

UNLOCKING POTENTIAL; EXPLORING THE PERCEPTIONS OF STUDENTS AND FACULTY REGARDING MEDICAL MENTORSHIP PROGRAM

Sara Jadoon, Naheed Mahsood, Kabsha Zain, Bushra Hashimi, Spogmay Wali Khan, Maham Iftikhar

Department of Medical Education, Khyber Girls Medical College, Peshawar - Pakistan

ABSTRACT

Objective: Adjusting to the demanding realm of medicine can be daunting. Medical students frequently seek guidance from senior professionals who have undergone analogous experiences and can relate to their difficulties. This highlights the imperative for a structured mentorship program in medical schools. Nonetheless, there is a paucity of literature regarding medical mentoring in the medical colleges in Khyber Pakhtunkhwa. Our study aims to explore the faculty's and students' perceptions of the Medical Mentoring Program at Khyber Girls Medical College.

Material and Methods: A qualitative study (phenomenology) was conducted at Khyber Girls Medical College and Hayatabad Medical Complex, Peshawar, Pakistan. Depending on the saturation of data, five Focus Group Discussions (FGDs) were conducted with students, and six In-depth Interviews (FGIs) were conducted with faculty. The sampling technique was purposive sampling. The FGDs and interviews were audio recorded, transcribed verbatim, analyzed, and themes identified.

Results: Four themes were developed from FGDs: evolving into a better version of oneself, opportunities, progressing together, and journeying toward excellence. Three themes were developed from IDIs: strengthening each other, obstacles in the way, and refining the mentorship experience.

Conclusion: An effective mentorship program is crucial for fostering bonding between students and teachers, and hence for the self-improvement of mentees.

Keywords: Mentorship, Mentors, Students, Medical College

This article may be cited as: Jadoon S, Mahsood N, Zain K, Hashimi B, Khan SW, Iftikhar M. Unlocking Potential; Exploring The Perceptions Of Students And Faculty Regarding Medical Mentorship Program. J Med Sci 2025 January - March;33(1):12-20

INTRODUCTION

Adjusting to a demanding field like medicine is an extremely hard battle. Preparing oneself to face the challenges and help in making the right decisions at the right time, students seek help from senior professionals who have gone through the same process and hence can understand their struggle. Reaching out to a trustworthy senior who is willing to spare time for a student is yet another endeavor. A formal Mentorship Program, therefore, is imperative in any medical college. The Standing Committee on Postgraduate Medical and Dental Education (SCOPME) has defined mentorship as "a process where by an experienced, highly regarded, empathic person (the

mentor) guides another individual (the mentee) in the development and examination of their ideas, learning, and personal and professional development."¹

Mentorship Programs help students in several ways ranging from adjusting to a new environment to choosing a specialty after medical school. Students who had good terms with a mentor were seen to spend more productive time during their undergraduate years by actively taking part in research and early career choices.² On the other hand, because of the formal Mentoring Program, faculty becomes bound to make time for the students-which they find burdensome.³

Therefore, considering the faculty's perception and training them increases the effectiveness of the program.⁴ From our search, the literature was deficient on Medical Mentoring in medical colleges of Khyber Pakhtunkhwa. Therefore, we planned this study to explore the perceptions of both the teachers and students regarding the medical mentoring program to help the administration of medical colleges in developing an effective model of medical mentoring.

Correspondence

Dr. Naheed Mahsood

Associate Professor

Department of Medical Education, Khyber Girls Medical College, Peshawar - Pakistan

Cell: +92-345-9405286

Email: drnaheed1@yahoo.com

Date Received: 15/12/2023

Date Revised: 04/12/2024

Date Accepted: 29/01/2025

The objective of this study was to explore the faculty's and student's perceptions of the Medical Mentoring Program at Khyber Girls Medical College.

