year MBBS students of the academic session 2021-22. Purposive sampling was done, and 24 students were voluntarily selected as N-PAL-P Tutors and 48 students were voluntarily selected as N-PAL-P Tutees based on their academic performance in the second module examination of the prescribed Otorhinolaryngology curriculum of the National University of Medical Sciences. Inclusion criteria included all 4th-year MBBS students from the academic session 2021-22 who consented to participate in the N-PAL-P pilot study and completed the required Google Forms. Exclusion criteria were students who did not consent, did not participate in N-PAL-P sessions, or submitted incomplete or blank feedback forms. The data was collected from the N-PAL-P pilot project already conducted by a Near Peer Assisted Learning initiative, which was started at CMLMC in the year 2021-22 for the 4th-year students in the subject of Otorhinolaryngology. The study was approved by the Institutional Review Board (IRB) of CMH Lahore Medical College vide letter no Case# 753/ERC/CMH/LMC dated 12/04/2023. Otorhinolaryngology was chosen as the subject context since the primary investigator is the content and curricular specialist in this subject. Data was collected through Google Forms using a modified pre-validated, self-administered feedback, evaluation, and course experience forms with open-ended questions. The links for Google Forms required to be filled out at different stages were sent on WhatsApp groups. While this digital approach enhanced reach and convenience, it may have introduced self-selection bias, as responses were limited to those students who voluntarily engaged and may not represent the full spectrum of students' experiences. The data collected was analyzed using the Stevik-Colaizzi-Keen⁹ method which involves a struc-

tured six-step approach to present the essential meaning of participants lived experiences. To ensure phenomenological reduction, the primary investigator maintained a journal to bracket preconceptions throughout data collection and analysis. In addition, an independent researcher performed member checking and thematic verification to ensure neutrality and reduce interpretive bias. All the data collected was kept anonymous after coding and kept confidential, keeping the ethical considerations in mind. The factors promoting and factors acting as barriers to N-PAL-P were identified and the themes generated separately for N-PAL-P tutors and tutees. To establish the credibility of results, triangulation was done through corroboration of themes generated from N-PAL-P tutors, N-PAL-P tutees and literature. Confirmability of results was ensured through member checking by involving an independent researcher.

Results

The results of our qualitative study were derived starting with common verbatims, which were aggregated into subthemes and themes, demonstrating two dimensions of force field analysis of Near Peer Assisted Learning Program (N-PAL-P) implementation in any institution, namely factors promoting and acting as barriers to these programs.

The main factors promoting N-PAL-P or main themes identified from verbatim both for N-PAL-P Tutors and N-PAL-P Tutees are shown in Table no 1.

Table 1: Factors Promoting the Near Peer Assisted Learning Program (N-PAL-P)

Themes	Subthemes	Verbatim
Enhanced Learning	Deeper Understanding	"Engaging in discussions with my peer really deepened my understanding."
Improved Communication	Comfort in Communication	"I felt more comfortable asking questions to my peer."
Confidence Building	Peer Encouragement	"My peer's encouragement really boosted my confidence."
Practical Experience	Hands-on Learning	"The practical sessions were very beneficial."
Mutual Understanding	Shared Challenges	"We faced similar challenges, which helped us connect."

These results show that the student perceived these living experiences of N-PAL-P as mutually enriching, with emotional (confidence-building) and physical benefits (enhanced learning, improved communication,

and practical experience) being frequently cited by both tutors and tutees.

The common factors acting as barriers to the N-PAL-P both for Tutors and Tutees are shown in Table no 2.

Table 2: Factors Acting as the Barriers to the Near Peer Assisted Learning Program (N-PAL-P)

Themes	Subthemes	Verbatim
Time Constraints	Scheduling Issues	"Finding a suitable time was challenging."
Variability in Skills	Knowledge Gaps	"There was a noticeable gap in knowledge."
Resource Limitations	Insufficient Materials	"We often ran out of necessary materials."
Reluctance to Participate	Discomfort in Setting	"Some students were reluctant to participate."
Inconsistent Feedback	Variability in Quality	"Feedback was not consistent across sessions."

These results show that the student perceived these living experiences of N-PAL-P acting as barriers to learning, which included time constraints, variability in skills, reluctance to participate by some tutees, while inconsistent feedback by some tutors and resource limitations in general.

