

SHORT COMMUNICATION

A Mixed-Methods Study of the Assembly and Analysis of a Near-Peer Mentorship Program for First-Year Medical Students - Initiation, Challenges, and Successes

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ABSTRACT

Objective: This study aimed to establish and evaluate the impact of a student-led near-peer mentorship program on the academic performance, social adjustment, and mental well-being of first-year medical students, and to assess the professional development of the mentors involved.

Study Design: A mixed-methods study design.

Place and Duration of Study: The study was conducted at Department of Medical Education, Shifa College of Medicine, Islamabad, Pakistan, from August 2022 to August 2023.

Methods: The RISE (Raise, Inspire, Support, Empower) program consisted of five founding members from second and third years, one faculty advisor, 18 advisors, and 30 mentors selected based on academic performance, empathy, and mentorship aptitude. Mentor performance was periodically evaluated through structured questionnaires. Mentee satisfaction was assessed through informal, recorded sessions, campus-wide consensus, and professor evaluations.

Results: Most mentees (89.8%) reported that the program met their expectations. Additionally, 93.2% felt mentors provided effective guidance, and 94.3% expressed interest in maintaining long-term mentee-mentor relationships. Multiple focus group sessions with the mentors and mentees demonstrated overwhelmingly positive perceptions of the RISE mentorship program.

Conclusion: The findings demonstrate an overall positive response, suggesting that near-peer mentorship programs are feasible and may serve as a foundation for institutionalized mentorship initiatives in medical schools and in Pakistan overall.

Keywords: Educational Measurement, Education, Medical, Mentors, Peer Group, Social Support, Students.

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Introduction

Due to the demanding academic burden and

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competition, medical students frequently feel high levels of stress.¹ There are several well-documented stressors that many students experience in their learning contexts, which serve as the background for building mentorship programs in medical education. The term "mentor" refers to a person who acts as a helpful hand and advisor for others. It has a significant and favorable impact on medical students' academic, professional, and personal growth by enhancing their capacity to form enduring connections, advance their careers, and engage in self-directed learning.² Near-peer mentoring is a process where a mentor is close to the social, professional, or age level of the mentee. They are better able to interact with and understand students'

struggles. By mentoring, a mentor and mentee can develop a positive, helpful relationship. Peer mentorship has been shown to offer many advantages, with mentees exhibiting better overall well-being. In addition, faculty involvement has aided the sustainability of mentorship programs, helping meet students' needs for community, support, and professional development.³ Recent literature reveals the advantages of incorporating an integrated mentorship program when important factors such as participant training and support, timely introduction of the program, standardization of the outline of mentor–mentee meetings, and a proper system of scheduling, to name a few.⁴ Sustainable mentorship programs empower students and sustain the standards of social justice and health equity through an approach that nurtures professional growth and fosters an environment of inclusivity that facilitates a smoother transition for first-year students to shift to higher medical education, as compared to the absence of such programs.⁵ During the onset of the COVID-19 pandemic, medical students were academically and mentally susceptible to more stressors than usual; however, they managed to adapt to online methods for support, which have proven to be as effective as confrontational methods. This provides a solid foundation for measures to ensure program sustainability in the event of future outbreaks.⁶ Mentorship programs are essential for guiding future doctors in the early stages of their medical careers, yet they are not widely implemented in Pakistani medical schools. Hence, we decided to introduce a mentorship program in our medical college, Shifa College of Medicine.

Methods

The study was conducted at Department of Medical Education, Shifa College of Medicine, Islamabad, Pakistan, from August 2022 to August 2023. RISE (Raise, Inspire, Support, Empower) is a near-peer mentorship program established by students in the year 2020-2021. It is currently active and functioning in its sixth term in 2026. It was started as a program for first-year medical students to help them adjust and assimilate into the new medical school environment. It has now advanced into the dentistry school.

The Institutional Review Board (IRB) and Ethics

Committee (EC) of the college provided ethical approval for research, vide IRB letter no: 0192-22, dated: 18th July 2022. It is in accordance with the ICH and GCP guidelines. Informed consent was obtained from all participants to use their responses anonymously for research purposes.

