Open Access

Original Article

Learning from each other: A qualitative exploration of students' experience in peer mentoring

Ambreen Surti[1], Fazal Arain[2], Rozmeen Akbar[3], Rehana Rehman[4]

ABSTRACT

Background & Objective: Peer mentoring is a developmental relationship in which individuals of similar status or experience support one another through guidance, shared learning, encouragement, and constructive feedback to enhance academic, professional, and personal growth. A structured, 'Peer Mentorship Program' was introduced for graduate students in the department of Biological & Biomedical Sciences (BBS) at Aga Khan University (AKU). The aim was to help fresh students navigate through course work and research components of the program. This study intended to evaluate the usefulness of peer mentorship program, identify existing challenges and areas for improvement by looking at the perception of mentors and mentees.

Methodology: A qualitative study was conducted at Aga Khan University from December 2024 to September 2025, in which two focus group discussions (FGDs) with MPhil-BBS students, comprising of five peer mentees and six peer mentors were conducted. The participants' verbatim responses were transcribed by the researchers; manual thematic analysis was done after compiling codes, categories, and subthemes into themes.

Results: Three themes; "Program Effectiveness and Positive Outcomes", "Challenges and Limitations", and "Program Structure and Future Recommendation": with several subthemes reflected students' experiences of the program. The support of peer mentors helped in reducing anxiety and promoted personal and professional development of mentees. Certain challenges were identified; mentees were initially reluctant to initiate contact, and mentors faced challenges in securing time for the meetings. To improve the impact by adding another tier of alumni in the program was suggested by both peer mentors and mentees.

Conclusion: The Peer Mentorship Program in the MPhil in BBS proved to be a transformative initiative which supported peer mentees to cope with the course work, research and enhance personal and professional growth by the guidance from peer mentors.

KEYWORDS: Graduate Studies, Mentors, Mentees, Peer Mentoring.

doi: https://doi.org/10.12669/pjms.42.10.14862

How to cite this: *Surti A, Arain F, Akbar R, Rehman R. Learning from each other: A qualitative exploration of students' experience in peer mentoring. Pak J Med Sci. 2026;42(10):2776-2781. doi: https://doi.org/10.12669/pjms.42.10.14862*

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0) (https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

1. Ambreen Surti, MBBS, MPhil, MHPE, FHEA (UK).
2. Fazal Arain, MBBS, PhD.
3. Rozmeen Akbar, MBBS, MPhil.
4. Rehana Rehman, MBBS, MPhil, PhD, MHPE, FHEA (UK).

1-4: Department of Biological and Biomedical Sciences, Aga Khan University, Karachi, Pakistan.

Correspondence:

Dr. Rehana Rehman, MBBS, MPhil, PhD, MHPE, FHEA (UK).
Professor,
Department of Biological and Biomedical Sciences,
Aga Khan University,
Karachi, Pakistan.
Email: rehana.rehman@aku.edu
drrehana7@gmail.com

* Received for Publication: December 20, 2025
* Revision Received: August 11, 2026
* Revision Accepted: August 25, 2026

INTRODUCTION

Since its time of inception, MPhil program in Biological and Biomedical Sciences (BBS) at Aga Khan University (AKU) inducts students from a broad range of academic backgrounds, including MBBS, BDS, Bachelor of Science in; Biomedical Sciences, Biology, Biochemistry, Physiology, Microbiology, Molecular Biology, Biotechnology, Zoology, as well as Pharm-D and Doctor of Veterinary Medicine. The structure of the program intentionally uses the first and second semester to bring all incoming students to a comparable level of competency and foundational knowledge.[1] This is followed by execution of research, bench work and thesis defense hence preparing students to make meaningful and lasting contributions to scientific knowledge and beyond.[2]

Literature suggests the significance of formal mentorship programs for undergraduate and graduate students for their personal and professional development.[3] Peer mentoring, does not adhere to traditional hierarchical relationships, however, it provides academic, social, psychological, and career support through interactions with more experienced peers who have recently navigated similar challengest.[4,5] In a study peer mentoring for a period of one year helped final-year residents, to excel in areas of research, memory and reading.[6] In Pakistan, formal peer mentoring in graduate programs is still relatively uncommon, and there is no national survey reporting how many graduate programs have implemented it. Most mentoring remains informal and supervisor-based rather than structured peer mentoring.