MATERIAL AND METHODS

A qualitative study was conducted at a public sector medical college in Khyber Pakhtunkhwa, and it took three months duration. The phenomenology approach was chosen to explore the subjective experience of participants and Five FGDs with students and six IDIs with faculty were conducted depending on the saturation of data. One FGD was conducted with students from each professional year. The number of participants in each FGD was a minimum of five and a maximum of ten. Depending on the saturation of data. two faculty members were interviewed from spiral I of the curriculum (1st and 2nd-year MBBS), 2 faculty members from spiral II (3rd and 4th-year MBBS), and 2 faculty members from spiral III (final year MBBS). The sampling technique was purposive sampling. The inclusion criterion was all students enrolled in each professional year of a public sector medical school and all faculty members in basic and clinical sciences. The exclusion criteria were those students and faculty members who were not willing to participate or were absent on the day of data collection.

After ethical approval from the institutional ethical board (Ethical Review Board of Hayatabad Medical Complex, Approval No # 1414, Dated 20.6.23), consent was taken from the study participants. Participation in the interviews and group discussions was welcomed by all full-time faculty members and students. The discussion was generated about students' and faculty's perceptions of the purpose, process, and demands of the medical mentorship program.

Before the study's implementation, guiding questions were extracted from the literature, verified by three medical education department specialists, and piloted.

The guiding questions for mentees were:

1. Have you ever heard about the mentorship program? (Probe: thoughts on mentorship program)
2. What positive impact will an effective medical mentorship program have on different aspects of your life?
3. How do you think this program will shape your career or help you with setting career goals?
4. How do you think this mentorship program will help you with your personal and academic growth?
5. What kind of issues are you facing in medical school, and how do you think this program will benefit

you?

6. How do you think the medical mentorship program can lead to collaboration between students and faculty and cause them to work together in different areas (such as research projects)?

7. How do you think the medical mentorship program can influence the overall environment of our institution?

8. What would you suggest for making this program beneficial for both the mentors and mentees?

.The guiding questions for mentors were:

1. What are your thoughts on a mentorship program for undergraduate medical students?
2. Do you have any previous experience in a medical mentoring program?
3. What factors do you feel influence the development of mentoring relationships?
4. What is your motivation for participating in the medical mentorship program?
5. What do you think what challenges you will face during mentorship programs?
6. What positive impacts will an effective medical mentorship program have on different aspects of students' lives?
7. How do you think the medical mentorship program can lead to collaboration between students and faculty and cause them to work together in different areas, such as research projects?
8. How do you think the medical mentorship program can influence the overall environment of our institution?
9. What would you suggest for making this program beneficial for both the mentors and mentees?

Data was recorded verbatim by using a Dictaphone and a sound recorder. Transcription was done through transcriber software. All the responses were anonymous and kept private. The moderator for each IDI and focus group was the same. Following each session, the moderator and assistant moderator went over every transcript and classified the information into several sections. Using an open coding technique, the text was analyzed for important indigenous terms and keywords in context. Co-authors were then shown these codes and subthemes, and any disagreements were resolved by consensus. Any topic that required more explanation served as a road-

map for the following meeting. This procedure produced themes after each session, which were subsequently discussed by each author until a consensus was achieved on themes. Data analysis and collection were carried out concurrently. The participants were given copies of the final report to verify.

RESULTS

Initially, open coding was used for analysis. Axial coding was used for the second coding cycle to determine the correlations. The six stages of thematic analysis were familiarizing oneself with the data, creating preliminary codes, looking for themes within codes, evaluating themes, defining, and labeling themes, and creating the final report. The goal of the process was to create meaningful patterns through coding.

The outcomes of six IDIs and five FGDs were compiled using theme categorizations.

Regarding the theme of "Evolving into a better version of oneself," all participants spontaneously agreed that the mentorship program is essential to the personal and professional development of medical students, and it enhances their confidence, time management skills, communication skills, and strengths.

Concerning the theme "Opportunities," nearly every participant expressed the belief that the mentorship program offers them research opportunities, facilitates their connection with mentors from many disciplines, and increases their chances of networking. They can exchange knowledge and receive career coaching through mentoring programs.

Regarding the theme "Progressing together," most participants felt that mentorship programs provide them with direction in both their professional and academic lives. They gain the opportunity to learn useful information as the mentor shares their own life experiences with them. Teachers and students can form better bonds through mentorship programs, and they can engage in a variety of collaborative activities with their mentors that benefit both parties. It's essentially a mutual support system for both mentors and mentees.

