

# Recognition of Core Elements of Medical Professionalism among Medical Students and Faculty Members

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## ABSTRACT

**Objectives:** Medical students and future physicians have chosen to pursue a profession that requires personal integrity, compassion and a constant awareness of the commitment made by them. Professionalism includes personal behaviors, knowledge, and competency. It includes the attitudes and values one holds and that run through the profession as a whole. Medical students learn professionalism during the course by either direct teaching or experiential learning. We conducted this study to estimate the self-reported level of practice of the core elements of professionalism by medical students and medical faculty and compared the two groups. **Methods:** One-hundred and nine students and 83 faculty members of Oman Medical College completed a professionalism questionnaire. The survey questions related to core elements of professionalism and were grouped under professional knowledge, professional skills, professional attitude, and qualities essential for professionalism. **Results:** The response rate was 65.6% (109 of 166) among students and 75.5% (83 of 110) from faculty members. Response to the questions on professional skills between the student and faculty group was significantly different ( $p < 0.001$ ). Similarly, there was a significant difference in the responses related to professional attitude between the student and faculty group ( $p < 0.001$ ). Students and faculty members have a significant difference in opinion regarding up to date knowledge of basic and clinical sciences and clinical competency ( $p = 0.024$ ). Similarly, significant differences in opinion regarding up to date knowledge of basic and clinical sciences and clinical competency in clinical and basic sciences faculty members ( $p = 0.001$ ). Students identified good communication skills (82.6%), and faculty staff identified up to date professional knowledge (62.7%) as the most important aspect of professionalism. **Conclusions:** Both students and teaching faculty agreed that the top most professional elements are up to date knowledge, good communication skills, and teamwork. Hence, it is important that faculty members encourage their students to improve their professional skills and attitude.

An important feature of the medical profession is to provide compassionate and empathic care to patients. Physicians need up to date knowledge and appropriate skills to provide better patient care.<sup>1</sup> Professionalism is a core quality that needs to be understood and developed as part of becoming a doctor. It brings together many aspects of how a medical student learns about and contributes to the care of patients. A teachers' professional attitude is a role model for learners. Medical educationists and teachers should foster the development of professionalism among learners. Both personal and environmental factors play a role in physician's

professionalism.<sup>2</sup> Various factors contribute to professionalism, which may allow the development of more effective approaches to promote this quality in medical students.

Medical professionalism forms the basis of the contract between doctors and patients. The General Medical Council's (GMC) publication, Good Medical Practice, outlines the principles of professional behavior for medical students under the categories providing good clinical care, maintaining good medical practice, teaching and training, relationships with patients, working with colleagues, probity, and health.<sup>3</sup> It is mandatory that professionalism is incorporated into the

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undergraduate curriculum so students can learn this attribute from the very beginning. The American Board of Internal Medicine (ABIM) established Project Professionalism, which sought to define the components of medical professionalism, including altruism, accountability, excellence, duty, honor/integrity and respect.<sup>4</sup> It is clear that the development of professionalism evolves over time by a process of exploration and reflection.<sup>5</sup>

The medical profession now recognizes the importance of professionalism in medical students and wants to promote curriculum integration and early introduction of experiential learning in the undergraduate curriculum.<sup>6</sup> Medical education and curriculum should provide multiple learning opportunities for gaining experience in and reflecting on the concepts and principles of medical professionalism for better patient care.<sup>7</sup> Doctors' actual behavior in clinical practice determines professionalism. This quality requires integrity, honesty, the ability to communicate effectively with patients, and respect for patient autonomy.<sup>8</sup> Medical students learn professionalism during the course either by direct teaching or experiential learning that help students to prioritize their learning needs and make the best use of the time available.<sup>9</sup>

The learning experience, with feedback from teachers and peers, helps students to learn appropriate professional attitude in clinical practice. Professionalism is a characteristic that cannot be established effectively without the direct participation of the learner with both a willingness and an attitude to change.<sup>10</sup> Encouraging students to experience a sense of responsibility may help them to build team working skills and self-directed learning and professionalism.<sup>11</sup> Feedback on professionalism must be based on valid and reliable observations. Teachers need to understand how their students view themselves and their professional roles.<sup>12-14</sup>

The purpose of this study was to estimate the self-reported level of practice of the core elements of professionalism by medical students and medical faculty and compare the two groups.