Therefore, to formalize and strengthen interactions among diverse group of students in the MPhil program, a structured, discussion-based Peer Mentorship Program was implemented (Fig.1) from January 2021. The framework was adapted after relevant literature search[7] and permission from the relevant authorities. The process was guided by a standardized Peer Mentoring Form, which outlined the shared responsibilities, expectations, and mechanisms of engagement between mentors and mentees (Supplementary Material-1)

In this 'Peer Mentorship Program of MPhil in BBS': each mentor-mentee pair jointly reviews and signs the mentoring agreement at the beginning of the mentorship cycle, thus acknowledging their shared responsibilities. After the initial agreement, mentoring process involves scheduled meetings and feedback from mentor. The structured documentation ensures consistency in mentoring experiences, which is monitored and supported by the program.

This study aimed to evaluate the usefulness of the peer mentorship program and identify existing challenges and areas for improvement by looking at the perception of mentors and mentees.

METHODOLOGY

This qualitative study was conducted at Aga Khan University (AKU) from December, 2024 – September, 2025. The peer mentorship program included two cohorts of MPhil- BBS Batch 2024 - 2025, (n=14) and Batch 2025 - 2026 (n=16). Purposive sampling was used to recruit the participants who could provide rich information about their experiences with peer mentorship program. Mentors and mentees who had attended at least three mentor-mentee meetings and provided written informed consent were invited to take part in the study while alumni were excluded. Out of these, 11 participants consented to take part in focus group discussions (FGDs). One FGD was conducted with six mentors of Batch 2024 - 2025) whereas second FGD included five mentees (Batch 2025 - 2026). Data collection continued until thematic saturation was attained, and no new themes emerged from following discussions.

Based on the study objectives and thorough literature search, a semi structured interview guide was prepared, reviewed, and piloted (Supplementary Material-2).

Ethical approval: Ethics committee approved from Aga Khan University; Ref. No. ERC- 2024-2211-28473; dated: March 13, 2024. Informed consent was obtained prior to participation. After explaining the study aim and procedure, focus groups were conducted face-face

