

Student Perceptions of Mentorship: A Comparative Study of Undergraduate Medical and Dental Students in Islamabad

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ABSTRACT

Objectives: This study aims to compare the perceptions, experiences, and expectations of mentorship among undergraduate medical and dental students in Pakistan

Methodology: A quantitative, comparative cross-sectional study was conducted at HBS Medical and Dental College, Islamabad from August and November 2023. Data was collected from 312 students using a validated, Likert-scale-based survey questionnaire. Purposive sampling was employed to select participants. The survey gathered demographic information and assessed students' perceptions of their mentors and the mentorship programs. Data were analyzed using SPSS version 26.

Results: The sample included a diverse group of students in terms of gender, program type, and level of education (mean age: 21.9 years; 50.3% male). While the majority of students felt respected and guided by their mentors, fewer perceived their mentors as role models. MBBS students rated their mentorship experiences more positively than BDS students, particularly in areas of mutual respect, comfort in sharing, and mentor understanding. Although both groups reported similar levels of stress and impact on professional reputation, BDS students showed a slightly greater reduction in mentoring-related stress. Overall, perceptions of mentorship varied among participants.

Conclusion: Mentorship programs tailored to the specific needs of students play a critical role in supporting their satisfaction, career development, and personal growth. Effective mentorship fosters a collaborative environment that benefits both mentors and mentees. A deeper understanding of mentorship dynamics can enhance the quality of these relationships, ultimately contributing to academic and professional success.

Key Words: Academics; Dental, Undergraduate; Education, Medical, Undergraduate; Mentors, Mentoring; Students, Dental; Students, Medical.

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Introduction

Mentoring is an informal but planned way to foster helpful communication between a mentor and mentee. Formal programs first emerged in American medical schools in the early 1990s, indicating structured student assistance, and were rooted in ancient Greece as a means of knowledge transfer and development.¹ In recent years, the importance of mentorship in medical education has gained considerable attention. Mentoring has been shown to benefit both mentors and mentees, fostering mutual growth, professional development, and academic success.^{2, 3} Guidance is crucial for medical and dental

students facing demanding environments. Stress and anxiety negatively impact their performance and well-being. Effective mentorship helps manage stress, set goals, and build confidence, fostering a better educational experience. Mentorship is a cost-effective and altruistic approach to personal and professional development, in which an experienced individual supports another in achieving their academic, career, and personal goals.⁴

It promotes academic achievement, career pathways, research, and personal development for students, teachers, and staff at medical and dental schools. Increased self-assurance, improved communication, greater opportunities, professional growth, and a cooperative

environment are among the advantages. When properly fostered, the mentor-mentee relationship—in which mentors provide guidance and act as role models—succeeds. Both parties' benefit from this dynamic: mentees give new perspectives that can encourage mentor introspection and development, and mentors offer support.⁵ On the flip side, reverse mentorship—where junior professionals guide their more senior colleagues—has emerged as a valuable tool in contemporary medical and academic settings.⁶ In environments where intergenerational teams collaborate, reverse mentoring can enhance unity, foster mutual learning, and ultimately improve team productivity.⁷

Mentoring, in any form, is fundamentally a two-way exchange that promotes open communication between mentor and mentee.⁸ It is no longer essential for mentors to always be in senior roles; rather, a more reciprocal and flexible model of mentorship is gaining ground—especially in medical education.⁵ While in clinical and research-based mentoring relationships, a higher level of expertise is still often expected from the mentor to ensure relevant guidance, the broader concept of mentorship now allows for more dynamic and egalitarian interactions.¹⁰ This can lead to guidance, support, fostering confidence, skill, and strong values.¹¹

Medical and dental students in Pakistan have distinct academic experiences and career paths that shape their mentorship perceptions. However, formal mentoring programs are frequently lacking in Pakistani Institutions. Limited research compares these views. This study examines and compares medical and dental students' experiences with formal mentorship programs in Pakistan to enhance these programs. Understanding their specific needs will inform the development of more effective and inclusive mentorship tailored to each group.

Methodology

A quantitative, comparative cross-sectional study was conducted at HBS Medical and Dental College, Islamabad from August and November 2023. Ethical approval was obtained from the Ethical Review Committee Ref no.App#EC06/20/09/22.

We invited purposively 400 medical and dental students to participate in the study, out of which 312 respondents. The study involved second, third, and fourth-year students from both the MBBS and BDS programs. Both first year medical and dental students were excluded. We purposively selected the participants who were enroll in this program for more than a year. This sample size

enables us to undertake relevant analysis of student attitudes toward mentorship. Data were collected through a pretested, self-administered questionnaire.