## METHODS

The study comprised of a survey of medical students, clinicians, and teaching faculty members using a self-reported questionnaire. The questionnaire comprised of four sections. The first section consisted

of demographic details of participants and sections two to four contained questions on professional knowledge and skills [Table 1]. Each question had five response options (strongly agree, agree, neutral, disagree, strongly disagree). The last section included the essential components of professionalism.

The ethical review committee approved the questionnaire, and participants were enrolled after obtaining written informed consent. Two research assistants were educated about the questionnaire and were trained in the data collection procedure, which included identification, recruitment, data collection, and obtaining written informed consent. The questionnaire was developed as a result of a literature search for studies of core elements of medical professionalism measures. The questionnaire was reviewed and finalized after several brainstorming sessions and discussions so that the questionnaire would maximize the validity and reliability. Previous studies have suggested methods to improve response rates by including a relevant topic, offering feedback, the length of questionnaires, and assurance of confidentiality, incentives, and personal contact. All questionnaires were included in the analysis, and there were no missing responses.

Statistical analysis was performed using SPSS Statistics (SPSS Statistics Inc., Chicago, US) version 20.0. Data was expressed in frequencies and percentages for questionnaire responses that were numerical. Cross tabulation was performed to determine if there was a relationship between subgroups. The chi-square test was used for categorical data and the Mann-Whitney test to compare differences between two groups with non-parametric continuous data.

## RESULTS

Out of the 166 students (80 clinical and 86 pre-clinical) contacted for this trial, 109 students participated giving a response rate of 65.6%. The age of students ranged from 21 to 26 years with a mean age of  $24.0 \pm 0.1$ .

The majority of students were female (82.6%). Most students (60.0%) were in the seventh year of study (clinical year), and 40.0% were from the fifth year (pre-clinical year). Nearly two-thirds ( $n = 81$ ; 74.3%) of participants were local, and the rest were international students.

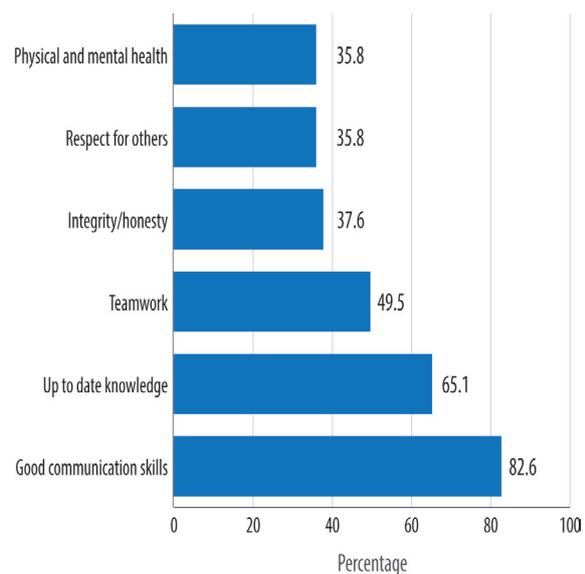
**Table 1:** Students' perception of their professional knowledge and skills.