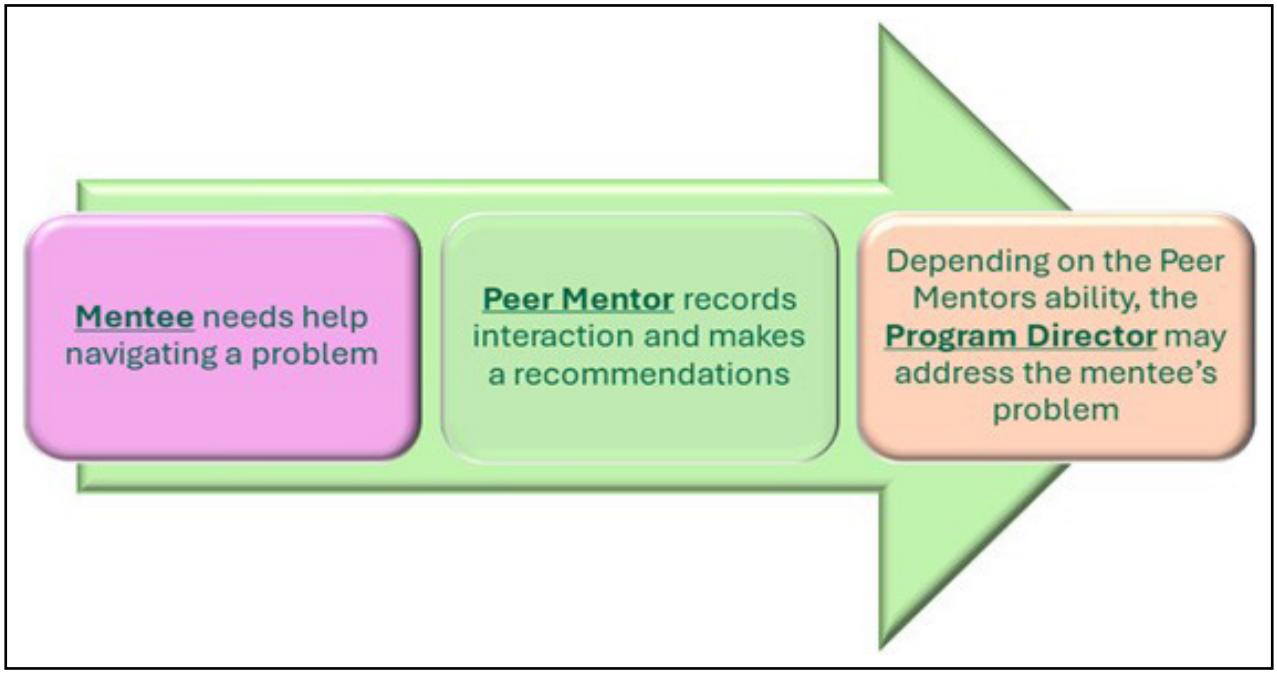

Fig.1: Peer mentoring Model of MPhil in BBS.

for 45-60 minutes by a neutral faculty member. The responses were recorded and supported by field notes and stored in an encrypted, password-protected file on the investigator's laptop.

Data analysis plan: All FGDs were recorded with participants after written consent using a password protected digital recorder. After each session field notes pertaining to non-verbal cues and group interactions were compiled. The recorded FGDs were transcribed verbatim, and every spoken word was converted to written text without altering the language or meaning. The transcripts were cross-checked by research team for accuracy and completeness. Data was analyzed manually using Braun and Clarke's six-phase thematic analysis [8]. Transcripts and field notes were read repeatedly by the researchers for familiarization and in-depth understanding of experiences. In the next phase meaningful segments which were relevant to the study objectives, were identified and assigned codes generated inductively. Similar codes were then compared and grouped into broader categories based on similar meanings and recurring patterns. Themes and subthemes were identified later. Emerging themes were then reviewed against original transcripts to ensure that they reflected the data. Themes were then refined, defined and assigned descriptive names through discussions among research team until consensus was achieved. Finally, representative quotations were selected to illustrate each theme. Trustworthiness was ensured by independent coding by two researchers and then compared. Discrepancies were resolved through discussions. Member checking was undertaken for accuracy. An audit trail was maintained throughout the study. Reflexive notes were also kept eliminating potential biases thus ensuring credibility, dependability, conformability and transferability.

RESULTS

The demographics of all peer mentors and mentees is summarized in Table-I. Thematic analysis of FGD generated separate initial codes as per mentors' and mentees' narratives. These were then integrated into common subthemes and three overarching themes as shown in Table-II. Themes "Program effectiveness and positive outcomes", "Challenges in the program" and "Program structure and future recommendations", reflect experiences of participants in the peer mentoring program and identify factors that influence its implementation.

Program effectiveness and Positive outcomes: Participants perceived the program to be beneficial in terms of academics as well as personal growth and development. The mentors described their role in providing academic guidance and sharing their experiences while mentees emphasized improved learning strategies, emotional support, and increased confidence. Thus, together indicating that the program promoted a sense of belonging and strengthened the professional as well as interpersonal skills (Table-II).

Challenges in the program: Despite positive experiences participants also identified several barriers that affected their relationship. Time constraints. Scheduling difficulties and Gradual Development of Trust were identified as some of the limiting factors which influenced regular interactions between them. Insufficient institutional support for coordinating the meetings and monitoring the progress were also identified as others factors which influenced the effectiveness and sustainability of the program.

Program structure and Future recommendations: Several strategies were suggested by the participants to strengthen the peer mentorship program. They suggested improving the institutional oversight, refining the mentor-mentee

Table-I: Demographics of students in the peer mentorship program (Batches of 2024-2025 and 2025-2026).

Batch 2025 (Peer Mentees)		
Age (Years)	24-40 years	
Gender	Male: 3	Female: 11
Educational background	Bachelor's in science: 6	Bachelor of Dental Surgery: 2
	Bachelor of Medicine and Bachelor of Surgery: 1	Bachelors of Eastern Medicine and Surgery: 1
	Masters in Zoological Science: 1	Masters in Biochemistry: 1
	Master's in biotechnology: 1	Diploma in Medical Laboratory Sciences: 1
Batch of 2026 (Peer Mentees)		
Age	21-30 years	
Gender	Male: 5	Female: 11
Educational Background	Bachelor of Medicine and Bachelor of Surgery: 1	Bachelor of Science: 15

Table-II: Descriptive Quotes, Subthemes and Themes.

