Comparison between faculty and students perspectives on the qualities of a good medical teacher: A cross-sectional study

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ABSTRACT

Objectives: This study aimed to explore faculty and students perceptions on the qualities of good medical teachers, and to determine whether the opinions of faculty and students differed.

Methods: Two quantitative surveys were performed at Qassim University College of Medicine using a pretested self-administered questionnaire distributed to the faculty and students of the college. It captured their opinions about qualities and attributes of good teachers. Each item was measured on a 5-point Likert scale. Data were entered and analyzed using SPSS.

Results: A total of 90 faculty and 356 students responded with a response rate of 64%. Overall scores on the performance and personality scales were similar between faculty and students. Faculty and students agreed that "organizes good lectures/use of audiovisual aids" and "expert on the subject/knowledgeable" are important attributes and that telling jokes and the sense of humor or sharing personal experiences are not as important. Students felt it is important for an educator to be respectful, good planner and examiner, whereas faculty members felt that communication skills are of high importance.

Conclusion: Faculty development programs should be designed to help faculty develop and improve on the identified qualities.

Keywords: Medical student, medical teacher, performance, personality, Saudi Arabia

Introduction

Recent changes in medical education have given more attention to the role of the teacher. The teacher is no longer considered an information provider; but also he is an assessor, a planner, a mentor, and a role model.[1] As stated by other researchers, the duty of the medical faculty includes the framing of personal and professional growth among their medical students, as well as developing among them, a sense of responsibility for themselves, their patients, and the whole community. Furthermore, they should instill within the medical students, the requisite ethical standards.[2]

A number of previous studies have tried to identify the qualities of an effective teacher.[3-5] Sutkin *et al*.[6] listed five qualities that effective teachers have as "recognition of a relationship, emotional activation, generate responsibility, self-awareness, and competence." Other studies have also identified the following characteristics: Knowledge of subject, enthusiasm, communication skills,[7] interest in teaching,[8] motivating, and inspiring students.[9] The purpose of identifying qualities of an effective teacher is to improve the quality of medical education.[8] To do this researcher should not only consider students opinion but also faculty perspectives as well.[10]

Previously, we have published two studies about this issue; one explored students' opinion about the qualities of an effective medical teacher,[11] and the other assessed the same opinions among faculty.[12] In the current study, we combined both datasets and analyzed them to further explore faculty and students' perceptions of qualities of good medical teachers, and to compare their opinions with regard to which attributes are most important for effective teaching. The results of this study could be used to develop a set of criteria for the "Best Medical Teacher" that will improve the faculty development program; hence, making them more relevant and evidence-based.

Methods

Context

Two quantitative surveys were performed in Qassim University College of Medicine (QUCOM); students completed surveys

during April/May of 2012 and faculty completed surveys during April/May of 2014. QUCOM has adopted problem-based learning (PBL) and student-centered medical curriculum featuring the hybrid PBL approach that is both vertically and horizontally integrated and community oriented and utilizes the spiral approach. Its 6-year course combines basic and clinical sciences. The first 3 years are devoted to an integrated basic medical sciences program; the next 2 years are for clinical rotations; and the 6th year for internship. The program is a mixture of student- and teacher-centered activities. However, the clinical phase mainly utilizes a teacher-centered traditional approach. The current annual intake of students is approximately 120.

Participants

All teaching staff and students at QUCOM were eligible to participate.

Instrument

This study was conducted using a self-administered questionnaire, which participants received with a cover letter explaining the project and included the informed consent. The questionnaire had two sections. The first section included only two questions for students about gender and class levels, whereas for faculty it included questions about gender, age, specialty, cultural background, and the length of academic experience. The second section contained detailed questions seeking the participants' opinions about qualities and attributes of good teachers. There were 43 items, which were derived from the previously conducted studies designed to identify the attributes of good medical teachers.[2,6] The items included 8 categories of teacher performance: Professional knowledge, instructional planning, and instructional delivery, assessment of student learning, motivation, professionalism, monitoring student progress, and communication skills. Each item was measured on a 5-point Likert scale with the following response options: Strongly agree, agree, not sure, disagree, and strongly disagree.

All items were verified and subjected to content validation by three experts in medical education. They were given copies of the questionnaire, purpose, and objectives of the study to evaluate the questionnaire on an individual basis. Comparisons were made between these evaluations and the questionnaire was modified based on these evaluations. The questionnaire was pretested on a small sample of participants and modifications were made accordingly. The study questionnaire content has also been described in earlier publications.[11,12]

The study protocol was approved by the Medical Research Committee of QUCOM.