Question	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
<b>Professional knowledge</b>					
I am up to date with my knowledge of basic and clinical sciences and clinical competency	11 (10.1)	74 (67.9)	20 (18.3)	4 (3.7)	0 (0.0)
<b>Professional skills</b>					
I can do self-management planning for learning	7 (6.4)	46 (42.2)	19 (17.4)	34 (31.2)	3 (2.8)
I am able to do self-restraint/risk management	4 (3.7)	63 (57.8)	29 (26.6)	13 (11.9)	0 (0.0)
My physical health is appropriate	33 (30.3)	57 (52.3)	10 (9.2)	7 (6.4)	2 (1.8)
My mental health is appropriate	60 (55.0)	39 (35.8)	2 (1.8)	5 (4.6)	3 (2.8)
I have lifelong learning skills; I can solve problems and make appropriate decision, self-directed learner	21 (19.3)	61 (56.0)	25 (22.9)	1 (0.9)	1 (0.9)
I can do team work	18 (16.7)	70 (64.8)	19 (17.4)	1 (0.9)	1 (0.9)
I have good communication skills	20 (18.3)	62 (56.9)	22 (20.2)	4 (3.7)	1 (0.9)
I am comfortable with foreign language skills	5 (4.6)	22 (20.4)	16 (14.7)	48 (44.4)	18 (16.7)
I have creative/logical/critical thinking	24 (22.0)	70 (64.2)	10 (9.2)	5 (4.6)	0 (0.0)
<b>Professional Attitude</b>					
I understand hospital/clinic setup (service oriented)	20 (18.3)	72 (66.1)	15 (13.8)	2 (1.8)	0 (0.0)
I have respect for others and myself	65 (59.6)	43 (39.4)	1 (0.9)	0 (0.0)	0 (0.0)
I am a role model	24 (22.0)	52 (47.7)	30 (27.5)	3 (2.8)	0 (0.0)
I have good etiquette/humanity	55 (50.5)	52 (47.7)	2 (1.8)	0 (0.0)	0 (0.0)
I prefer ethical thinking and behavior	11 (10.1)	18 (16.5)	14 (12.8)	46 (42.2)	20 (18.3)
I am self-confident	8 (7.3)	40 (36.7)	27 (24.8)	25 (22.9)	9 (8.3)
I always maintain integrity/honesty	39 (35.8)	61 (56.0)	6 (5.5)	1 (0.9)	2 (1.8)
I do regular self-assessment	7 (6.4)	27 (24.8)	38 (34.9)	29 (26.6)	8 (7.3)
I have appropriate appearance/behavior	47 (43.1)	57 (52.3)	3 (2.8)	2 (1.8)	0 (0)
I am fully aware of patient safety	38 (34.9)	56 (51.4)	11 (10.1)	3 (2.8)	1 (0.9)
I always reflect on my knowledge and practice	3 (2.8)	33 (30.3)	38 (34.9)	26 (23.9)	9 (8.3)

Data presented as n (%).

Pre-clinical and clinical students showed no significant differences in opinion regarding having updated knowledge of basic and clinical sciences and clinical competency ( $p = 0.889$ ). The student's perception of their professional skills ( $p = 0.874$ ) and attitude ( $p = 0.469$ ) was not significantly different between the study group years. With regards to the student's attitude, no significant difference was observed in all given options except patient safety ( $p < 0.030$ ) [Table 1].

Fifth and seventh-year medical students were asked about qualities they thought were essential for professionalism [Table 2]. The top five qualities essential for professionalism as determined by the students are shown in Figure 1. The top quality was good communication (82.6%). Respect for others (35.8%) and physical and mental health (35.8%) shared the fifth place.