A novel hierarchy was established in the program: 5 chief council members from the then second- and third-year students (the principal founders of the program), 18 advisors, 1 faculty advisor, and 30 mentors. The highest order was the chief council, which selected advisors for advising committees: Positive Reinforcement, Academics, Evaluation and Conduct, Recruitment and Matching, and Management. The advisors helped mentors carry out their duties (Figure 1).

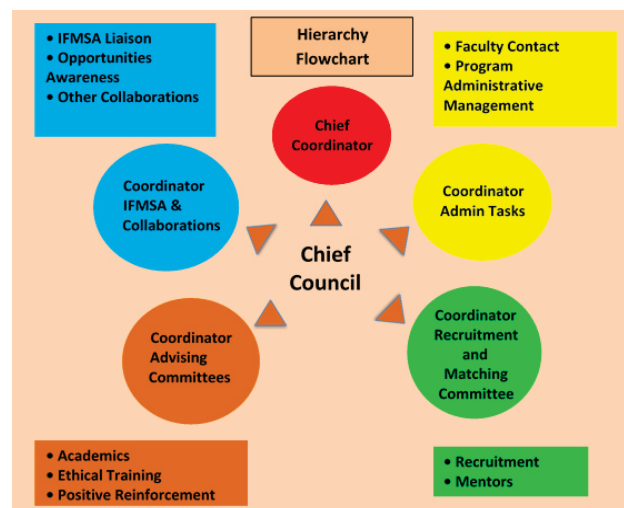


Fig.1. Hierarchy of the RISE program

The Recruitment and Matching Advising Committee, chief council, and faculty advisor selected mentors from the second or third year of medical school. We held in-depth interviews, and potential applicants filled out questionnaires in the form of Google Documents that asked them for their reasons for joining the program, scientifically backed psychological testing, and what they would do in different scenarios where mentees would approach them. We selected mentors not merely on academics but, more importantly, based on their personalities and empathetic characteristics. Each mentor was assessed by the faculty advisor and deliberately paired with another mentor to further fool-proof the selection and balance of the team.

After the selection of mentors was complete, we

assigned them to the entire class of 100 first-year mentees in groups of 6-7 mentees per group. Although participants were given the choice to participate, it was seen that all first-years eventually decided to be a part of the mentorship group, and so all were included in our study. After an ice-breaking session with all members, we gave mentors and mentees the freedom to conduct their own group-based mentoring sessions, at least two per month, as well as individual, tailored sessions when needed. Advising committee members for evaluation and conduct regulated and proctored the initial sessions; subsequent sessions were unmonitored. The founding members and faculty advisor actively ensured maintenance of smooth operations, dealt with grievances, and held regular online meetings with mentees directly- this tactic proved to be more effective in fixing problems quickly. These sessions ranged from study-with-me sessions and introductions to new modules being taught at our college to IPE (Integrated Practical Examination) guidance, study tactics, and exam-giving techniques. Apart from academic sessions, our mentors conducted general lunches between mentor groups, online games, and fun activities, both online during the COVID-19 lockdown and in person when COVID-19 restrictions allowed.

To ensure smooth and safe communication throughout the program, our Advising Committee for Evaluation and Conduct regularly compiled feedback through questionnaires from mentors, mentees, and other Advising Committee members. They kept this information confidential and shared it only with the chief counsel on a need-to-know basis. We maintained regular contact with the faculty advisor via email and in-person or online meetings, depending on the situation.

A mixed-methods study design was employed, incorporating quantitative data collection Likert-scale questionnaires shared via Google Forms on session quality and open-ended questions on further improvements and suggestions, as well as qualitative data collection through focus group discussions.

Results

Overall, quantitative and qualitative feedback on the novel program was positive. We asked mentees to complete an End-of-Term feedback form at the end of the first term of RISE. 88 mentees had responded.

