

Principled physicians are not born—they are mentored: Medical students' perception of the values and need of mentors at the College of Medicine, Saudi Arabia

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Abstract

Objective: To discuss the perception of medical students about mentoring at the medical school.

Methods: This cross-sectional descriptive study was conducted at the King Saud University, Riyadh, Saudi Arabia, from April 2015 to April 2016, and comprised medical students. A well-structured, bilingual (English and Arabic) quantitative questionnaire with 21 items was administered online via Google Docs to the students. SPSS 21 was used for data analysis.

Results: Of the 311 students who received the questionnaire, 296(95.17%) completed it. Of them, 257(86.8%) expressed an interest in having a mentor during their medical school career and 276(93.2%) selected the role of their mentor as a "guide". Moreover, 107(36.1%) students agreed that it was "not important at all" that their mentor should be of the same gender.

Conclusion: Participants were interested in having a mentor during their medical school career.

Keywords: Principled physicians, Mentored, Medical students, Perception, Value, Need, Mentors special. (JPMA 67: 1192; 2017)

Introduction

Mentorship between faculty and medical students facilitates the transfer of knowledge and skills, ethics, values, professionalism and simplifies the understanding of the science and art of medicine. Mentorship is a professional relationship and contributors share the responsibility towards the facilitation of standards of learning. This relationship brings about the informal conveyance of knowledge and the support perceived by the recipient as pertinent to work, career or professional evolution.^{1,2} Literature debates that medical professionals with strong mentors are more productive and have greater successful career chances and satisfaction.^{3,4}

Medical students experience various stress types caused by academic expectations and social or personal issues.^{5,6} Medical students during their undergraduate medical training are prone to stressful study schedules at campus as well as off-campus with their self-directed learning hours which may lead to severe psychological distress.⁷ Literature suggests that students entering medical school anticipate various types of worries^{8,9} and their mental health deteriorates at the beginning of their medical school.¹⁰ Current literature identifies the occurrence of a high level of academic concerns in medical students at undergraduate levels.^{10,11} This adversely affects their

cognitive capabilities as well as their learning.¹² Nowadays, the importance of mentoring is being globally discussed and it is considered to have a significant impact on students' behaviour, emotional and psychological adjustment and increases their sense of personal significance.¹³ Several recently published studies have identified a striking lack of mentoring in academic medicine.^{14,15} In the Kingdom of Saudi Arabia (KSA), too, we lack mentorship in medical schools. The current study was planned to explore the perceptions and expectations of medical student about this professional relationship (mentorship).

Subjects and Methods

This cross-sectional descriptive study was conducted at the College of Medicine, King Saud University (KSU), Riyadh, Saudi Arabia, from April 2015 to April 2016, and comprised medical students. During the academic year 2015-16, the Department of Medical Education organised a workshop to introduce our medical students to the idea of mentorship. An announcement was made using university notice board to request all medical students from 1st to 5th year to attend, and the student leaders were also requested to disseminate this information to all their class fellows. The students who attended this workshop received an online (Google Doc) questionnaire. Workshop participants were followed up using university email system (two emails, with one week apart were sent to all workshop participants as a gentle reminder) as well as the students group leaders were also asked to cooperate and keep reminding the workshop participants

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for responding to the online survey questionnaire.

A bilingual (English and Arabic) quantitative survey was administered online via Google Docs to the students. The 21-item questionnaire was developed based on an extensive literature review by a team of 4 senior medical educationists. The face validity of the items was checked by a test-run among a group of 15 volunteer students and was found to be actually measuring what the test actually claimed. The questionnaire items were also discussed by an expert panel of 3 senior faculty members for content validity; they discussed in detail the first draft of the questionnaire comprising of 25 items. These faculty members deleted 4 items from the questionnaire as they were not relevant to the aim of the study and finalised the questionnaire with 21 items which adequately covered the information needed to answer the research questions.

The questionnaire included three parts: 1) mentor's role, 2) qualities and trust of a mentor, and 3) importance of having a mentor and having a mentor of the same gender.

Answers of each item were calculated using a Likert-type scale as follows: 1 for "strongly disagree", 2 for "disagree", 3 for "not sure", 4 for "agree" and 5 for "strongly agree". The number 5 was given the highest agreement score and the number 1 was given the highest disagreement score. A covering letter was also included which explained the objectives and purpose of the study.

After approval from the institutional review board, the questionnaires were distributed among the participants using online Google Docs.

The collected data was entered in Microsoft Excel 2010 software. SPSS 21 was used for data analysis. Descriptive

statistics (mean, standard deviation and percentages) were used for summarising the study and outcome variables. Person's chi-square test was used for observing and quantifying the association between categorical outcomes. $P < 0.05$ was considered statistically significant.