When it comes to the theme "Journey towards excellence" it was recommended by many participants that the mentor should have patience and good listening skills. To build a relationship and trust between mentor and mentee, a mentor's positive behavior is crucial. Mutual pleasure and understanding should exist between the two sides. The choice of mentors ought to be made with input from the mentees.

The theme "Strengthening each other" metaphorically states that a medical mentoring program is crucial for students' career counseling, academic and personal development, and improvement of their communication skills. The mentors provide the right guidance, fostering an environment where helping each other is encouraged. This collaborative approach extends beyond academics, creating opportunities for research and instilling a culture of respect. Through these interactions, we aim to build confidence in our students while working together in collaboration towards their professional and personal development.

The theme "Obstacles in the way" metaphorically describes the challenges the mentors face during the mentoring session with their mentees. Challenges in medical mentorship programs for students can take the form of time management issues, making it difficult for them to handle their academic obligations. A lack of facilities and resources can make learning difficult and present obstacles for both mentors and mentees. Another challenge is controlling students' overly friendly conduct, which necessitates mentors setting firm limits to preserve a formal and productive mentoring environment.

In terms of the theme "Refining mentorship experience," the mentors gave suggestions for improvement of the mentoring program. To enhance medical mentoring programs for students, the mentors suggested that training programs for mentors can provide them with the knowledge and abilities they need to be successful in their positions as mentors. Many mentors suggested establishing avenues for both in-person and virtual connections that will enable more adaptable and easily accessible mentor-student relationships. In the mentoring relationship, this can improve involvement and communication. Mentors in all six IDIs recommended establishing a system of incentives and acknowledgment for mentors who exhibit extraordinary commitment and efficacy in their capacities. Mentors might be inspired to keep giving students the important support they need by acknowledging and valuing their contributions.

DISCUSSIONS

The medical mentoring program is a structured initiative designed to foster the professional and personal development of aspiring medical students. The participants in this study believed that a medical mentoring program would bring out the best in them. It may boost their confidence, such as not being afraid to express their feelings, and enhance their communication skills, whether with patients or colleagues. This was in line with the article by Parya and Saeed in which they mentioned that mentors