Theme	*Initial Mentor Code*	*Initial Mentee Code*	*Sub-Theme*	*Key Codes / Metrics*	*Representative Quote(s)*
I. Program Effectiveness and Positive Outcomes	Shared study strategies; academic guidance; synopsis support	Guidance in coursework; exam preparation; learning strategies	Academic & Navigational Support	• Guidance on course of Cell Molecular Biology and Genetics (CMG) learning strategies, exam preparation, • Support in synopsis writing.	"My mentor helped me to develop the strategies to study CMG which helped me a lot."(Mentee) "I remembered how we struggled with this course so tried my level best to help my juniors" (Mentor)
	Active listening; emotional support, referral of concerns	Sense of belonging; reduced anxiety; emotional support	Psycho-Social Support and Professional Development	• Enhanced sense of belonging, reduced anxiety, • promoted personal/ professional development.	"I always thought I have at least someone to rely on"(Mentee) "I referred serious issues of my mentee to the program office" (Mentor)
	Approachability; responsiveness; guidance	Attentive listener; mindful responses	Mentor Qualities	• Approachable, good listener, mindful responses, and honest guidance.	"She's attentive and a pretty good listener and mindful in her responses."(Mentee) "In this program, I learned to be time bound and develop active listening skills" (Mentor)
II. Challenges	Reduced availability during time of thesis; competing responsibilities	Difficulty in approaching; infrequent meetings	Time & Workload Constraints	• Infrequent meetings and time constraint. • Mentor availability decreased during thesis period.	"It is so difficult to approach my mentor" (Mentee) "Sometimes, it is really difficult to dedicate extra time to metness due to our overwhelming deadlines." (Mentor)
	Time required to build trust	Hesitation to initiate meetings; confidentiality	Mentee Outreach & Trust	• Reluctance to initiate the relationship • Initial confidentiality issues.	"I struggled to reach out and initiate meetings, thinking I might bother my mentor." (Mentee) "It took a lot time and effort to develop rapport and trust with my mentee" (Mentor)
	Need for coordination with supervisors	Limited support in organizing meetings	Program Office Support	• Insufficient involvement in scheduling or tracking meeting progress.	"We have to arrange all meetings ourselves" (Mentee) "Program office should inform our research supervisors to spare us for these meetings" (Mentor)

III. Program Structure and Future Recommendation	Regular monitoring, scheduled meetings	More structured meetings	Structural Oversight	• Recommended program office-arrange meetings (e.g., twice a month) • Regular feedback tracking.	"Should arrange meeting twice a month." (Mentee) "As I said before the program office should include these meeting times as part of our schedule" (Mentor)
	Discipline specific pairing; multi-tier mentoring	Preference for similar educational background	Refined Matching & Support	• Peer mentor mentee matching • Implement a multi-tier mentoring structure.	"I would probably pair students from same educational backgrounds with each other..."(Mentor) My mentor was a MBBS doctor so she could not understand my problem (Mentee)
	Orientation workshops	More workshops; informal networking	Training & Capacity Building	• Workshops should be held at the start of the program. • Include informal sessions (e.g., day trips).	"Maybe more workshops to be organized to allow more communication..." (Menor and Mentee)

matching and providing structured orientation and training. These suggestions reflect a shared view that greater support from the institution and clearer program structure could enhance engagement and thus improve the overall mentoring experience (Table-II).

DISCUSSION

This study, exploring the perceptions of mentors and mentees about peer-mentoring program highlighted the effectiveness of the program on one hand while identified the challenges on the other. Findings from this study indicated that mentees regarded their mentors as highly supportive in developing effective learning strategies. These results were supported by a review which identified that peer mentoring has favorable impacts on social and academic integration, career benefits, emotional benefits, soft skills development, university-life balance, and sense of belonging to university.[9]

The peer mentoring program provided mentors and mentees a platform for growth and development. Program Effectiveness was highlighted by both the mentees and mentors. Mentees described their mentors as reliable, attentive, and constructive in their guidance however they initially had concerns about potentially disturbing their mentors. The program strength was reinforced by the mentors who encouraged mentees to develop strategies, boost their knowledge, thus mitigating stress, and achieving academic goals, as supported by literature.[10] Similar to our study, peer mentoring for nursing students increased self-efficacy, boost self-confidence, and personal and professional development.[11]Another study suggests peer mentoring as an "*effective pedagogical support strategy*" which can support the mentees in acclimatizing the complexities of academics and institutions,[5] in support of our theme ***"Program Effectiveness and Positive Outcomes***".