Results

Of the 311 students who received the questionnaire, 296(95.17%) completed it. Of them, 110(37.16%) were males and 186(62.83%) were females. Moreover, 76(25.7%) respondents were first-year students, 63(21.3%) second year, 74(25%) third year, 49(16.6%) fourth year and 34(11.5%) fifth year. The students' overall responses showed that the students perceived the mentors' role in different capacities (mean 2.82 ± 0.12). It was observed that 276(94.3%) students expected their mentors "to work as a guide"; of them, 100(90.9%) were males and 179(96.2%) were females ($p = 0.12$). Besides, 259(87.5%) students agreed that mentors should "work as a teacher"; 171(91.9%) of them were females as compared to 88(80%) males ($p = 0.01$). Moreover, 221(74.7%) students expected mentors "to work as friend", including 90(81.8%) males and 131(70.4%) females ($p = 0.09$). Additionally, 268(90.5%) students saw their mentor "to work as a role model" (Table-1).

The overall mean score for all the fourteen items was 2.83 ± 0.08 . When asked what should be expected from a mentor, 225(86.1%) students agreed with "put extra efforts in supporting my studies"; of them, 95(86.4%) were males and 160(86%) were females ($p = 0.99$). Regarding the item a mentor should "always show his/her respect for me (student) as an individual", 282(95.3%) students agreed, including 102(36%) males and 180(96.8%) females ($p = 0.27$). Only 2(0.7%) students disagreed, including

Table-1: Student's perception about Mentors role (n=296).

Themes	Mean (SD)	Categories†	Participants n(%)	Male n (%)	Female n (%)	P-value*
Work as a role model	2.88(0.37)	Agree	268(90.5)	99(90)	169(90.9)	0.8
		Not sure	22(7.4)	8(7.3)	14(7.5)	
		Disagree	6(2)	3(2.7)	3(1.6)	
Work as a friend	2.64(0.65)	Agree	221(74.7)	90(81.8)	131(70.4)	0.09
		Not sure	45(15.2)	12(10.9)	33(17.7)	
		Disagree	30(10.1)	8(7.3)	22(11.8)	
Work as a teacher	2.84(0.44)	Agree	259(87.5)	88(80)	171(91.9)	0.01
		Not sure	27(9.1)	16(14.5)	11(5.9)	
		Disagree	10(3.4)	6(5.5)	4(2.2)	
Work as a guide	2.92(0.30)	Agree	276(94.3)	100(90.9)	179(96.2)	0.12
		Not sure	13(4.4)	7(6.4)	6(3.2)	
		Disagree	4(1.4)	3(2.7)	1(0.5)	

SD: Standard deviation

*Chi-square test, † the 5 Likert scale responses were combined into 3 different categorical variables; agree (strongly agree, plus agree), Not sure, Disagree (Strongly disagree plus disagree)

NB Responses with 'not sure' weren't included in calculating Chi-Square.

Table-2: Student's perception of the qualities of a mentor.