Table No 1: Codes and Representative Quotes Identified By Mentees in FGDs

	Representative Quotes from interviews	Codes used by the participants	Number of times the code is used by the participant in FGDs
1	"A mentor eases our life by guiding us so that we do not face the difficulties they did or the good outcomes we produce that they could not." (Participant 1 from FGD 1)	Offering guidance	+20+26+13+30 118=29
2	"A mentor can make a person believe in herself, her skills, and her capabilities and hence become a better and a confident version of herself." (Participant 3 from FGD 2)	Enhanced personal growth	14=2+2+2+2+6
3	"Mentors will provide guidance and support at every step; this will boost confidence within us and make us capable of facing any challenges." (Participant 3 from FGD 4)	Building confidence	24=9+4+4+1+6
4	"I don't know how to socially interact as I suffer from social anxiety and it's difficult for me to interact. Mentors can train us through patient engagement and teach us how to handle different personalities." (Participant 4 from FGD 2)	Improvement of communication skills	18=3+4+2+7+2
5	"Our mentors will possess expertise in specific fields, and they will not only guide us about their respective areas of specialization but also share their overall experiences. This guidance will contribute to a clearer understanding of our career paths." (Participant 1 from FGD 5)	Career counseling	32=8+5+8+4+7
6	"The experiences of mentors can serve as a lighthouse for us." (Participant 4 from FGD 3)	Sharing of experiences	25=6+3+6+3+7
7	"Their motivation is important for our personal and academic progress. When we believe in ourselves, we can perform tasks more effectively, which positively influences our overall growth." (Participant from FGD1)	motivation	16=2+4+1+6+3
8	"This will provide us with opportunities to network, gain recognition, and potentially collaborate with individuals from diverse academic backgrounds and most importantly we get research opportunities." (Participant 4 from FGD 3)	Provision of research and networking Opportunities	32=9+9+4+8+2
9	"Medical mentorship programs will produce a friendly atmosphere too and will facilitate better communication with mentors." (Participant 3 from FGD 2)	Bonding between students and teachers	22=5+5+5+1+6
10	"We want our mentors to make us part of any curricular activity that they know about, for example, research, career counseling sessions, and any knowledge-enhancing activity." (Participant 2 from FGD 3)	Collaborative activities	21=9+4+4+0+2
11	As students receive support from their mentors, they will be motivated and show greater enthusiasm towards their profession. (Participant 3 from FGD 1)	Support system	22=0+2+1+3+16
13	"Mentors will help us cope with different challenges that we face in our professional institute; they can give us advice on career decisions." (Participant 4 from FGD 4)	Valuable advice	6=0+0+5+1+0
14	"After guidance in every aspect of our medical field, the output will be doubled, as a result, the institute environment will comprise socially and academically groomed individuals." (Participant 2 from FGD 2)	Grooming as professionals	7=1+2+2+2+0
15	"They correct our mistakes and this way there is considerable improvement in every little or big thing we do." (Participant 1 from FGD 3)	Improving weaknesses and strengths	21=4+4+5+1+7
16	"Mentors can Help us in better networking and clarity of mind and reduce the energy utilized in making decisions." (Participant 4 from FGD 5)	Making better choices	7=3+0+1+1+2
17	"My mentor will help me to make effective and smart study plans and hence this will save me time and reduce the stress levels that I will face while studying if I don't have a mentor." (Participant 3 from FGD 4)	Effective time management	20=3+2+5+6+4
18	"The knowledge and skills I acquire through the program will not only benefit me but also enable me to share and teach them to my friends. They will in turn pass on this knowledge to others, thus producing a positive impact throughout the institution." (Participant 4 from FGD 1)	Exchange of knowledge	18=3+3+6+5+1
19	"This mentorship program emphasizes practical learning, which will prove beneficial when we conduct our research. It will greatly assist us in developing the necessary skills and knowledge for independent research." (Participant 1 from FGD1)	Efficient learning	20=5+0+3+9+3
20	"Mentors should have good listening skills and patience so that they can understand our learning issues and they shouldn't harshly behave with us." (Participant 5 from FGD 2)	good listening skills of mentors	22 =3+2+5+8+4
21	"Mentors should promote a friendly and approachable environment for us and should not discriminate among mentees." (Participant 3 from FGD 4)	Behavior of mentors	21 =4+2+5+7+3

22	"The administration should ensure mutual satisfaction regarding the mentorship program from both mentors and mentees." (Participant 4 from FGD 3)	Mutual satisfaction of both mentors and mentee	22 =5+2+4+8+4
23	"Mentees should be given choices for the selection of mentors or at least the administration should ensure compatible pairing." (Participant 2 from FGD 5)	Selection of mentors	23 =3+4+6+6+4

Table No 2: Codes and Representative Quotes Identified By Mentors in IDIs

	Representative quote	Codes used	No. of times the code is used by the participant
1	"The students will also get an insight about the different fields of medicine from their mentors, and this will further help the students in the selection of their career choices" (IDI 1)	Career counseling	12
2	"Students will get to learn from the life experiences of the teachers which will be very beneficial for the personal growth of students especially helping our students how to deal with different circumstances being a female" (IDI 3)	Personal growth	8
3	"Professional growth & academic improvement would happen because of mentoring" (IDI 2)	Improvement	6
4	"Teaching is not just knowledge. We will try to concentrate on not only knowledge but also other skills and attitudes" (IDI 6)	Skill development	7
5	"It will help both the students and mentors because it will be a two-way communication and exchange of knowledge" (IDI 5)	Promoting communication	14
6	"Mentor will provide guidance to the students for effective study and will also guide students in further selection of the different medical fields for their careers in future" (IDI 2)	Providing right guidance	12
7	"If you have a good relationship with students of today they give you very good social contacts for the future, good mentees can help mentors" (IDI 1)	Helping each other	15
8	"Good mentees can help mentors in medical camps in research and co-curricular activities" (IDI 4)	Research opportunities	16
9	"The students and teachers by having sessions with each other will develop respect for each other and develop good relations with each other and get to know them personally" (IDI 3)	Showing respect	16
10	"Mentoring program will lead to personal growth of the students by boosting their confidence levels" (IDI 2)	Fostering confidence	11
11	"Fostering good relationship, collaboration between faculty and students it can very effectively improve the environment of the college" (IDI 1)	Working together in collaboration	10
12	Time management is the most challenging task for faculty, especially clinical faculty face lots of issues in taking time for mentoring sessions out of their busy clinical schedules. (IDI 2)	Time management	12
13	The mentoring program needs resources, and the administration of the medical schools must provide all required resources and facilities for the smooth conduction of mentoring sessions. (IDI 5)	Lack of resources/ facilities	8
14	Sometimes students become overfriendly with mentors and demand extra favors, making mentors very uncomfortable. (IDI 6)	Over-friendly behavior of students	6
15	The mentors should be given proper training, workshops, and refresher courses so they can mentor better. (IDI 4)	Training of mentors	14
16	There should be options for physical and online mentoring sessions so that it becomes more feasible and convenient for both mentors and mentees. (IDI 3)	Opportunities for physical and online communications	9
17	The mentors should be awarded for mentoring services and should be acknowledged in promotion as sparing time for mentoring sessions is difficult for faculty, especially out of busy clinical schedules. (IDI 1)	Rewards for mentors	10