**Figure 1:** The top five qualities essential for professionalism according to medical students.

**Table 2:** Self-reported response on qualities for professionalism in fifth and seventh-year students.

Qualities	Fifth year n = 44	Seventh year n = 65	p-value	Qualities	Fifth year n = 44	Seventh year n = 65	p-value
<b>Good communication skills</b>			<b>0.434</b>	<b>Self-confidence/self-efficacy</b>			<b>0.637</b>
Yes	35 (79.5)	55 (84.6)		Yes	13 (29.5)	17 (26.2)	
No	9 (20.5)	10 (15.4)		No	31 (70.5)	48 (73.8)	
<b>Up to date professional knowledge</b>			<b>0.835</b>	<b>Logical/critical/creative thinking</b>			<b>0.311</b>
Yes	29 (65.9)	42 (64.6)		Yes	14 (31.8)	15 (23.1)	
No	15 (34.1)	23 (35.4)		No	30 (68.2)	50 (76.9)	
<b>Teamwork</b>			<b>0.755</b>	<b>Lifelong/self-directed learning skills</b>			<b>0.730</b>
Yes	21 (47.7)	33 (50.8)		Yes	7 (15.9)	12 (18.5)	
No	23 (52.3)	32 (49.2)		No	37 (84.1)	53 (81.5)	
<b>Integrity/honesty</b>			<b>0.824</b>	<b>Foreign language skills</b>			<b>0.162</b>
Yes	16 (36.4)	25 (38.5)		Yes	2 (4.5)	8 (12.3)	
No	28 (63.6)	40 (61.5)		No	42 (95.5)	57 (87.7)	
<b>Respect for others</b>			<b>0.752</b>	<b>Self-management</b>			<b>0.168</b>
Yes	15 (34.1)	24 (36.9)		Yes	2 (4.5)	8 (12.3)	
No	29 (65.9)	41 (63.1)		No	42 (95.5)	57 (87.7)	
<b>Ethical thinking and behavior</b>			<b>0.700</b>	<b>Appearance/behavior</b>			<b>0.940</b>
Yes	14 (31.8)	23 (35.4)		Yes	4 (9.1)	6 (9.2)	
No	30 (68.2)	42 (64.6)		No	40 (90.9)	59 (90.8)	
<b>Physical and mental health</b>			<b>0.752</b>	<b>Service oriented</b>			<b>0.941</b>
Yes	15 (34.1)	24 (36.9)		Yes	2 (4.5)	3 (4.6)	
No	29 (65.9)	41 (63.1)		No	42 (95.5)	62 (95.4)	
<b>Patient safety</b>			<b>0.029</b>	<b>Etiquette</b>			<b>0.911</b>
Yes	18 (40.9)	14 (21.5)		Yes	2 (4.5)	3 (4.6)	
No	26 (59.1)	51 (78.5)		No	42 (95.5)	62 (95.4)	
<b>Humanity</b>			<b>0.342</b>	<b>Self-restraint/risk management</b>			<b>0.240</b>
Yes	15 (34.1)	17 (26.2)		Yes	0 (0.0)	2 (3.1)	
No	29 (65.9)	48 (73.8)		No	44 (100)	63 (96.9)	

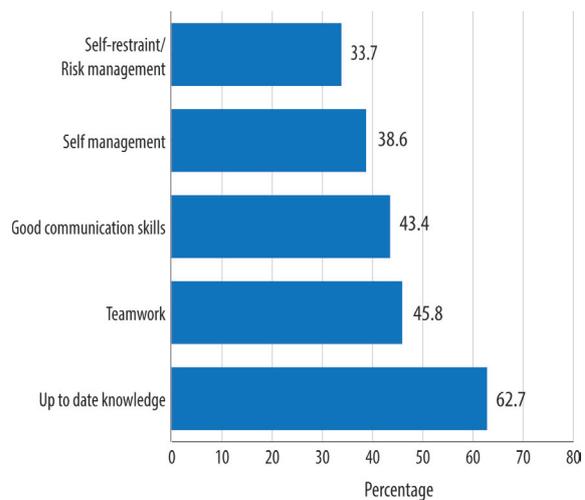
Data presented as n (%).

Out of the 110 teaching faculty members contacted for this trial, 83 participated in the study giving a response rate of 75.5%.

Their age ranged from 30–57 years with mean age of 41.2±6.7 years. Of the total participants, 43 (51.8%) were female, and 40 (48.2%) were male. Over half (n = 51; 61.4%) were academic general practitioners, 15 (18.1%) were clinical faculty, and 17 (20.5%) were from the basic sciences faculty.

Among participants from the clinical faculty, 22 (26.5%) had fewer than five years experience, 38 (45.8%) had 5–10 years’ experience and 23 (27.7%) had over 10 years’ experience.

The faculty members perception of their professional knowledge and skills is shown in Table 3. A significant statistical difference was observed between clinical and basic sciences faculty



**Figure 2:** The top five qualities of practice or skills essential for professionalism according to faculty members.

members regarding up to date knowledge and clinical competency ( $p < 0.001$ ). The perception of professional skills between the two faculty groups was not significant ( $p = 0.094$ ). Study data showed that perception of professional attitude in the basic sciences and clinical faculty group was not significantly different ( $p = 0.267$ ).

Clinical and basic sciences faculty members were also asked about the qualities they believed to be essential for professionalism [Table 4]. They answered yes/no questions to determine the attributes they believed to be essential for professionalism. Sixty-

two percent thought that up to date professional knowledge was an essential attribute [Figure 2]. We observed a statistically significant difference in gender with regard to logical/critical/creative thinking ( $p = 0.031$ ), integrity/honesty ( $p = 0.055$ ), and ethical thinking and behavior ( $p = 0.014$ ) professional qualities.

