

Shaping medical professionalism in pre-clinical medical students: students' perspective.

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Abstract

Objectives: Medical professionalism is an essential aspect of medical education and clinical practice globally. It symbolizes the nature, responsibilities and distinctiveness of medical students and physicians. The significance of medical professionalism has been highlighted as it involves an ongoing conversation. This study aimed to determine the medical students' perspectives towards the teaching medical Professionalism course in medical schools.

Method: For this study a cross-sectional based well-structured English language questionnaire survey was administered. The questionnaire was distributed among 238 second year male and female medical students. 136 (57.14%) participants were male and 102 (42.85%) were female medical students. The questionnaire comprised of 14 items, students' feedback was recorded on teaching medical Professionalism and assessment system.

Results: Out of 238 students: 55.5% of the students' responses were positive about their pre-knowledge regarding the medical professionalism course. 14.7% medical students agreed and 16% disagreed for keeping professionalism course in medical schools. However, 69.3% students' responses remained neutral. As far as the lectures were concerned in order to perceive the professionalism course 47.1% of the total students "agreed" and 18.9 % of students "disagreed". Regarding the participants' perceptions on assessment system, 71% students reported that the professionalism course should not be evaluated by MCQs. The majority of males (72.8%) and females (68.6%) were not in favor of course evaluation being based on the MCQs.

Conclusion: Majority of the medical students showed positive pre knowledge about medical professionalism course. Medical students were less likely interested to keep the medical professionalism course in medical schools. However, they were highly satisfied with the instructors for properly utilizing the technology during the study sessions. Medical professionalism course needs time and further improvements in making the students understand about the objectives and significance of the medical professionalism course in academic and clinical practice.

Keywords: Medical professionalism, Ethics, Students' feedback.

Accepted on June 08, 2016

Introduction

Medical professionalism signifies the responsibilities and distinctiveness of medical students and physicians. The significance of medical professionalism has been highlighted as multiple reports of misconduct and inadequate ethical attitudes of the medical community have been published in the science literature. Worldwide medical professionalism has received increased attention by medical educationist. Today, every society with various cultural backgrounds expects that the medical students must be real professionals rather than merely acting professionally. Medical professionalism is one of

the top priorities for the medical students, physicians and medical educators. Professionalism has received increased attention in recent years as it is a critical quality of the physicians [1]. Medical professionalism has emerged as a substantive and sustained theme, the operationalization and measurement of which has become a major concern for those who are involved in medical education and clinical practice [2]. There has been an increase in the frequency of medical errors claims in the medical institutes [3], this is mirroring the observed trends globally [4,5], because of lack of medical professionalism courses and their proper applications in medical schools. The literature not specifically including the

medical students' feedback on how to act upon the guidelines of professionalism [6,7], also signifies that improving medical professionalism can only occur through changes in teaching and assessment.

Although there are persistent efforts in promoting professional education in medical schools across the globe (i.e. in the national perspective as well as international perceptive) Arabian region, very few reports are available in the public domain in the form of publications. Moreover, out of the current published research, one of the studies demonstrated a gap between formal professional education given in the academic curriculum and its application in medical practice [8]. Further the newly established Committee of Deans of Medical Schools in the Kingdom of Saudi Arabia established a task force to develop a national competency framework for doctors [9]. General medical council (GMC) is currently reviewing its student guidance on professionalism [10]. This necessitates a growing interest among the health care professionals to include medical professionalism courses into the medical schools' core curriculum. This study aimed to addresses the medical students' feedback about teaching professionalism course, learning and teaching procedures as well as the assessment tools in the medical schools.

Research Methodology

Study design

This cross sectional was conducted in the Department of Medical Education, College of Medicine, King Saud University, Riyadh, Saudi Arabia during the academic year 2015.

Subjects selection

The second year medical students (n=268) were invited to respond to the questionnaire. The response rate was 238 (88.80%). 136 participants were male students (57.14%) and 102 participants were female medical students (42.85%). All the participants were informed about the aims and objectives of the study. The participation was entirely voluntary and they could decline to participate or withdraw from the survey at any time. They were also informed that their responses will be taken as consent to participate on the understanding that the results will never be published or presented in forms that would identify individual respondents. Throughout the study, participants' anonymity was assured and maintained by assigning each student with a separate code number for the later analysis.

Table 1. Student's perception about medical professionalism course in medical schools.