77 mentees (87.5%) felt that they had sufficient contact with their mentors. Almost everyone (96.6%, 85 mentees) found their mentors easy to contact for guidance

The majority (93.2%, 82 mentees) felt that both of their mentors were effective guides, and 83 mentees (94.3%) wished to maintain contact with their respective mentors in the future. We asked mentees whether they would want to become a mentor or a core team member of RISE in the future, as elaborated in Figure 1.

Twenty-four mentees (27.3%) said neither, 23 mentees (26.1%) wished to become a mentor, followed by 22 mentees (25.0%) who aspired to be both.

About 81 mentees (92.0%) found the program beneficial for academics, and 67 mentees (76.1%) thought they performed better because they were part of it, compared with if they were not.

Most mentees (89.8%, 79 mentees) found that RISE met their expectations, while 33 mentees (37.4%) suggested some changes. However, 81 mentees (92.0%) had no major concerns. On a scale from 1-5, 42 mentees (47.7%) rated the program 5/5, as specified (Figure 2). Finding the program academically beneficial was associated with mentors being easily contacted ($P<0.01$) and both mentors being effective ($P=0.003$).

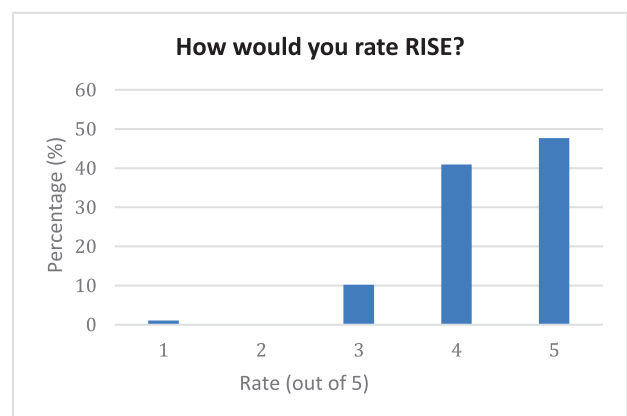


Fig 2: Pie-chart depicting data from the question: 1.1% mentees rated RISE as 1/5, 0% mentees chose 2/5, 10.2% chose 3/5, 40.9% chose 4/5, and 47.7% chose 5/5

The mentors and mentees were periodically asked in focus groups, both formally and informally, about their experiences; most of the positive changes in their performance as students and in making new friends. Their stress levels were also monitored

informally, with mentors regularly taking feedback from their mentee groups.

Mentors considered the program valuable for easing first-year students' transition into medical school while simultaneously fostering their own leadership, communication, and reflective learning skills. Many reflected on their own experiences of entering university without adequate senior guidance, especially during the COVID-19 pandemic. Several mentors noted that these relationships extended beyond the formal mentorship period, with mentees continuing to seek advice on academic and personal matters. The principal barriers to effective mentoring arose from the COVID-19 pandemic and the reliance on online delivery, which hindered communication, attendance, and relationship-building. Mentors recommended increasing program structure through scheduled sessions, improved accountability, enhanced mentee engagement strategies, and continued expansion of mentorship to include research and postgraduate career guidance. Overall, mentors strongly supported the continuation and further development of the RISE program.

An interesting recent development we started was the branching off of RISE to a different institution, Shifa College of Dentistry. The results there need to be evaluated and have not been introduced in this study. However, the same metric was used, with a slight adjustment for the dentistry side. Further medical colleges can use this rubric to initiate a similar program with certain changes catered to their specific colleges.

Discussion

The purpose of this study was to investigate the actual implementation of the peer mentoring program, as well as the satisfaction, perceived outcomes, advantages, mentors' and mentees' experiences, and suggestions for future mentoring programs. When evaluating the survey findings, participants expressed general satisfaction with the peer mentorship program, particularly regarding the academic, emotional, and social benefits they gained.

Interestingly, one study conducted at the University of California, San Francisco, examined how students informally formed their own mentors and identified barriers to finding mentors.⁷ Furthermore, to

extrapolate this to postgraduate education, a study conducted to assess the impact of peer mentorship in Radiation Oncology training programs in Canada showed that informal interactions were more impactful.⁸ In this study, regarding the motivations and goals that led mentors and mentees to participate in the peer mentoring program, mentors stated that they did so to encourage first-year medical students and to foster personal growth by enhancing their sense of responsibility.