Table No 3: Subthemes and Themes derived from FGDs

S/No	Themes	Subthemes	Codes
1	Evolving into a better version of oneself	Personal and professional growth	Grooming as professionals Building confidence Enhanced personal growth. Effective time management Improvement of communication skills Improving weaknesses and enhancing strength
2	Opportunities	Learning and research opportunities	Provision of research and networking Opportunities Career counselling Exchange of knowledge Efficient learning
3	Progressing together	Mutual benefits for both mentors and mentees	Offering guidance Sharing of experience Motivation Bonding between students and teachers Collaborative activities Support system Making better choices
4	Journey towards excellence	Suggestions for mentors and administration	Good listening skills of mentors Behavior of mentors Mutual satisfaction of both mentors and mentee Selection of mentors

Table No 4: Categories or Subthemes and Themes Derived from IDIs

S/No	Themes	Subthemes	Codes
1	Strengthening each other	Benefits/ Rewards for mentees and mentors	Career counseling Personal growth Improvement Skill development Promoting communication Providing right guidance Helping each other Research opportunities Showing respect Fostering confidence Working together in collaboration
2	Obstacles in the way	Challenges	Time management Lack of resources/facilities Over-friendly behavior of students
3	Refining mentorship experience	Suggestions	Training of mentors Opportunities for physical and online communications Rewards for mentors

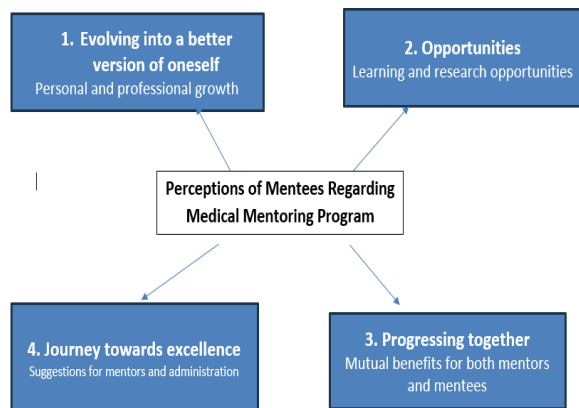


Figure 1: Thematic presentation of Perceptions of Mentees Regarding Medical Mentoring Program

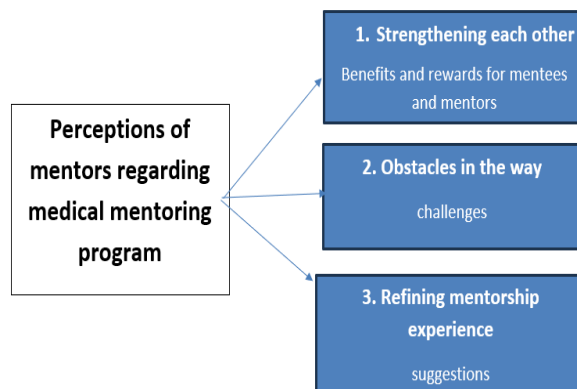


Figure 2: Thematic presentation of Perceptions of Mentors Regarding Medical Mentoring Program

help their mentees improve their social skills, in particular, communication skills and bring them a sense of empathy.⁵ These programs also groom their personalities and improve their abilities to deal with obstacles in their personal and professional lives. Aside from grooming and development, one factor that the participants emphasized was self-improvement; they believed that a mentoring program may help them analyze themselves and make positive adjustments in their lives as doctors and students.