To ensure the validity and reliability of the questionnaire, it was pilot tested with a group of two to three experts from the Department of Medical Education. Following the pilot test, the finalized version of the survey was shared with the participants. The questionnaire was divided into four sections. The first section gathered demographic information, while the second and third sections focused on students' perceptions of their mentors and the mentoring program. The final section consisted of questions with multiple-choice answers (Yes, No, and "Sometimes"), followed by a Likert Scale (strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, strongly agree = 5) to assess the students' attitudes and experiences. For these items, the Cronbach's alpha score of 0.80 was used to confirm reliability. The institutional head authorized the use of this questionnaire.

Before data collection, participants were informed verbally that their responses would remain confidential and then written informed consent were obtained by each participant, where participation was purely voluntary. Descriptive data were analyzed using SPSS version 26, with frequencies and percentages calculated to summarize the responses.

Results

Table I outlines the sociodemographic characteristics of the study participants with a sample consisted of 312 participants, with 157 (50.3%) males and 155 (49.7%) females. In terms of academic background, 151 (49%) participants were enrolled in the MBBS program, while 161 (51%) were in the BDS program. Regarding the year of study, 102 (32.6%) participants were in their second year, 117 (37.5%) in their third year, and 93 (29.9%) in their fourth year of either the MBBS or BDS program. The mean age of the participants was 21.9 years (SD = 1.51).

Table I: Socio-demographic Characteristics of Participants. (n=312)

Parameter	Variable	N	%
Gender	Male	157	50.3%
	Female	155	49.7%
Program	MBBS	151	49%
	BDS	161	51%
Study Year	Second Year	102	32.6%
	Third Year	117	37.5%
	Fourth Year	93	29.9%

Table II outlines the participants' perceptions of the mentorship program. About 30.2% of respondents agreed or strongly agreed that mentoring was useful, while 12.8% disagreed. Similarly, 24% agreed that mentoring facilitated personal development, whereas 17% disagreed. When evaluating the impact on communication skills, 23.1% found mentoring helpful, while 28.8% were neutral. Similarly, 28.2% believed mentorship increased their self-confidence, with 19.6% neither agreeing nor disagreeing.

Table III presents the results of the inferential analysis comparing responses between MBBS and BDS students. Statistically significant differences were observed in several mentorship aspects. MBBS students were significantly more likely to feel respected by their mentors than BDS students ($p = 0.027$). Similarly, MBBS students reported feeling more comfortable sharing their experiences compared to BDS students ($p = 0.002$). Additionally, mentors' understanding of perspectives was rated higher among MBBS students than BDS students ($p = 0.008$). Conversely, no significant differences were found regarding stress during mentoring sessions ($p = 0.595$) or mentorship impact on professional reputation ($p = 0.527$). Regarding mentorship influence on reducing stress and anxiety, a marginally significant difference was observed ($p = 0.05$), with BDS students reporting a slightly higher benefit.

Table IV presents the results of the inferential analysis comparing responses between MBBS and BDS students. Statistically significant differences were observed in several mentorship aspects. MBBS students were significantly more likely to feel respected by their mentors than BDS students ($p = 0.027$). Similarly, MBBS students reported feeling more comfortable sharing their experiences compared to BDS students ($p = 0.002$). Additionally, mentors' understanding of perspectives was rated higher among MBBS students than BDS students ($p = 0.008$).

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These results suggest that MBBS students generally report a more positive experience with mentorship in terms of feeling respected, comfortable sharing experiences, and having their perspectives understood by mentors when compared to BDS students.

Discussion

This study examined the perceptions of medical and dental students about mentoring programs, demonstrating a range of experiences along with key deviations among BDS and MBBS students. The study sample gave balanced insights into the undergraduate population, with a mean age of 21.9 years and a virtually equal gender distribution. While both groups agreed that mentorship is crucial for academic and professional growth, medical students reported having better access to organized mentorship program than their dental counterparts, according to the findings. BDS students pointed out institutional support inadequacies and indicated a greater need for individualized supervision. These distinctions highlight the importance of structured mentorship framework that accommodate the various academic contexts and career paths of both medical and dental students.