Participants of this study identified several challenges like competing academic and clinical workloads and accessibility of mentors. Mentees were reluctant to approach their mentors because they observed them to be overwhelmed with demanding laboratory assignments, grant-related commitments, administrative responsibilities and closely scheduled research deadlines. This perception, coupled with concerns about imposing on their mentors' time and uncertainty about the appropriateness of seeking assistance, reduced the frequency of mentor–mentee interactions. The mentors expected the mentees to approach them while the mentees felt that they would be disturbing their mentors, hence creating a barrier in trust. The findings of theme ***"Challenges"*** are consistent with current literature which identified time and logistic constraints as one of the major obstacles in peer mentoring.[12,13] In order to overcome the challenges, establishment of formal meetings, workshops and training programs for mentors and mentees has been suggested by our participants.[14,15]

"Program Structure and Future Recommendation" theme highlights the support of program office which is sup-

ported by the literature.[16,17] As far as future recommendation are concerned matching of peer mentors and peer metness on common academic and research interest depicted in our study for sustainability and impact of the program.[18] Cho et al also emphasized the importance of program office for training the mentors and mentees.[19]

Such programs have been reported in literature to provide emotional support, motivation and a sense of community for the mentees and offer the mentors opportunities for self-development and gratification.[20]

Strengths: The strength of peer mentoring program is that it provided a reciprocal platform for academic, personal, and professional growth, benefiting both mentees through guidance and psychosocial support and mentors through the development of leadership, communication, and interpersonal skills. Hence, it is recommended that institutions should cultivate a culture of mentorship that supports the professional growth and success of academics for cultivating the minds that are in turn shaping our future generations.[21] Furthermore, program can be further strengthened by a multi-tier model through additional mentoring tiers and institutional support. The findings from this study could be useful for improving the program for students from different educational backgrounds

Limitations: Our study is limited in terms of mentor-mentee matching imposed by the program office rather than then being on voluntary basis. The peer mentors had only one training workshop which limits the standardization of mentoring process and variability in mentor -mentee quality engagement.

CONCLUSION

The findings of this study indicate that the peer mentoring program was considered to be positive factors by the participants. Both mentors and mentees reported that the program provided academic guidance and opportunities for their individual development. Time constraints, relationship building and limited institutional support were also identified as challenges by the participants.

Participants suggested that in the future, this program required structured training of mentors and mentees, improved mentor-mentee matching, regular monitoring and greater support from the program office, in order to be improved and more polished.

Recommendations: Future studies may provide more evidence regarding the effectiveness and sustainability of peer mentoring program if conducted with a larger number of participants and students from different cohorts and institutions.

AI disclaimer: The authors declare that artificial intelligence (AI)-assisted tools were used solely for grammatical checking and improvement of sentence structure. No AI tools were used for study design, data collection, data analysis, interpretation of results, or generation of scientific content.

Grant Support & Financial Disclosures: None.