The findings of this study that medical students (mentees) believe that medical mentoring programs can provide different opportunities for them like skills development, career opportunities, and research opportunities are similar to the findings of a study conducted by [Nimmons et al.](#)⁶ The mentoring program will also help the students learn a lot from their mentors' personal and professional experiences. The mentoring program will also provide career counseling sessions to the students in which the mentors can guide the students in selecting the right career paths based on the skills and interests of the students.⁷

Based on our study, an ideal mentoring program is beneficial for the mentors, mentees, and the institution.⁸ According to students' perspectives, as are the findings of many previous studies, mentees will gain potential assistance in several ways including motivation, valuable advice, guidance on foreign licensing exams, and emotional support.⁹ As were the findings of [Kale et al.](#) most respondents anticipated a mentor's support in coping with stress, understanding their problems, and providing a professional perspective.¹⁰ As were the findings of the study conducted by [Nimmons et al.](#), mentors in return can get help in their research pursuits and other projects and hence professional development.¹¹ Consistent with the results of the study conducted by [Bickel et al.](#), by promoting an ideal environment for learning and growth, the institute will earn a reputation as a breeding ground for leaders and good organizers.¹²

Most of the students in our study agreed to the fact that a mentor should have good listening skills; the understanding of what the mentees are trying to convey by mentors is crucial for mentees to build good relationships with mentors. Most of the students recommended that a mentor should empathize with their mentees. As discussed in the literature, practicing empathy by mentors is a proven significant factor that can foster their relationship with the young mentees.¹³ The trust-building at the start of this professional relationship is the most important factor that will let this interaction progress smoothly and yield productive outcomes, as proved in a study conduct-

ed by [Ferda et al.](#), which showed that the important factor that can influence trust-building is the efforts given by mentors for the progress of this relationship.¹⁴ Identical to the results of the study by [William et al.](#), both one-to-one and group meetings at a mutually agreed time was recommended.¹⁵ Any form of discrimination among mentees has the potential to erode and compromise the integrity of the mentor-mentee relationship. The students proposed the idea of pairing mentees with mentors based on the criterion of compatibility. Furthermore, a recommendation was put forth to the college administration or program leaders that, before the designation of mentors for specific classes, an established mechanism for assessing both academic acumens and personal attributes should be implemented. This measure aims to ensure a sense of mutual contentment and compatibility as proposed in a study conducted for the resident mentoring program at Zurich University Hospital where one of the options for choosing mentors for mentees was to assign mentors based on the interest of mentees by the criterion set up by the program leaders.¹⁶

Mentorship programs provide academic support to the students and help them choose study methods that will improve their study performance. Mentors offer emotional support to mentees and guide them through diverse situations.¹⁷ The life experiences of mentors serve as valuable lessons that help mentees with their personal growth.¹⁸ Mentors support and guide mentees through their research endeavors and enhance opportunities for networking and sharing of knowledge.¹⁹ Mentors also benefit from the mentorship programs as it has a good impact on their CVs and help them in their advancement.²⁰ They also get a great sense of achievement when they witness their mentees succeed under their guidance.²¹

Challenges often arise when both mentors and mentees have high expectations of each other, and boundaries aren't set. Therefore, adequate training of the mentors and evaluation of the process is necessary.²² Conflicting schedules of mentors and mentees can also pose a challenge as it would be difficult for them to find a suitable time to arrange meetings.²³ The absence of a proper system to guide and structure the mentorship process and the unsupportive nature of the existing system can further strain the dynamics of mentorship.²⁴

The findings of this study reported that all the mentors recommend a training session for mentors. Similar studies also report training to be a prerequisite for rendering mentorship programs successful.²⁵

This study proposed that there should be monthly in-person and virtual meetings. Mentors must put out ef-

fort to win their mentees' trust and demonstrate their dedication to the mentoring program. It was found that willpower and dedication were crucial for developing a solid mentor-mentee connection.²⁶

The key limitation of this study was that it was conducted only in one center. Further multi-centric research would be needed to capture the perceptions from different institutes to explore the in-depth perceptions of both mentors and mentees.