Them	Participants	Mean (SD)	Agree (%)	Disagree (%)	Neutral (%)
Medical Professionalism must be kept as a course in medical education.	238	1.99 (0.55)	35 (14.7)	38 (16)	165 (69.3)
I heard about medical professionalism course from my senior fellows before it started.	238	2.41 (0.73)	132 (55.5)	35 (14.7)	71 (29.8)
Lectures as teaching method in this course helped me understand the subject of Professionalism.	238	2.28 (0.76)	112 (47.1)	45 (18.9)	81 (34)
The objectives of the lectures are easy to understand.	238	2.29 (0.76)	113 (47.5)	45 (18.9)	81 (34)
During the lectures the technology is effectively used to support my learning	238	2.32 (0.76)	121 (50.8)	44 (18.5)	73 (30.7)
Tutor encouraged to interact which helps me understand the topic	238	2.31 (0.68)	104 (43.7)	31 (13)	103 (43.3)
Continuous assessment (in the form of quiz during lectures) is helpful in my learning	238	2.17 (0.55)	60 (25.2)	19 (8)	159 (66.8)
Grades/marks of continuous assessment should be included in the final (end of the year) assessment	238	1.93 (0.76)	62 (26.1)	78 (32.8)	98 (41.2)
This course helps me to learn my other subjects in medical college.	238	2.0 (0.47)	26 (10.9)	27 (11.3)	185 (77.7)

Study instrument

A well-structured English language questionnaire was devised through literature searches and personal experience as team of 3 members (faculty) from course planning committee who were involved in teaching of medical professionalism, had two half day meetings one day apart. At first meeting a briefing was carried out for explaining the purpose of the study and all

the faculty members were advised to take part in the questionnaire development. Initially 15 items were prepared and included into the questionnaire. The second session was conducted the next day and the participants discussed each item for its face validity and agreed upon selecting total 9 items to be utilized.

Data collection and analysis

The data were coded and entered into the Microsoft Excel software and analysed by using SPSS version 21.0 statistical software. Mean values and standard deviation were analyzed for the entire questionnaire and each individual question. The Likert-type scale was employed throughout the questionnaire. A p-value of <0.05 was considered statistically significant.

Ethical approval

The Institutional Review Board, Ethical Committee of College of Medicine, King Saud University approved the study.

Results

The second year medical students (n=268) were invited to respond to the questionnaire. The response rate was 238 (88.80%). In the sample 1, 36 participants were male students (57.14%) and 102 (42.85%) participants were females. Out of

238 students, 14.7% agreed and 16% of the students disagreed for keeping current professionalism course in medical education while the large number of students' responses remained neutral 69.3%, overall mean (SD) was 1.99 (0.55) (Table 1) that is showing not statically significant χ^2 (p) 1.68 (0.431) (Table 1). The results indicate that the 55.5% of the students' responses were positive when asked about their pre-knowledge regarding the professionalism course and the overall mean (SD) was 2.41 (0.73), 51.4% were males and 60.8% were females χ^2 (p) 2.30 (0.31). As far as the lectures are concerned in order to perceive the professionalism course 47.1% of the total students "agreed" and 18.9% of students "disagreed" out of them total agreed, 50.7% were males, 16.1% males remained disagreed, of total agreed 42.1% were females while 22.5% females disagree. About the perspicuity of professionalism objectives total 47.5% of students agreed while 18.9% disagreed, out of total agreed, 49.2% were males and 45% were females (mean score 2.29 (0.76) were $X^2=0.40$, $p=0.81$.

Table 2. Summarizes the gender wise perception of the items.

Them	Participants	Gender	Agree (%)	Disagree (%)	Neutral (%)	X ² (p)
Medical Professionalism must be kept as a course in medical education	136	Male	23 (16.9)	23 (16.9)	90 (66.1)	1.68 (0.431)
	102	Female	12 (11.7)	15 (14.7)	75 (73.5)	
I heard about medical professionalism course from my senior fellows before it started	136	Male	70 (51.4)	43 (31.6)	23 (16.9)	2.30 (0.317)
	102	Female	62 (60.8)	12 (11.7)	28 (27.4)	
Lectures as teaching method in this course helped me understand the subject of professionalism	136	Male	69 (50.7)	22 (16.1)	45 (33.0)	2.24 (0.325)
	102	Female	43 (42.1)	23 (22.5)	36 (35.2)	
The objectives of the lectures are easy to understand	136	Male	67 (49.2)	25 (18.3)	44 (32.3)	0.409 (0.815)
	102	Female	46 (45.0)	20 (19.6)	36 (35.3)	
During the lectures the technology is effectively used to support my learning	136	Male	73 (53.7)	25 (18.3)	38 (28.0)	1.27 (0.528)
	102	Female	48 (47.0)	19 (18.6)	35 (34.31)	
Tutor encouraged to interact which helps me understand the topic	136	Male	74 (54.4)	12 (8.8)	50 (36.8)	15.74 (<0.0001)
	102	Female	30 (29.4)	19 (18.6)	53 (51.9)	
Continuous assessment (in the form of quiz during lectures) is helpful in my learning	136	Male	37 (27.2)	12 (8.8)	87 (64.0)	1.16 (0.556)
	102	Female	23 (22.5)	7 (6.9)	72 (70.5)	
Grades/marks of continuous assessment should be included in the final (end of the year)assessment	136	Male	51 (37.5)	56 (41.2)	29 (21.3)	53.18 (<0.0001)
	102	Female	11 (10.8)	22 (21.5)	69 (67.6)	
This course helps me to learn my other subjects in medical college	136	Male	16 (11.8)	19 (14.0)	101 (74.2)	2.65 (0.269)
	102	Female	10 (9.8)	8 (7.8)	84 (82.4)	