The summary of our study revealed that N-PAL-P participants reported enhanced learning, confidence, communication, and mutual support as key facilitators or promoting factors while time constraints, skill variability, limited resources, and inconsistent feedback emerged as major barriers to the N-PAL-P. The credibility was ensured through triangulation with literature and participant groups, while confirmability was reinforced via member checking by an independent researcher.

The word cloud generated from the verbatim consolidated for both PAL Tutors and PAL Tutees is shown in Figure no 1.



Figure 1:

Discussion

Our study utilized Google Forms for collection of data through a modified pre-validated, self-administered feedback, evaluation, and course experience forms with open-ended questions from both Tutors and Tutees regarding N-PAL-P and then transcendental phenomenological analysis was done using the structured six-step Stevik-Colaizzi-Keen method. Our study revealed that N-PAL-P participants reported enhanced learning, confidence, communication, and mutual support as key facilitators or promoting factors, while time constraints, skill variability, limited resources, and inconsistent feedback emerged as major barriers to the

N-PAL-P. The credibility was ensured through triangulation with literature and participant groups, while confirmability was reinforced via member checking by an independent researcher.

The interpretation of the results of our study was generally aligned with the existing literature and key themes demonstrated clearly the factors promoting and factors acting as barriers to the N-PAL-P. The factors promoting N-PAL-P are elaborated below, and a comparison is drawn with existing literature. Our study showed that learning was enhanced through deepened understanding and active engagement as reported by participants after undergoing N-PAL-P. Our findings are confirmed by Purohit et al.¹⁰, emphasizing that PAL fosters critical thinking and deeper understanding as peers explain concepts to each other, solidifying their own knowledge in the process. Our research findings revealed that both N-PAL-P tutors and tutees confirmed improvement in communication as a result of N-PAL-P. and these findings are supported by research conducted by Aydin et al.¹¹ who argue that the informal, supportive environment of PAL encourages students to ask questions they might hesitate to pose to instructors, thereby facilitating more effective learning. Our research found that N-PAL-P led to a tremendous increase in confidence for both tutors and tutees because of peer encouragement, which was enacted through empowerment and a supportive environment and these findings are supported in research conducted by Khan AA et al.¹² that N-PAL-P provides a supportive atmosphere where students feel encouraged and validated by their peers, which contributes to increased confidence in their academic abilities. Our study found that both N-PAL-P tutors and tutees benefited thorough hands-on learning in N-PAL-P which had real-life applications. Our findings are supported by Gracie¹³ and their findings summarize that N-PAL-P often involves practical exercises that help students contextualize and apply what they have learned, leading

to better retention and understanding of the material. Our study found that N-PAL-P promoted mutual understanding amongst tutors and tutees because of a supportive environment, and since they faced challenges together, which highlights the importance of social and emotional support in learning. Our results are supported by Bailey et al.¹⁴ who noted that the sense of camaraderie in PAL environments can significantly reduce feelings of isolation and increase motivation.

The factors acting as barriers to the N-PAL-P are elaborated here, and a comparison drawn with existing literature. Our study found scheduling issues reported by participants echo challenges noted in the literature regarding the coordination of peer learning sessions. Nisar et al.¹⁵ discussed his findings how busy timetables and conflicting schedules can hinder the regularity and consistency of PAL sessions, affecting their overall efficacy, which is similar to our findings. The noticeable gaps in knowledge levels among participants point to a common issue in PAL programs as in our N-PAL-P, and in regard to this Zhao et al.¹⁶ emphasized the importance of careful matching of peers to ensure compatibility in learning levels and to maximize the benefits of peer interactions. The lack of adequate resources is a practical challenge according to our findings and this is supported by research conducted by Alzaabi S et al.¹⁷ which stresses the necessity of sufficient resources to support effective peer learning, particularly in hands-on and practical disciplines like medicine. The reluctance of some students to engage in the peer learning setting as found in our research findings indicates the need to develop strategies to foster participation and this is supported by the research study conducted by Fakoya et al.¹⁸ which suggested that clear communication of the benefits and structured facilitation can help alleviate discomfort and encourage more active involvement. Our study found that feedback mechanisms need standardization to handle the challenge of inconsistent feedbacks. Our results are supported by Jurs P, et al.¹⁹ who emphasize the importance of regular, structured feedback in enhancing the learning experience and ensuring continuous improvement.