CONCLUSION

The study underscores the significance of the Medical Mentoring Program in facilitating students' personal and professional development. Mentors are seen by students as essential advisors who provide insightful advice, inspiration, and assistance. The program fosters a collaborative environment by offering chances for learning, research, and career advice. Resource limitations and time management were noted as difficulties. Academics underscored the need for mentor training and a methodical mentorship procedure. To contribute to the overall excellence of medical education, the findings support the maintenance and enhancement of the Medical Mentoring Program, with a special focus on mentor qualifications and program enhancements. It is advised that more studies be conducted at various locations to gain a thorough grasp of perceptions in various contexts. Further research across multiple centers is recommended for a comprehensive understanding of perceptions in diverse settings.

REFERENCES

1. Frei E, Stamm M, Buddeberg-Fischer B. Mentoring programs for medical students - a review of the PubMed literature 2000-2008. *BMC Med Educ* 2010; 10: 32.
2. Aagaard EM, Hauer KE. A cross-sectional descriptive study of mentoring relationships formed by medical students. *J Gen Intern Med* 2003; 18: 298-302.
3. Abernethy AD. 1999. A mentoring program for underrepresented minority students at the University of Rochester School of Medicine. *Acad Med* 74:356-359
4. Connor MP, Bynoe AG, Redfern N, Pokora J, Clarke J. 2000. Developing senior doctors as mentors: A form of continuing professional development. Report of an initiative to develop a network of senior doctors as mentors: 1994-99. *Med Educ* 34:747-753.
5. Abdolalizadeh P, Pourhassan S, Gandomkar R, Heidari F, Sohrabpour AA. Dual peer mentoring program for undergraduate medical students: exploring the perceptions of mentors and mentees. *Med J Islam Repub Iran*. 2017;31:2.
6. Danielle Nimmons, Shaista Giny & Joe Rosenthal (2019) Medical student mentoring programs: current insights, *Advances in Medical Education and Practice*, 113-123, DOI: 10.2147/AMEPS154974
7. Frei E, Stamm M, Buddeberg-Fischer B. Mentoring programs for medical students--a review of the PubMed literature 2000-2008. *BMC Med Educ*. 2010 Apr 30;10:32. doi: 10.1186/1472-6920-10-32. PMID: 20433727; PMCID: PMC2881011.
8. Von Der Borch P, Dimitriadis K, Störmann S, Meinel FG, Moder S, Reincke M, et al. A Novel Large-scale Mentoring Program for Medical Students based on a Quantitative and Qualitative Needs Analysis. *GMS Zeitschrift für Medizinische Ausbildung*; 28(2):Doc26; ISSN 1860-3572 [Internet]. 2011 [cited 2023 Aug 12]; Available from: <http://www.egms.de/en/journals/zma/2011-28/zma000738.shtml>
9. Kalén S, Ponzer S, Silén C. The core of mentorship: medical students' experiences of one-to-one mentoring in a clinical environment. *Adv in Health Sci Educ*. 2012 Aug;17(3):389-401.
10. Kalén S, Stenfors-Hayes T, Hylin U, Larm MF, Hindbeck H, Ponzer S. Mentoring medical students during clinical courses: A way to enhance professional development. *Medical Teacher*. 2010 Aug;32(8):e315-21.
11. Nimmons D, Giny S, Rosenthal J. Medical student mentoring programs: current insights. *AMER*. 2019 Mar; Volume 10:113-23.
12. Bickel J, Rosenthal SL. Difficult Issues in Mentoring: Recommendations on Making the "Undiscussable" Discussable: *Academic Medicine*. 2011 Oct;86(10):1229-34.
13. Deane KL, Boat AA, Haddock SA, Henry KL, Zimmerman TS, Weiler LM. The comparative roles of mentor self-efficacy and empathy in fostering relationship quality with youth. *Journal of Youth and Adolescence*. 2022 Apr;51(4):805-19.
14. Erdem F, Aytemur JÖ. Mentoring—A relationship based on trust: Qualitative research. *Public Personnel Management*. 2008 Mar;37(1):55-65.
15. Williams LL. The Good-Enough Mentoring Relationship. *Academic Psychiatry*. 2004 Jun 1;28(2):111-5.
16. Buddeberg-Fischer B, Vetsch E, Mattanza G. Career support in medicine-experiences with a mentoring program for junior physicians at a university hospital. *GMS Psycho-Social Medicine*. 2004;1.
17. Abdolalizadeh P, Pourhassan S, Gandomkar R, Heidari F, Sohrabpour AA. Dual peer mentoring program for undergraduate medical students: exploring the perceptions of mentors and mentees. *Med J Islam Repub Iran*. 2017 Jan 11;31:2. doi: 10.18869/mjiri.31.2. PMID: 28638809; PMCID: PMC5473101.
18. Dalgaty F, Guthrie G, Walker H, Stirling K. The value of mentorship in medical education. *Clin Teach*. 2017