Students and faculty members had a significant difference in opinion regarding up to date knowledge of basic and clinical sciences and clinical competency ( $p = 0.024$ ). Similarly, the perception of professional skills ( $p = 0.001$ ) and attitude ( $p = 0.001$ ) was

**Table 3:** Faculty perception of their professional knowledge and skills.

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<b>Professional knowledge</b>					
I am updated with my knowledge of basic and clinical sciences and clinical competency	23 (27.7)	46 (55.4)	12 (14.5)	2 (2.4)	0 (0.0)
<b>Professional skills</b>					
I can do self-management planning for learning	18 (21.7)	56 (67.5)	9 (10.8)	0 (0.0)	0 (0.0)
I am able to do self-restraint/risk management	10 (12.0)	57 (68.7)	16 (19.3)	0 (0.0)	0 (0.0)
My physical health is appropriate	27 (32.5)	33 (39.8)	22 (26.5)	1 (1.2)	0 (0.0)
My mental health is appropriate	37 (44.6)	39 (47.0)	7 (8.4)	0 (0.0)	0 (0.0)
I have lifelong learning skills; I can solve problems and make appropriate decisions; self-directed learner	27 (32.5)	45 (54.2)	10 (12.0)	1 (1.2)	0 (0.0)
I can do teamwork	27 (32.5)	44 (53.0)	12 (14.5)	0 (0.0)	0 (0.0)
I have good communication skills	26 (31.3)	49 (59.0)	8 (9.6)	0 (0.0)	0 (0.0)
I am comfortable with foreign language skills	20 (24.1)	50 (60.2)	13 (15.7)	0 (0.0)	0 (0.0)
I have creative/logical/critical thinking	15 (18.1)	46 (55.4)	22 (26.5)	0 (0.0)	0 (0.0)
<b>Professional attitude</b>					
I understand hospital/clinic setup (service oriented)	23 (27.7)	50 (60.2)	10 (12.0)	0 (0.0)	0 (0.0)
I have respect for others and self	47 (56.6)	31 (37.3)	5 (6.0)	0 (0.0)	0 (0.0)
I am a role model	17 (20.5)	43 (51.8)	23 (27.7)	0 (0.0)	0 (0.0)
I have good etiquette/humanity	33 (39.8)	42 (50.6)	8 (9.6)	0 (0.0)	0 (0.0)
I prefer ethical thinking and behavior	33 (39.8)	39 (47.0)	11 (13.3)	0 (0.0)	0 (0.0)
I am self-confident	19 (22.9)	55 (66.3)	9 (10.8)	0 (0.0)	0 (0.0)
I always maintain integrity/honesty	25 (30.1)	44 (53.0)	12 (14.5)	2 (2.4)	0 (0.0)
I do regular self-assessment	23 (27.7)	36 (43.4)	19 (22.9)	5 (6.0)	0 (0.0)
I have appropriate appearance/behavior	21 (25.3)	45 (54.2)	17 (20.5)	0 (0.0)	0 (0.0)
I am fully aware of patient safety	32 (38.6)	33 (39.8)	18 (21.7)	0 (0.0)	0 (0.0)
I always reflect on my knowledge and practice	18 (21.7)	51 (61.4)	14 (16.9)	0 (0.0)	0 (0.0)

Data presented as n (%).