Almost 50.8% students agreed about the usage of technology during the lectures among which, 53.7% were males and 47% were females. However 104 (43.7%) students agreed when asked about the interaction and support provided by the Tutors and almost same number 103 (43.3%) of students were neutral of this question and overall mean score 2.31 (0.68) (Table 2), in which 54.4% were males and 29.4% were female. This remains statistically significant as $X^2=15.74$, $p<0.0001$ (Table

3). 32.8% students "disagreed" when queried about the inclusion of grades into final evaluation" and 41.2% replied as neutral. In addition, 77.7% students neutral or 11.3% students disagreed about "the professionalism course assists in learning of the other subjects". Regarding the participants' reply on multiple options question the overall 28.9% students replied by selecting the option that the course should be evaluated by MCQs, but at the same time, 71% students reported that the

professionalism course should not be evaluated by MCQs, therefore, it is concluded that the majority of males (72.8%) and females (68.6%) were not in favour of course evaluation being based on the MCQs. However, 89% students did not

agreed to course evaluation to be in the form of essays furthermore 92.8% did not want the group presentations as a form of course evaluation (Table 3).

Table 3. Multiple response questions.

I would like to be evaluated in this course by	Participants	Yes (%)	No (%)	Male			Female		
				N (%)	Yes (%)	No (%)	N (%)	Yes (%)	No (%)
MCQs	238	69 (28.9)	169 (71)	136 (57.14)	37 (27.2)	99 (72.8)	102 (42.8)	32 (31.4)	70 (68.6)
Assessment/Assays	238	26 (10.9)	212 (89)	136 (57.14)	15 (11)	121 (89)	102 (42.8)	11 (10.8)	91 (89.2)
Group presentation	238	17 (7.2)	221 (92.8)	136 (57.14)	9 (6.6)	127 (93.4)	102 (42.8)	8 (7.8)	94 (92.2)
Teacher feedback	238	30 (12.7)	208 (87.3)	136 (57.14)	15 (11)	121 (89)	102 (42.8)	15 (14.7)	87 (85.3)
Do not Know	238	100 (42)	138 (57.9)	136 (57.14)	61 (44.9)	75 (55.1)	102 (42.8)	39 (38.2)	63 (61.8)

Discussion

Medical professionalism is commonly described as characteristics of professional excellence, integrity and altruism [11,12]. This study sets out to explore the students' perception towards the professionalism course in medical schools. We found that, the majority of the student's responses were positive about their pre-knowledge regarding the medical professionalism course. However, 14.7% medical students agreed and 16% disagreed for keeping the professionalism course in medical school. Furthermore, 69.3% students' responses remained neutral. Similar finding was reported as it was stated that fostering of professionalism relies heavily on courser taught in the universities which in turn allows focusing on proper professional behaviour [13]. It was also found that another study reported that medical schools in US are teaching professionalism as a course [14]. As far as the lectures were concerned in order to perceive the professionalism course 47.1% of the students agreed and 18.9 % of students disagreed. Regarding perceptions on the assessment system, most of the students reported that the professionalism course should not be evaluated by MCQs (Table 3). Previous studies have noted that there are no strategies on the most operative ways of supporting medical students to develop high standards of medical professionalism [15]. A Lancet review in 2001 emphasized the prominence of an obligation to the teaching of professionalism to medical students and suggested that rigorous research would be required in this area [16].

According to Hendelman et al. [17] most of medical institution had a professionalism curriculum in place for the pre clerkship phase but lack of formal program in the clerkship years. The present study identified a lack of knowledge or interest by the medical students in the current professional course. The most obvious reasons for the lack of interest in professionalism course was the assessment which students have not considered helpful and felt uncomfortable for having it on a weekly basis. Students agreed with usage of technology during the lectures and shown a significant positive value. However, these attributes develop over time and are inculcated at all levels of medical training. Feudtner et al. [18] found that 62% of

medical students believed that during the course of their clerkship, their ethical principles have been eroded. Our finding shows that 47.5% students agree that the objectives of the professionalism course were easy to understand throughout the course. 26.1% students agree with the grades/marks being included in the final assessment and the majority of students were neutral (41.2 %), this possibly affected their interest in the medical professionalism course.