Data analysis

All questionnaires were coded and entered into an electronic database using only identification numbers. We collected data on a total of 43 attributes related to faculty and students perceptions of quality of a good medical teacher. The items were grouped into two broad categories: "Performance" and "personality." 25 attributes belonged to performance and the remaining 18 belonged to personality.

In the first step, individual frequencies (proportion who "strongly agreed" for any given item, and for reverse coded items [n=2] proportion who "strongly disagreed") of all items belonging to performance and personality categories were calculated separately. In each category, item frequencies were sorted in the descending order (from the highest to the lowest). Top and bottom five frequencies from both samples were selected and shown in tables. Finally, the list of the top and bottom five items was compared between faculty and students.

The mean score of performance and personality items was calculated for faculty and students separately. Independent sample t-tests were used to test whether there were significant differences between faculty and students on both of the scales. Further, the faculty was stratified according to the years of experience (above and below 10 years), and then, student mean scores were compared with each strata. Furthermore, the student mean scores were stratified by academic level (5 years) and tested for differences using one-way ANOVA. The mean score for each academic level was compared with the mean score for faculty using independent sample t-tests.

All tests were two-sided with an alpha of 0.01 because of multiple testing and analysis was carried out in SPSS version 17.

Results

Ninety out of 100 and 37 teaching staff at QUCOM responded. Of the participating faculty, 79% were male and 21% were female. Half of the faculty (49%) teaches during the basic science phase (year 1–3) and the other (51%) teach during the clinical science phase (year 4–5). While 356 out of 567 students participated in the study. Of the participating students, 60% were male and the remaining 40% were female. 56% belonged to the junior classes (year 1–3) and the rest (44%) belonged to the senior classes (year 4–5). The overall response rate of both samples was 64%.

Table 1 shows the comparison of the frequency in top five medical teacher attributes according to faculty and students. More faculty endorsed the qualities of "good communication skills" and being "honest" that students. The quality that was most frequently endorsed by students was being "respectful." Among the top five most frequently endorsed qualities, two of them were similar for faculty and students: Namely, "organizes good lectures/use of audiovisual aids" and "expert on the subject/knowledgeable." Table 2 shows the comparison of the frequency in bottom five medical teacher attributes according to faculty and students. There was a strong agreement

Table 1: Comparison of the frequency in top five medical teacher attributes according to faculty (*n*=90) and students (*n*=356)
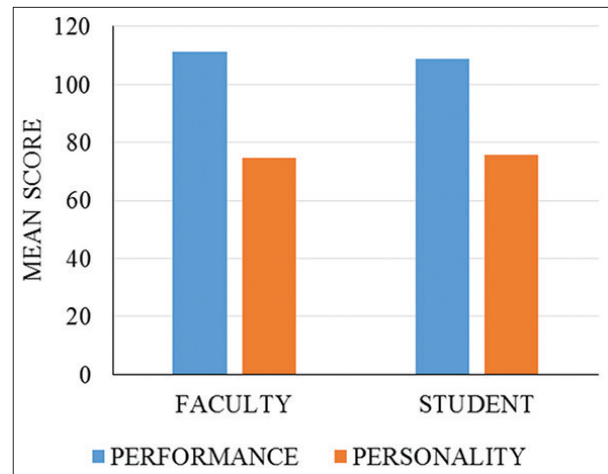
Faculty		Students	
Good communication skills	86.7	Respectful	73.6
Honest	81.1	Good planner	67.1
Motivates students	77.8	Good examiner	66.6
Organizes good lectures/use of audiovisual aids	76.7	Organizes good lectures/use of audiovisual aids	66.3
Expert on the subject/ knowledgeable	75.6	Expert on the subject/ knowledgeable	66.3

Table 2: Comparison of the frequency in bottom five medical teacher attributes according to faculty (*n*=90) and students (*n*=356)
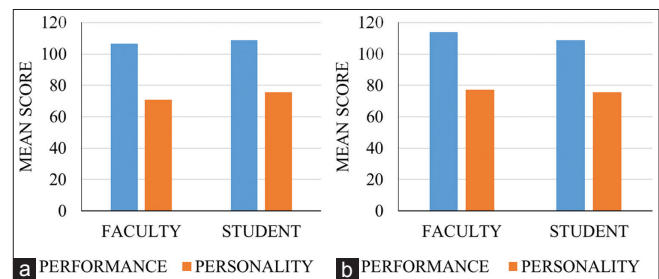
Faculty		Students	
Not strict/shows leniency	23.3	Sense of humor	32.9
Tell jokes during session to amuse students to maintain their interest	24.4	Self-sacrificing	34.3
Non judgmental	32.2	Explains and shares personal experiences	34.8
Self-sacrificing	40.0	Tell jokes during session to amuse students to maintain their interest	39.0
Explains and shares personal experiences	44.4	Dresses appropriately	41.9