An important predictor of a generally favorable mentoring experience was the findings, which showed that most participants felt their mentors valued them. This result is consistent with earlier studies¹³ that highlight the value of respect for one another in developing fruitful mentor-mentee relationships. Nonetheless, a few students voiced

Table II: Perception on Mentorship Program

Survey Item	Frequency (Percentage %)				
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Do you think mentoring program is useful?	41 (13.1)	40 (12.8)	98 (31.4)	94 (30.2)	39 (12.5)
Do you think that mentoring helps in your professional development?	44 (14.1)	53 (17.0)	93 (29.8)	77 (24.7)	45 (14.4)
Do you think that mentoring facilitates your personal development?	45 (14.4)	53 (17.0)	92 (29.5)	75 (24.0)	47 (15.1)
Do you think mentoring facilitate communication skills?	45 (14.4)	72 (23.1)	90 (28.8)	72 (23.1)	33 (10.6)
Do you think mentorship increase your self-confidence?	43 (13.8)	64 (20.5)	61 (19.6)	88 (28.2)	56 (17.9)
Do you think mentoring helps in reducing stress and anxiety?	44(14.1)	60(19.2)	86(27.6)	71(22.8)	51(16.3)

Table III: Comparison between MBBS and BDS Students on Mentorship

Survey Items	Mean \pm SD		t-statistic	p-value
	MBBS	BDS		
Do you feel respected by your mentor?	1.53 \pm 0.75	1.36 \pm 0.60	2.221	0.027
Do you feel that your mentor is available for you when needed?	1.67 \pm 0.80	1.49 \pm 0.72	2.078	0.039
Do you consider your mentor as a role model for you?	1.78 \pm 0.71	1.67 \pm 0.71	1.38	0.169
Do you feel stressful during mentoring session?	1.84 \pm 0.71	1.88 \pm 0.65	-0.532	0.595
Do you feel comfortable in sharing your experiences with your mentor?	1.81 \pm 0.77	1.55 \pm 0.65	3.085	0.002
Does your mentor guide you when needed?	1.92 \pm 0.79	1.75 \pm 0.73	1.962	0.051
Does your mentor understand your perspective?	1.81 \pm 0.79	1.58 \pm 0.72	2.686	0.008
Does your mentor stimulate you to think critically?	1.80 \pm 0.77	1.73 \pm 0.75	0.86	0.391
Does your mentor meet you on the right level of your knowledge and ability?	1.78 \pm 0.80	1.64 \pm 0.73	1.576	0.116
Does your mentor give you emotional support?	1.77 \pm 0.79	1.60 \pm 0.73	2.031	0.043
Do your mentor helped you to understand how to accomplish the work objectives of a new position?	1.85 \pm 0.81	2.04 \pm 0.89	-2.077	0.039
Do your mentor suggested specific strategies on how to achieve short and long range career objectives?	1.71 \pm 0.80	1.57 \pm 0.74	1.659	0.098
Do your mentor provided you with ongoing performance feedback about challenging assignments?	1.68 \pm 0.75	1.69 \pm 0.74	-0.014	0.989
Do your mentor helped you in developing a professional reputation?	1.76 \pm 0.80	1.81 \pm 0.74	-0.633	0.527
Do your mentor discussed career paths with you?	1.74 \pm 0.81	1.46 \pm 0.69	2.704	0.007
Does your mentor supported your advancement in the organization through mutual association?	1.80 \pm 0.75	1.72 \pm 0.76	1.329	0.185
Do your mentor shared insights about administrators held power and influence within the organization?	1.93 \pm 0.84	2.10 \pm 0.93	-1.664	0.097
Do your mentor encourages you to take courses, seminars, workshops to develop your competence in administration?	1.82 \pm 0.77	1.72 \pm 0.72	1.952	0.052
Do your mentor helped prepare you for positions of greater responsibility by providing leadership experiences?	1.89 \pm 0.86	1.81 \pm 0.80	0.833	0.405
Do you think mentoring program is useful?	1.79 \pm 0.89	1.93 \pm 0.93	-1.06	0.29
Do you think that mentoring helps in your professional development?	1.89 \pm 0.91	2.09 \pm 0.94	-1.418	0.157
Do you think that mentoring facilitates your personal development?	1.86 \pm 0.92	2.03 \pm 0.93	-1.222	0.223
Do you think mentoring facilitate communication skills?	1.95 \pm 0.96	2.16 \pm 0.94	-1.539	0.125
Do you think mentorship increase your self-confidence?	2.01 \pm 0.97	2.23 \pm 1.01	-1.593	0.112
Do you think mentoring helps in reducing stress and anxiety?	2.08 \pm 1.01	2.36 \pm 1.04	-1.966	0.05

Table IV: Inferential Analysis Comparing Responses between MBBS and BDS Students.