The critical engagements including cultural specificity, tutor training, feedback quality, motivation, and participant dynamics, need to be elaborated in the discussion to have a complete picture of this modality of medical education. Research suggests that N-PAL-P can significantly improve academic performance of medical students in Pakistan according to Khan et al.²⁰ However, there is a recognized need for culturally specific research in Pakistan, as Western models may not fully align with

the local context according to Tariq et al.²¹ Psychological safety, crucial for team learning and organizational outcomes, can be fostered in educational settings through collaborative leadership and organizational culture according to Shahid et al.²² While these studies provide valuable insights, they do not directly address the hypothesis that Pakistani students may benefit more from N-PAL-P due to cultural factors. Further comparative cross-cultural research is needed to explore this specific question. In regard to tutor training, most of the international PAL programs include formal and structured tutor training for consistency and quality while our N-PAL-P included volunteers with limited structured formal training. This gap may explain inconsistent feedback and variable peer competencies. Tutor preparation is crucial, with most institutions offering mandatory training focused on social competencies, communication, and group management. Research suggests that tutor preparation should be more uniformly designed and tailored to specific requirements of uni-professional and interprofessional learning according to Herinek et al.²³ Regarding participant motivation and dynamics it was observed that in our N-PAL-P the tutees were reluctant to be assessed by peer tutors. Although Peer teachers are highly intrinsically motivated, valuing opportunities to support others and improve themselves according to Engels et al.²⁴ However, cultural factors can impede participation, particularly for females in Pakistan, where family support, religious limitations, and cultural conflicts impact sports engagement according to Raza et al.²⁵

In a nutshell, the findings of our research study are supported by literature on N-PAL-P, confirming its effectiveness in improvement of learning outcomes of undergraduate medical students and identification of factors influencing its implementation.

Any discussion would be incomplete without discussing the possible limitations of the study. The limitations of our study are elaborated as follows; First limitation is the small sample size which affects the generalizability of the findings to other educational institutions or disciplines. Then there is an issue of biases in the feedbacks provided by the participants which can affect the analysis and accuracy of results. Another limitation is the reliance on self-reported data from tutors and tutees which limits the objectivity of the findings because of individual perceptions and recall bias.

Conclusions

The conclusions of our research study are that N-PAL-P facilitates learning, communication, confidence through mutual academic support but at the same time it exposed

certain challenges like time constraints, resource limitations, peer variability and inconsistent feedbacks. Furthermore, our study findings support its formal integration into the undergraduate medical curricula especially where faculty is overburdened or limited.

Recommendations:

The recommendations brought forward from our research findings to strengthen the N-PAL-P and make its implementation more efficient include the following: Firstly, it is recommended to develop targeted strategies to boost tutee participation and engagement thorough out the program, such as more interactive sessions, timely regular feedbacks with motivational incentives. Secondly, it is recommended to prevent conflicts, efficient time management should be done by incorporating more flexible timing to accommodate both tutors and tutees. Thirdly, it is recommended to establish more effective feedback systems to regularly assess and address both tutors and tutees concerns and offer support where students face difficulties. Fourthly, it is recommended to increase the frequency and duration of face-to-face interactions to improve communication between students and build stronger bonding and rapport to enhance the learning experience. Fifthly, it is recommended to lay more emphasis on tutor training with more structured training courses to equip them with more effective teaching strategies to deal with all kinds of situations and to better prepare them for their roles. Sixthly and lastly, it is recommended to do to regularly analyze feedback collection and evaluation so that emerging issues are promptly identified and addressed.

Ethical Approval: The Ethical Review Committee, CMH Lahore Medical College & Institute of Dentistry approved this study vide Case # .753/ERC/ CMH/LMC.

Conflict of Interest: The authors declare no conflict of interest.

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Authors' Contribution:

AAK: Conceived, designed and did statistical analysis & final editing of manuscript, critical review and editing of manuscript is responsible for integrity of research.

ST: Did data collection, critical analysis and manuscript writing.

AA: Critical review and editing of manuscript.

AAK: Data collection, manuscript writing

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