Figure 1: Comparison of the mean scores for the performance and personality scales by all faculty (*n* = 90) and students (*n* = 356)

Figure 2: Comparison of the mean scores for the performance and personality scales by students (*n* = 356) and faculty (*n* = 90) stratified by experience. (a) Faculty with <10 years of experience and (b) faculty with ≥10 years of experience

between faculty and students. Three out of five qualities were identical, which included "self-sacrificing," "explains and shares personal experiences," and "tell jokes during session to amuse students to maintain their interest." The quality that was identified as the least important for a good medical teacher differed between faculty and student. Faculty stated "no strict/shows leniency" and students stated "telling jokes and the sense of humor."

Overall, the mean score was higher on the performance scale than on the personality scale for both the students and the faculty [Figure 1]. There were no statistically significant differences in the mean score between faculty and students. However, there were significant differences when students were compared to different strata of the faculty (e.g., less experience and more experience). When student responses were compared with the responses of faculty with <10 years of experience, there was a significant difference in the scores on the personality scale ($P < 0.02$) but no significant difference on the performance scale [Figure 2a]. On the other hand, when student responses were compared with the responses of faculty with >10 years of experience, there was a significant difference in the scores on the performance scale ($P < 0.02$) but no significant difference on the personality scale [Figure 2b].

There were significant differences in student responses across the academic level ($P < 0.05$) indicating some variation but not following a particular trend. When the student responses, by level, were compared to the faculty there was only one significant difference (year 3 students on personality scale). Figure 3 shows the comparison of the scores for performance and personality scales by faculty and students stratified by academic level. This difference may be a result of multiple comparisons and not represent a true phenomenon.

- Mean scores did not differ significantly between student and faculty using a two-sample *t*-test
- Performance comparison: $P = 0.25$.
- Personality comparison: $P = 0.47$.
- Mean scores were compared between student and faculty using a two-sample *t*-test.
- Younger faculty.
  Performance comparison: $P = 0.52$.
  Personality comparison: $P < 0.02$.
- Older faculty.
  Performance comparison: $P < 0.02$.
  Personality comparison: $P = 0.35$.
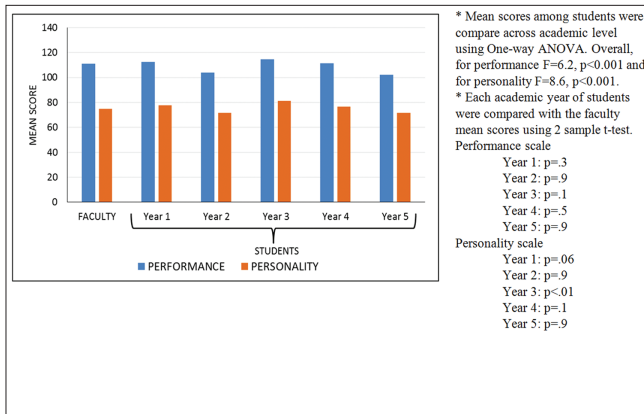
Figure 3: Comparison of the mean scores for the performance and personality scales by faculty (*n* = 90) and students (*n* = 356) stratified by academic level

Discussion

The main finding of the study was that QUCOM faculty and students have similar perspectives on the qualities of a good medical teacher. The overall scores for personality and performance attribute scales were not significantly different between faculty and students. Further, when item analyses were conducted, faculty and students identified a similar set of attributes as the best/necessary qualities of a good medical teacher as well as the worst/unnecessary qualities. The most commonly endorsed attributes included communication skills, respect, organized presentation, and subject expertise. On the other hand, the least endorsed attributes included self-sacrificing, telling jokes, and sharing personal experiences.

Defining exactly what makes good medical teacher is difficult; the current study, as well as earlier studies, have identified good communication skills as an important attribute.[13,14]

Communication skills incorporate several aspects such as speaking style and body language. It has also said to include the ability to simplify complex material for student learning. The medical teacher has to convey a significant amount of scientific information to a large number of students who have various levels of comprehension. To achieve this goal, the teacher has to create an interesting and effective learning environment to reach all of the students. The presentation and communication skills of a teacher are essential to achieve the learning goals.[15] This study illustrated how both students and faculty appreciated the communication (personal) and the knowledge/expertise (performance) skills of a medical teacher. The mastery of good communication is an obligation of an effective teacher, not just an option. Communication is further complicated in this specific study because in QUCOM there is a bilingual environment in which the first language of the students is Arabic and the teaching medium is English. More barriers to communication and understanding are present in this bilingual environment than in a monolingual teaching

environment. In-depth research is needed to explore the nuances of communication in such an environment. Further, faculty training should be implemented to enhance and improve faculty communication skills.