Survey Item	MBBS Students	BDS Students	t-value	p-value
	(Mean \pm SD)			
Feeling Respected by Mentor	M = 1.53, SD = 0.75	M = 1.36, SD = 0.60	2.221	0.027
Comfort in Sharing Experiences with Mentor	M = 1.81, SD = 0.77	M = 1.55, SD = 0.65	3.085	0.002
Mentor's Understanding of Perspective	M = 1.81, SD = 0.79	M = 1.58, SD = 0.72	2.686	0.008

various points of view of their mentors, pointing to differences in support and involvement. It is noteworthy that a comparatively small proportion of students in this survey acknowledged that their mentors were role models. This is in contrast to the results of other research^{14, 15}, which underscore the crucial role that mentors play as role models by encouraging leadership, fostering the growth of a variety of abilities, and aiding in

the creation of a professional identity and career progression. In certain Pakistani educational environments, the disparity can be due to differences in the informal nature of mentoring, institutional culture, or mentorship quality.

Most of the participants did not experience any tension during mentoring sessions. Nonetheless, some of them said they felt stressed out during these encounters, maybe

as a result of insufficient interaction or excessive expectations. Overall, the majority of respondents said they felt comfortable talking to their mentors about their experiences, indicating that there is a generally safe and encouraging environment. Few individuals disagreed, indicating that people's experiences vary widely.

These conclusions are corroborated by earlier study¹⁶, which found that mentors who were viewed as kind, honest, giving, attentive, and modest were frequently associated with supportive mentor-mentee relationships. The relevance of interpersonal traits in successful mentoring relationships is further reinforced by the considerable contribution these qualities make to the creation of a secure and comfortable environment for students.

Comparably, the majority of participants acknowledged that their mentors offered helpful approaches for accomplishing both their immediate and future professional goals, with very few opposing. A far smaller proportion of students, however, said that their mentors encouraged in the establishment of their careers as professionals. According to the participants, mentors also provided little assistance in promoting growth inside the institution through opportunities for interaction

This identifies a possible area for development, where mentors should take a more proactive approach to promoting visibility and professional relationships. These results are in line with previous research that highlights the value of mentoring in career planning, professional identity development, and career success through institutional support and networking.¹⁷ The study's participants viewed mentoring's efficacy as modest overall. Likewise, there was variation in the claimed effects of mentoring on skill and personal development. Although many respondents believed that mentorship had a good impact on their personal growth, a sizable number had no opinion. Some students specifically mentioned that mentoring helped them become more confident and improve their ability to communicate.

According to these results, mentoring may help students improve both personally and professionally, but how beneficial it is will rely on the quality of the mentoring relationship and the requirements of each specific mentor-mentee. This is in line with previous research that indicates mentorship may be very beneficial for career advancement and filling gaps in both the personal and professional spheres.¹⁸

Academic discipline-specific mentorship requirements sometimes differ, underscoring the necessity of specialized mentorship programs. In terms of respect, understanding, and communication openness, students in MBBS programs reported substantially more favourable mentorship experiences. These findings confirm prior studies indicating that mentorship should be tailored to the specific characteristics and demands of different fields.¹⁹

Program structure, institutional culture, or mentors' own training and experience may be the cause of the observed disparities in respect and ease of engagement.²⁰ Surprisingly, the effect of mentorship on stress levels and reputation-building proved to be very consistent across both fields. BDS students, however, reported somewhat reduced levels of mentoring-related stress, a result that demands deeper examination.

Conclusion

Mentorship programs should be modified to accommodate the unique requirements of each profession, since this study found that MBBS and BDS students had relatively different views of mentorship. Despite this, the mentorship program's overall efficacy is only somewhat beneficial. Particularly in areas like understanding, communication, and respect for one another, MBBS students had more favorable experiences. Given these variations, a one-size-fits-all strategy might not be enough. To increase mentoring quality, advance fairness, and assist student growth in both medical and dental education, future initiatives should concentrate on improving mentor training and program structure.

Recommendations: Given the limitations of the current study design, future research should use a mixed-methods approach with longitudinal study design to acquire a better understanding of mentorship's growing influence. Future research might examine students' real-world experiences and show causation and development over time by combining objective outcome measurements with qualitative data.

Limitation of Study: Because this study was cross-sectional, it only records students' opinions at one particular moment in time, making it difficult to determine causality or track changes during the students' academic careers.

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