Apr;14(2):124-128. doi: 10.1111/tct.12510. Epub 2016 Feb 4. PMID: 26848105.

19. Nemeth, A., Chisty, A., Spagnoletti, C.L. et al. Exploring Mentoring Experiences, Perceptions, and Needs of General Internal Medicine Clinician Educators Navigating Academia: a Mixed-Methods Study. *J GEN INTERN MED* 36, 1229–1236 (2021).
20. Palepu A, Friedman RH, Barnett RC, Carr PL, Ash AS, Szalacha L, et al. Junior faculty members' mentoring relationships and their professional development in U.S. medical schools: *Academic Medicine*. 1998 Mar;73(3):318–23.
21. Garmel, G.M. (2004), Mentoring Medical Students in Academic Emergency Medicine. *Academic Emergency Medicine*, 11: 1351-1357.
22. *Academic Emergency Medicine* 2017; 24: 362–370
23. Straus SE, Johnson MO, Marquez C, Feldman MD. Characteristics of successful and failed mentoring relationships: a qualitative study across two academic health centers. *Acad Med*. 2013 Jan;88(1):82-9. doi: 10.1097/ACM.0b013e31827647a0. PMID: 23165266; PMCID: PMC3665769.
24. Musa, Adesola & Yakubu, A & Adefuye, B & Ezechi, Oliver & Article, Original & Yusuf, Aminu & Chukwu, Emelda & Njokanma, Azuka. (2022). Barriers and Solutions to Effective Mentorship in Health Research and Training Institutions in Nigeria: Mentors, Mentees, and Organizational Perspectives. *Nigerian Journal of Clinical Practice*. 25. 215-25. 10.4103/njcp.njcp_154_20.
25. Sinclair P, Fitzgerald JEF, McDermott FD, Derbyshire L, Shalhoub J. Mentoring during surgical training: Consensus recommendations for mentoring programmes from the Association of Surgeons in Training. *International Journal of Surgery*. 2014 Nov;12:S5–8.
26. Cho CS, Ramanan RA, Feldman MD. Defining the Ideal Qualities of Mentorship: A Qualitative Analysis of the Characteristics of Outstanding Mentors. *The American Journal of Medicine*. 2011 May;124(5):453–8. "

CONFLICT OF INTEREST: Authors declare no conflict of interest

GRANT SUPPORT AND FINANCIAL DISCLOSURE: NIL

Authors Contribution:

Following authors have made substantial contributions to the manuscript as under

Authors	Conceived & designed the analysis	Collected the data	Contributed data or analysis tools	Performed the analysis	Wrote the paper	Other contribution
Jadoon S	✓	✗	✓	✗	✓	✗
Mahsood N	✓	✓	✗	✓	✓	✗
Zain K	✗	✓	✗	✗	✓	✗
Hashimi B	✓	✓	✓	✗	✓	✓
Khan SW	✓	✓	✗	✓	✓	✗
Iftikhar M	✓	✓	✓	✗	✓	✓

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.

Ethical Approval:

This Manuscript was approved by the Ethical Review Board of Hayatabad Medical Complex, Vide No. HMC-QAD-F-00/1414.

Dated: 20 06 2023



This work is Licensed under a Creative Commons Attribution-(CC BY 4.0)