REFERENCES

1. Rehman R, Ali R, Khan R, Arain FM. An organizational challenge: reframing of leadership to introduce "Master's Program in Basic Sciences". J Bahria Univ Med Dent Coll. 2017;7(4):254-256.
2. Ravishankar S, Spencer-Drakes TCJ, Fernandes IH, Hayes MI, Coopwood S, Spencer I, et al. Empowering STEM students: a university-wide mentorship program fostering retention and belonging. J Cell Physiol. 2024;239(7):e31348. doi: 10.1002/jcp.31348
3. Reeves AG, Bischoff AJ, Yates B, Brauer DD, Baranger AM. A pilot graduate student-led near-peer mentorship program for transfer students provides a supportive network at an R1 institution. J Chem Educ. 2022;100(1):134-142. doi: 10.1021/acs.jchemed.2c00427
4. Cree-Green M, Carreau AM, Davis SM, Frohnert BI, Kaar JL, Ma NS. Peer mentoring for professional and personal growth in academic medicine. J Investig Med. 2020;68(6):1128-1134. doi: 10.1136/jim-2020-001391
5. Le HG, Sok S, Heng K. The benefits of peer mentoring in higher education: findings from a systematic review. J Learn Dev High Educ. 2024;(31):1-29. doi: 10.47408/jldhe.vi31.1159
6. Haider SI, Riaz Q, Bari MF. Development and evaluation of a peer mentoring programme for postgraduate medical residents in Pakistan: a pilot study. J Coll Physicians Surg Pak. 2023;33(11):1305-1309. doi: 10.29271/jcpsp.2023.11.1305
7. Boston University Faculty Development Office. Boston University Mentoring Ontology [Internet]. Boston (MA): Boston University; [cited 2025 Dec 19]. Available from: https://www.bumc.bu.edu/facdev-medicine/files/2013/08/BU-Profiles-Mentoring-Ontology_for-website1.pdf
8. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2006;3(2):77-101. doi: 10.1191/1478088706qp063oa
9. Gehreke L, Schilling H, Kauffeld S. Effectiveness of peer mentoring in the study entry phase: a systematic review. Rev Educ. 2024;12(1):e3462. doi: 10.1002/rev3.3462
10. Wasim T, Haroon F, Shahid A, Wasim A. Mentees perception of formal mentorship at public sector medical school, Pakistan. Pak J Med Sci. 2025;41(2):488-493. doi: 10.12669/pjms.41.2.11055
11. Lim S, Min LX, Chan CJ, Dong Y, Mikkonen K, Zhou W. Peer mentoring programs for nursing students: a mixed methods systematic review. Nurse Educ Today. 2022;119:105577. doi: 10.1016/j.nedt.2022.105577
12. Preovolos C, Grant A, Rayner M, Fitzgerald K, Ng L. Peer mentoring by medical students for medical students: a scoping review. Med Sci Educ. 2024;34(6):1577-1602. doi: 10.1007/s40670-024-02108-7
13. Penman M, Tai J, Evans G, Brentnall J, Judd B. Designing near-peer mentoring for work integrated learning outcomes: a systematic review. BMC Med Educ. 2024;24(1):937. doi: 10.1186/s12909-024-05900-6
14. Ahmed N, Sarfaraz S, Khursheed I, Khurshid Z. Introduction of near-peer mentorship program in an undergraduate medical college in Pakistan: a pilot study. Educ Res Int. 2023;2023:7669033. doi: 10.1155/2023/7669033
15. Rehman R, Ali TS, Khalid S, Ali R. The ongoing evolution of mentorship: advancing the formal mentorship program at AKUSONAM. Pak J Med Sci. 2024;40(3):1050-1056. doi: 10.12669/pjms.40.3.8212
16. Pozzulo J, Stone A, Vettese A. Designing a graduate-level peer-wellness mentoring course. Health Educ J. 2025;84(3):00178969251334905. doi: 10.1177/00178969251334905
17. Lim JJ, Verbo VA, Khandelwal G, Nograles NH. Peer mentoring as a community of practice in medical education. Clin Teach. 2025;22(6):e70238. doi: 10.1111/tct.70238
18. Toreid HE, Sjolie BH, Bjorbaek SA, Kohler M. Digital peer mentoring in higher education: results from a qualitative study involving digital part-time nursing students. Heliyon. 2025;11(4):e42454. doi: 10.1016/j.heliyon.2025.e42454
19. Cho M, Lee YS. Voluntary peer-mentoring program for undergraduate medical students: exploring the experiences of mentors and mentees. Korean J Med Educ. 2021;33(3):175-190. doi: 10.3946/kjme.2021.198
20. Oddone Paolucci E, Jacobsen M, Nowell L, Freeman G, Lorenzetti L, Clancy T, et al. An exploration of graduate student peer mentorship, social connectedness and well-being across four disciplines of study. Stud Grad Postdr Educ. 2021;12(1):73-88. doi: 10.1108/SGPE-07-2020-0049
21. Rehman R, Arooj M, Ali R, Ali TS, Javed K, Chaudhry S. Building stronger foundations: exploring a collaborative faculty mentoring workshop for in-depth growth. BMC Med Educ. 2024;24(1):797. doi: 10.1186/s12909-024-05775

Authors Contribution:

AS: Conducted the research and was involved in data collection.
FA: Contributed to drafting and critical revision of the manuscript.
RA: Performed data analysis and contributed to interpretation of the results.
RR: Conceived and designed the study and provided overall supervision.
All authors reviewed and approved the final manuscript and agreed to be accountable for all aspects of the work.