Medical schools place the foundation for fostering the medical professionalism to practice the issues among practicing clinicians [19]. It is thus imperative that professionalism is incorporated into the undergraduate curriculum [20,21]. Cruess et al. [22] emphasized that a profession requires specialist knowledge and skills acquired through training and education and the professional is expected to use these characteristics to serve the humanity. To involve in a profession means to promote to follow ethical values with expertise, integrity, morality, altruism and promotion of the common high moral. We believe that, medical professionalism courses should be introduced both in basic and clinical medical sciences curricula. Moreover, assessment weightage should be equally given for the understanding and importance of the subject.

Limitations

The present study has been limited to testing the student's perception about professionalism as only second year medical students (currently enrolled in the course) are asked for their responses.

Conclusion and Suggestions

Medical students showed positive pre knowledge about the medical professionalism course, but medical students were less likely interested to establish the medical professionalism programs in medical schools. Students were satisfied with the instructors for properly utilizing the technology during the study sessions. Medical professionalism courses need time and further improvements in the student's understanding about the objectives and importance of the medical professionalism

courses in academic and clinical practice. It is suggested that, medical professionalism programs should be introduced both in basic and clinical medical sciences curricula. The medical schools and their administration must recognize the importance of an appropriate identification and implementation of medical professionalism to produce good physicians who practice medicine in exemplary manners.

Acknowledgement

The authors are thankful to the Deanship of Scientific Research, King Saud University, Riyadh, Saudi Arabia for supporting the work through Research Group Project (RGPVPP 181).

References

1. Haidet P. Where we're headed: a new wave of scholarship on educating medical professionalism. *J Gen Intern Med* 2008; 23: 1118-1119.
2. Hodges B. Assessment of professionalism: Recommendations from the Ottawa 2010 Conference. *Med Teach* 2011; 33: 354-363.
3. Rees CE, Knight LV. The trouble with assessing students' professionalism: theoretical insights from sociocognitive psychology. *Acad Med : J Associat Am Med Coll* 2007; 82: 46-50.
4. Mueller PS. Incorporating professionalism into medical education: The Mayo Clinic experience. *Keio J Med* 2009; 58: 133-143.
5. Adkoli BV, Al-Umran KU, Al-Sheikh M, Deepak KK, Al-Rubaish AM. Medical students' perception of professionalism: A qualitative study from Saudi Arabia. *Med Teach*, 2011; 33: 840-845.
6. Cruess SR, Cruess RL. Professionalism must be taught. *Brit Med J* 1997; 315: 1674-1677.
7. Relman AS. Education to defend professional values in the new corporate age. *Acad Med* 1998; 73: 1229-1233.
8. Sadat-Ali M. Professionalism: Are we doing enough? *Saudi Med J* 2004; 25: 676-677.
9. Zaini R, Ben Abdulrahman K, Al-Khotani A, Al-Hayani A, Al-Alwan I, Jasaniah S. Saudi MEDs: A competence specification for Saudi medical graduates. *Med Teach* 2011; 33: 582-584.
10. General Medical Council. Medical Students: Professional Values and Fitness to Practise. Medical School Council 2009.
11. ABIM Foundation, ACP-ASIM Foundation, European Federation of Internal Medicine. Medical professionalism in the new millennium: a physician charter. *Ann Intern Med* 2002; 136: 243-246.
12. Kassirer JP. Managing care - should we adopt a new ethic? *N Engl J Med* 1998; 339: 397-398.
13. Steneck NH. Fostering professionalism and integrity in research. *University of St. Thomas Law J* 2008; 5: 522-543.
14. Swick HM, Szenas P, Danoff D, Whitcomb ME. Teaching professionalism in undergraduate medical education. *JAMA* 1999; 282: 830-832.
15. Vimmi P. Developing medical professionalism in future doctors: a systematic review *International Journal of Medical Education*. 2010; 1: 19-29.
16. Stephenson A, Higgs R, Sugarman J. Teaching professional development in medical schools. *Lancet* 2001; 35: 867-870.
17. Hendelman W, Byszewski A. A National Survey: Medical Professionalism in Canadian Undergraduate Programs 2007.
18. Feudtner C, Christakis DA, Christakis NA. Do clinical clerks suffer ethical erosion? Students' perceptions of their ethical environment and personal development. *Acad Med* 1994; 69: 670-679.
19. Papadakis MA, Loeser H, Healy K. Early detection and evaluation of professionalism deficiencies in medical students: one school's approach. *Acad Med* 2001; 76: 1100-1106.
20. Irvine D. *The Doctor's Tale*. Oxford: Radcliffe Medical Press, 2003.
21. Hilton SR, Slotnik HB. Proto-professionalism: how professionalization occurs across the continuum of medical education. *Med Educ* 2005; 39: 58-65.
22. Cruess RL, Cruess SR, Steinert Y. *Teaching medical professionalism*. Cambridge: Cambridge University Press, London 2009.

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