This was consistent with a survey conducted at the University of Wollongong, Australia, in which academic improvement was a major motivator for participation in peer mentorship programs during a medical undergraduate degree.⁹

Both mentees and mentors emphasized the advantages of the peer mentoring program. For mentees, academic support, improved lifestyle patterns, a stronger sense of dedication, relief from emotional stress, and more varied conversations with others were among the positive outcomes. Mentors indicated that mentees had an emotional connection with them and a greater feeling of responsibility.

Surveys conducted in Vietnam and Australia also showed that mentorship increased confidence among other benefits.^{10,11}

The results of the focus group discussion in this study indicate motivation, autonomy, and responsibility, as well as emotional support, interpersonal ties, and numerous study aid approaches as key themes regarding mentor-mentee perspectives. It has been demonstrated that mentorship programs enable first-year medical school students, who are going through a transition period, to feel less stressed and give them a network of support to help them deal with challenges and adapt to new situations.¹¹

It was a valuable program that worked well in instances when schools did not mandate more regular, close relationships and interpersonal contact amongst students. Such career guidance should already be a regular part of medical school, as it relates to more career-related success.¹²

A study conducted at Agha Khan University, Karachi, regarding postgraduate residents also concluded that peer mentorship between junior and senior residents can promote growth at both the personal and professional levels.¹³

Interestingly, a cohort study conducted at Second Affiliated Hospital in China incorporated the use of AI tools in peer mentoring, which augmented orthopedic clinical education across various fields, such as knowledge acquisition, student engagement, and OSCE performance, which could be incorporated in peer mentorship programs in Pakistan.¹⁴

An important point to highlight is that medical education is a never-ending process. The mentors themselves can also be mentees and benefit from the mentorship process. A study published in 2025 highlighted this aspect of dual roles.^{15,16}

Limitations of this study include the unorthodox nature of this program, at this college and in Pakistan in general. Few other studies have developed a rating metric; hence, our study was built on international frameworks, which always require adjustment to local demographics. Furthermore, being conducted at a single private institution, in comparison to multiple private and government institutions, limits the study's generalizability. In addition, the data were collected and analyzed by members of the chief council as part of its regular evaluation process, which may introduce researcher bias.

Improvements to the peer mentoring program can be made by encouraging voluntary participation from mentees and mentors, strengthening pre-education for program participants, and providing supplementary materials, such as the program's implementation guidelines or rulebooks. Furthermore, improvement in conceptual organization, with a greater focus on aligning the program's format with international practices, encompassing the social and psychological domains more relevant to our population of medical students, with goals that are more measurable and practical. This is based on the proposed framework given by Abdelmannan D et al.¹⁷

Conclusion

This study demonstrates that a structured near-peer mentorship program is feasible and well-received in a private medical college setting. The program was associated with high levels of mentee satisfaction and perceived improvements in academic performance, emotional support, and social integration. Effective mentor accessibility and guidance were significantly linked to positive academic outcomes. The strong inclination of

mentees toward sustained mentor relationships and future participation reflects the program's potential for continuity. These findings suggest that near-peer mentorship programs can play a vital role in supporting first-year medical students and may serve as a framework for institutionalizing mentorship initiatives in medical schools across Pakistan.

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Conflict of Interest: The authors declare no conflict of interest

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Author Contributions

AA: Conception, design of the work, and approval for final submission

AL: Validation of data, interpretation, write-up of results, and approval for final submission

HA: Manuscript writing for methodology design, investigation, and approval for final submission

MAA: Data acquisition, curation, statistical analysis, and approval for final submission

NS: Revising, editing, supervising for intellectual content, and approval for final submission

IBH: Writing the original draft, proofreading, and approval for final submission

MAR: Validation of data, interpretation, write-up of results, and approval for final submission

AYRK: Data acquisition, curation, statistical analysis, and approval for final submission

NS is the nominated guarantor and takes full responsibility for the overall content and integrity of the work