Themes	Mean (SD)	Categories†	Participants n(%)	Male n (%)	Female n (%)	P-value*
Puts extra efforts for supporting in my learning	2.82(0.46)	Agree	255(86.1)	95(86.4)	160(86)	0.99
		Not sure	30(10.1)	11(10)	19(10.2)	
		Disagree	11(3.7)	4(3.6)	7(3.8)	
Always shows his/her respect for me as an individual	2.94(0.25)	Agree	282(95.3)	102(92.7)	180(96.8)	0.27
		Not sure	12(4.1)	7(6.4)	5(2.7)	
		Disagree	2(0.7)	1(0.9)	1(0.5)	
Be a reliable source for advice	2.94(0.24)	Agree	280(94.6)	102(92.7)	178(95.7)	0.31
		Not sure	15(5.1)	8(7.3)	7(3.8)	
		Disagree	1(0.3)	0(0)	1(0.5)	
Shares examples from his/her personal experiences for my learning	2.87(0.36)	Agree	263(88.9)	98(89.1)	165(88.7)	0.87
		Not sure	29(9.8)	11(10)	18(9.7)	
		Disagree	4(1.4)	1(0.9)	3(1.6)	
Be empathetic about my concerns	2.70(0.54)	Agree	223(75.3)	79(71.8)	144(77.4)	0.36
		Not sure	60(20.3)	24(21.8)	36(19.4)	
		Disagree	13(4.4)	7(6.4)	6(3.2)	
Actively listens to my ideas	2.94(0.23)	Agree	282(95.3)	104(94.5)	178(95.7)	0.59
		Not sure	13(4.4)	6(5.5)	7(3.8)	
		Disagree	1(0.3)	0(0)	1(0.5)	
Explores with me various options to solve my academic problems	2.82(0.44)	Agree	253(85.5)	89(80.9)	164(88.2)	0.15
		Not sure	35(11.8)	16(14.5)	19(10.2)	
		Disagree	8(2.7)	5(4.5)	3(1.6)	
Talk about what I feel is interesting in my academic work	2.69(0.56)	Agree	222(75)	78(70.9)	144(77.4)	0.21
		Not sure	58(19.6)	23(20.9)	35(18.8)	
		Disagree	16(5.4)	9(8.2)	7(3.8)	
Discuss about my fears about hurdles in my academic work	2.76(0.50)	Agree	238(80.4)	82(74.5)	156(83.9)	0.07
		Not sure	47(15.9)	21(19.1)	26(14)	
		Disagree	11(3.7)	7(6.4)	4(2.2)	
Challenges me to learn new skills	2.83(0.44)	Agree	254(85.8)	91(82.7)	163(87.6)	0.48
		Not sure	34(11.5)	15(13.6)	19(10.2)	
		Disagree	8(2.7)	4(3.6)	4(2.2)	
Helps me learn how to successfully proceed in my career	2.90(0.37)	Agree	276(93.2)	102(92.7)	174(93.5)	0.94
		Not sure	12(4.1)	5(4.5)	7(3.8)	
		Disagree	8(2.7)	3(2.7)	5(2.7)	
Discusses with me about available career options	2.84(0.46)	Agree	261(88.2)	94(85.5)	167(89.8)	0.5
		Not sure	23(7.8)	11(10)	12(6.5)	
		Disagree	12(4.1)	5(4.5)	7(3.8)	
Talks about how to overcome possible career obstacles	2.85(0.45)	Agree	267(90.2)	96(87.3)	171(91.9)	0.41
		Not sure	16(5.4)	8(7.3)	8(4.3)	
		Disagree	13(4.4)	6(5.5)	7(3.8)	
Tells his/her personal experiences as examples for my learning	2.80(0.48)	Agree	248(83.8)	89(80.9)	159(85.5)	0.49
		Not sure	37(12.5)	17(15.5)	20(10.8)	
		Disagree	11(3.7)	4(3.6)	7(3.8)	

SD: Standard deviation

*Chi-square test, † the 5 Likert scale responses were combined into 3 different categorical variables; agree (strongly agree, plus agree), Not sure, Disagree (Strongly disagree plus disagree).

NB Responses with 'not sure' weren't included in calculating chi-Square.

1(0.9%) male and 1(0.5%) female. Mentors were considered to be "a reliable source for advice" by 280(94.6%) students. It was noted that the majority of students, i.e. 223(75.3%), saw mentors to be "empathetic about my concerns". Also, 238(80.4%) students expected mentors to address fears seen as a hurdle in the students' academic work. Furthermore, 254(86%) students agreed

that mentor "challenges me to learn new skills". Moreover, 248(83.8%) students perceived that mentors would guide them using their experiences (Table-2).

Moreover, 136(45.9%) students reported that they didn't have a mentor, but wished to have at least one mentor. In our study, the majority of the students, i.e. 257(86.8%),

Table-3: Student's perception about how important is it to have a mentor and from the same gender.

Themes	Mean (SD)	Categories	Participants n(%)	Male n (%)	Female n (%)	P-value*
During your academic training, has there been at least one person you would consider an important mentor, someone who has made a positive difference with respect to your course subjects or career plans?	2.63(0.92)	Yes, I had more than one mentor	70(23.6)	30(27.3)	40(21.5)	0.54
		Yes, I had one mentor	69(23.3)	22(20)	47(25.3)	
		No, but I wish I had a mentor	136(45.9)	49(44.5)	87(46.8)	
		No, but I don't think it affected my progress	21(7.1)	9(8.2)	12(6.5)	
How important is to have a mentor?	2.73(0.67)	Important	257(86.8)	95(86.4)	162(87.1)	0.42
		Not important at all	1(0.3)	1(0.09)	0(0)	
		Not very important	38(12.8)	14(12.7)	24(12.9)	
How important was it to you that you have a mentor who is the same gender as you?	1.96(0.79)	Important	90(30.4)	41(37.3)	49(26.3)	0.14
		Not important at all	107(36.1)	36(32.7)	71(38.2)	
		Not very important	99(33.4)	33(30)	66(35.5)	

SD: Standard deviation

*Chi-square test.

Table-4: Reliability Statistics (Mentor role) (n=296).

Kappa	Number of Items
0.94	4
Items	Inter-rater reliability
1	0.97
2	0.88
3	0.96
4	0.98

Table-5: Reliability Statistics (Qualities and trust of a mentor).