**Table 4:** Self-reported response on qualities for professionalism by clinical and basic sciences faculty members.

Qualities	Clinical n = 66	Basic science n = 17	p-value	Qualities	Clinical n = 66	Basic science n = 17	p-value
<b>Up to date knowledge</b>			<b>0.001</b>	<b>Physical and mental health</b>			<b>0.542</b>
Yes	47 (71.2)	5 (29.4)		Yes	15 (22.7)	5 (29.4)	
No	19 (28.8)	12 (70.6)		No	51 (77.3)	12 (70.6)	
<b>Teamwork</b>			<b>&lt;0.001</b>	<b>Ethical thinking and behavior</b>			<b>0.341</b>
Yes	37 (56.1)	1 (5.9)		Yes	13 (19.7)	5 (29.4)	
No	29 (43.9)	16 (94.1)		No	53 (80.3)	12 (70.6)	
<b>Good communication skills</b>			<b>0.016</b>	<b>Lifelong/self-directed learning skills</b>			<b>0.923</b>
Yes	33 (50.0)	3 (17.6)		Yes	11 (16.7)	3 (17.6)	
No	33 (50.0)	14 (82.4)		No	55 (83.3)	14 (82.4)	
<b>Patient safety</b>			<b>0.019</b>	<b>Service oriented</b>			<b>0.071</b>
Yes	23 (34.8)	1 (5.9)		Yes	11 (16.7)	0 (0.0)	
No	43 (65.2)	16 (94.1)		No	55 (83.3)	17 (100.0)	
<b>Self-management</b>			<b>0.002</b>	<b>Respect for others</b>			<b>0.785</b>
Yes	20 (30.3)	12 (70.6)		Yes	21 (31.8)	6 (35.3)	
No	46 (69.7)	5 (29.4)		No	45 (68.2)	11 (64.7)	
<b>Self-restraint/risk management</b>			<b>0.251</b>	<b>Self-confidence/self-efficacy</b>			<b>0.091</b>
Yes	20 (30.3)	8 (47.1)		Yes	10 (15.2)	7 (41.2)	
No	46 (69.7)	9 (52.9)		No	56 (84.8)	10 (58.8)	
<b>Humanity</b>			<b>0.353</b>	<b>Appearance/behavior</b>			<b>0.426</b>
Yes	19 (28.8)	3 (17.6)		Yes	7 (10.6)	3 (17.6)	
No	47 (71.2)	14 (82.4)		No	59 (89.4)	14 (82.4)	
<b>Integrity/honesty</b>			<b>0.164</b>	<b>Etiquette</b>			<b>0.003</b>
Yes	16 (24.2)	7 (41.2)		Yes	5 (7.6)	6 (35.3)	
No	50 (75.8)	10 (58.8)		No	61 (92.4)	11 (64.7)	
<b>Logical/critical/creative thinking</b>			<b>0.164</b>	<b>Foreign language skills</b>			<b>0.210</b>
Yes	16 (24.2)	7 (41.2)		Yes	5 (7.6)	3 (17.6)	
No	50 (75.8)	10 (58.8)		No	61 (92.4)	14 (82.4)	

Data presented as n (%).

significantly different between the two student year groups.

In Table 5, we compared the responses of faculty members and students to attributes they believed to be essential for professionalism.

## DISCUSSION

Professionalism is a critical quality needed by physicians to provide competent and compassionate care to patients. It encompasses a set of values and behaviors that underpin the social contract between the public and the medical profession.<sup>15</sup> Physicians should uphold the highest standards of ethical and professional behavior in all their actions and activities, the practice of medicine involves trust between the patient and their doctor.

In our study, most students agreed that up to date knowledge is an important attribute. Students felt positive about their professional skills but did not feel comfortable with their foreign language proficiency and self-management. Developing reflective skills were related to student's comfort with multi-tasking and self-directed learning, which helps to develop positive attitude in professionalism.<sup>16</sup> Medical students perception of professionalism suggests that our current generation of learners may have a different perception of professionalism as it relates to specific behaviors. This raises the importance for teachers to clearly identify and make explicit the expectations of medical students as they interact in classroom and clinical settings.<sup>17</sup>

Two-thirds of students expressed that they see themselves as role models for others in professional