There were three other areas in which faculty and students showed agreement: (a) Knowledge and qualification, (b) respectful attitude, and (c) sense of humor. First, in this study, both faculty and students identified subject expertise and organization as important attributes, which has been supported by other studies.[5,8,9,14,16-19] For example, Wilson *et al.*[20] stated that a large proportion of effective teacher studies emphasize mainly teachers' knowledge and qualifications and pay little attention to their personality attributes that may have an impact on how the knowledge is delivered to students. Second, in this study, students identified "respectful" as an important attribute. Other student surveys have reported the same finding [5,14,18,21] It is plausible that students want their teacher to listen to their perspective and to be empathetic to them; hence, to show respect to their concerns. Finally, the attribute of "sense of humor" and "telling jokes" was among the least endorsed item by students and faculty. Both felt that humor does not encourage the learning process as much as professionalism. This finding was in agreement with another regional study[22] but was in disagreement with studies from other region.[5,17] The discrepancy may be attributable to cultural differences but that was not within the scope of the current study; future studies are needed to determine the impact of culture on medical education.

One area that faculty and students differed in opinion was respect to leniency. Faculty gave the least endorsement to "no strict/shows leniency," but students did not. It may be the case that students appreciate a teacher who is fair in examination and assessment but does not need to be overly strict in the class management (e.g., punctuality and attendance). An earlier study showed that students gave better evaluation for lenient teachers.[23] Medical ethics is central to the practice of good medicine. A medical teacher is responsible to train students in ethical values that form a set of morals in the physician's profession. Essential to this goal, the medical teacher must adhere to the highest ethical standards while teaching students. A medical teacher must possess attributes conducive to sound professional skills.[24,25] In this study, students and faculty appreciated honesty as a good attribute of a medical teacher. On the other hand, they marked down leniency, telling jokes, self-scarification, and nonjudgmental in the list of favorable attributes.

Relationships and emotions that a teacher forms with his/her students play an important role in students' retention of knowledge, conceptualization of phenomena, and future behaviors.[26] These relationships during undergraduate medical education impact on the professional behavior after graduation. Hence, the personal attributes of a medical teacher are phenomenal. Faculty demonstrated in this study

that good communication skills, honesty, and motivation of students are very important for a good teacher. However, students did not recognize these characteristics as highly ranked personal attributes. It seems that the selection of the personal attributes of a good teacher for this study does not emphasize the relationships and emotions. Some attributes such as guidance, direction, advising, counseling, frequent contact and interaction, and showing interest and enthusiasm to students should be asked directly to students rather than using broad nonspecific terms such as communication skills.

The study has some limitations. The participants' response may have been biased according to what they perceived was expected of them (i.e., desirability bias). For most items, the percentage of participants who agreed or strongly agreed was unusually high. Another limitation was the absence of items unrelated to performance and personality. It would have been possible to check whether the participants responded to each item according to the value they really ascribed to it or just gave blanket response to all items had the questionnaire included additional questions unrelated to teacher characteristics. The study generalizability may be limited since the study was conducted at only a single medical college.

Conclusion and Recommendations

Faculty and students value both performance-related and personality-related attributes, with a slight emphasis on performance attributes. Since we are living in the era of student-centered education, the qualities and attributes that are needed to be seen as an ideal medical teacher should be acquired by all people involved in medical education. As a natural consequence, the faculty development programs should be tailored to meet these new realities. Going a step further, the performance monitoring and evaluation of medical teachers will have to be synchronized with the training programs as well.

The future research should go in-depth to define performance, personality, and other attributes that are expected from ideal medical teacher. Conducting qualitative research studies could elicit more information in this regard. Faculty development programs should be designed on information gathered by such studies. Developing professional behavior of teachers should be an integral content of all faculty development programs.

Teaching is a continuous "quality improvement" learning process. A good teacher is one who plays an effective role in training students, and who provides them with a range of values along with knowledge and information to guide them toward their goal. A good medical teacher has the social and moral commitment to train the best doctors possible. This good teaching should be encouraged and appreciated.

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