Kappa	N of Items
0.961	14
Items	Inter-rater reliability
1	0.95
2	0.99
3	0.99
4	0.98
5	0.94
6	0.99
7	0.96
8	0.93
9	0.95
10	0.96
11	0.97
12	0.95
13	0.95
14	0.95

Table-6: Reliability Statistics (Importance of having a mentor and of the same gender).

Kappa	Number of Items
0.75	3
Items	Inter-rater reliability
1	0.92
2	0.87
3	0.47

agreed that it was important to have a mentor; of them, 95(86.4%) were males and 162(87.1%) were females (p=0.42). For the same item, there were 38(12.8%) students who answered "not very important" and out of this total, 14(12.7 %) were males and 24(12.9%) were females.

Our study also recorded students' responses to an item "how important was it to you that you have a mentor who is the same gender as you?" And it was found that the majority of the students did not have an issue with having a mentor of the opposite gender, i.e. 107(36.1%) selected the response "not important at all", and of them 36(32.7%) were males and 71(38.2%) were females. Moreover, 99(33.4%) students selected the option "not very important", including 33(30%) males and 66(35.5%) females. However, 90(30.4%) students documented their answer as "important" to have their mentors to be of the same gender. Of them, 41(37.3%) were males and 49(26.3%) were females (Table-3).

The inter-rater reliability (Kappa) was carried out in all the three parts mentioned above.

An item analysis of the 4 items under 'mentor's role' revealed an overall reliability of 0.94 (Table-4); item analysis of 14 items under 'qualities and trust of a mentor' revealed an overall reliability of 0.96 (Table-5), and the analysis of 3 items under 'importance of having a mentor and having a mentor of the same gender' revealed an overall reliability of 0.75 (Table-6).

Discussion

Needs analysis through this study was helpful in identifying areas improvement in the educational process. Students' feedback remained an inestimable resource that, if utilised carefully, may support in diagnosing issues that require urgent attention. The discussion of the findings of our study is reported in three sections: a) importance of having a mentor, and moreover of the same gender; b) the main role of the mentor as perceived by students; c) duties of mentor as expected by the students. In this study, 86.8% students claimed an interest in having a mentor during their medical school career and 93.2% selected the role of their mentor as a "guide". Moreover, 36.1% students felt that it was "not important at all" that their mentor should be of the same gender.

The significance of mentoring throughout one's career has been emphasised, especially during professional transitions.¹⁶⁻¹⁸ The importance and effectiveness of formal mentoring programmes have been well documented. Our study findings are truly consistent with the globally perceived need for mentorship as 86.8% students agreed that it was important to have a mentor-protégé programme.

Widespread research findings suggest that across a broad array of mentor-protégé contexts and configurations, gender shapes the functions and importance of relationships.¹⁹ Although differences in the gender and culture have been considered relative barriers to an effective relationship, and literature reports have documented that this is not viewed by most mentees as a real barrier.²⁰ In the present study, when we recorded the students' responses regarding the influence of gender in a mentoring relationship, it was identified that the majority of the students were not concerned about having a mentor of the opposite sex.

Although there is no uniform definition of mentor, the most emphasised roles of mentor are teaching, professional and personal guidance, sponsorship, role modelling, and socialisation into a profession. Mentors in academic medicine can help with day-to-day tasks, and facilitate important decisions such as career planning.²¹ The role of a mentor as a guide is the driving force within the professional relationship of mentoring. A mentor who

guides successfully creates an educational environment where relationship thrives. The role of the mentor "to be a guide" was recorded as the response of the majority of the participants in our study.

Mentors must maintain integrity with their mentee in a straightforward and respectful way.¹³ Interestingly, in the present study we found that similar responses about the duties of the mentor as one who "actively listens to students ideas". Recently, studies on formal mentoring have received more attention.²² The findings of our study are consistent with what globally is expected of a mentor, i.e. he/she "always show his/her respect for me as an individual".

The current study had its limitations as well. This study was established on self-reporting which might not be devoid of bias in the responses. Generalisability could not be achieved as the study was limited in asking students' perception only in one medical school.

Conclusion

Medical students expressed an interest in having a mentor during their medical school career. This study has accomplished an initial need analysis in regards to mentorship relationship and the students' responses are consistent with the need for designing a robust and uniquely tailored mentoring programme for medical students. The findings of this study should help the medical school administration to design a programme for mentoring that should meet the needs of medical students. It is also recommended that in the light of the apparent and proven benefits that have been achieved and well appreciated, the academic medical leadership should pay particular attention to having mentoring programmes at educational institutions.

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