**Table 5:** Comparison between faculty and students on their self-reported response on items of professionalism.

Qualities	Faculty n = 83	Students n = 109	p-value	Qualities	Faculty n = 83	Students n = 109	p-value
<b>Good communication skills</b>			<b>&lt;0.001</b>	<b>Patient safety</b>			<b>0.947</b>
Yes	36 (43.4)	90 (82.6)		Yes	24 (28.9)	32 (29.4)	
No	47 (56.6)	19 (17.4)		No	59 (71.1)	77 (70.6)	
<b>Up to date knowledge</b>			<b>0.722</b>	<b>Humanity</b>			<b>0.663</b>
Yes	52 (62.7)	71 (65.1)		Yes	22 (26.5)	32 (29.4)	
No	31 (37.3)	38 (34.9)		No	61 (73.5)	77 (70.6)	
<b>Teamwork</b>			<b>0.606</b>	<b>Logical/critical/creative thinking</b>			<b>0.864</b>
Yes	38 (45.8)	54 (49.5)		Yes	23 (27.7)	29 (26.6)	
No	45 (54.2)	55 (50.5)		No	60 (72.3)	80 (73.4)	
<b>Respect for others</b>			<b>0.639</b>	<b>Self-confidence/self-efficacy</b>			<b>0.261</b>
Yes	27 (32.5)	39 (35.8)		Yes	17 (20.5)	30 (27.5)	
No	56 (67.5)	70 (64.2)		No	66 (79.5)	79 (72.5)	
<b>Integrity/honesty</b>			<b>0.149</b>	<b>Lifelong/self-directed learning skills</b>			<b>0.918</b>
Yes	23 (27.7)	41 (37.6)		Yes	14 (16.4)	19 (17.4)	
No	60 (72.3)	68 (62.4)		No	69 (83.1)	90 (82.6)	
<b>Physical and mental health</b>			<b>0.082</b>	<b>Etiquette</b>			<b>0.031</b>
Yes	20 (24.1)	39 (35.8)		Yes	11 (13.3)	5 (4.6)	
No	63 (75.9)	70 (64.2)		No	72 (86.7)	104 (95.4)	
<b>Self-management</b>			<b>&lt;0.001</b>	<b>Foreign language skills</b>			<b>0.913</b>
Yes	32 (38.6)	10 (9.2)		Yes	8 (9.6)	10 (9.2)	
No	51 (61.4)	99 (90.8)		No	75 (90.4)	99 (90.8)	
<b>Self-restraint/risk management</b>			<b>&lt;0.001</b>	<b>Service oriented</b>			<b>0.031</b>
Yes	28 (33.7)	2 (1.8)		Yes	11 (13.3)	5 (4.6)	
No	55 (66.3)	107 (98.2)		No	72 (86.7)	104 (95.4)	
<b>Ethical thinking and behavior</b>			<b>0.063</b>	<b>Appearance/behavior</b>			<b>0.518</b>
Yes	18 (21.7)	37 (33.9)		Yes	10 (12.0)	10 (9.2)	
No	65 (78.3)	72 (66.1)		No	73 (88.0)	99 (90.8)	

Data presented as n (%).

attitude and communication. The literature has reported that students identify the need for strong positive role models in their learning environment for effective evaluation of professionalism.<sup>18</sup> A recent publication suggested that role modeling is an untapped educational resource that should be emphasized in faculty development initiatives.<sup>19</sup>

Although medical students expressed a positive attitude towards professionalism, they felt that ethical thinking and behavior was not a part of professionalism. One-third of students felt that they were not confident and that their self-assessment and knowledge reflection was not appropriate. Ginsburg et al,<sup>20,21</sup> showed that behavior is contextual that the student's and the evaluator's perception often determine whether the unprofessional behavior is

recorded or reported. There is no formal teaching of professionalism in the curriculum; however, there is continuous assessment and examinations such as clinical encounter and objective structured clinical examination (OSCE). Encouraging students to experience this sense of responsibility for one another at an early stage may help build teamworking skills and reduce destructive competition.<sup>22</sup> This poses a great challenge as to how we can teach and assess this attribute in the medical curriculum. Cruess<sup>23</sup> described the need for the explicit teaching of the definition and values of professionalism and that institutional leadership and support is needed to demonstrate its fundamental significance. Teaching and assessing professionalism makes student aware of its importance in clinical practice.<sup>24</sup>

Faculty were very positive about professionalism in up to date knowledge and competency. However, there was a significant difference between basic science and clinical faculty regarding teamwork, self-restraint, self-management, patient safety, and communication skills. Teachers in the health profession stimulate intrinsic motivation (motivation that stems not from external factors, such as grades and status, but from genuine interest and ambition) in their students and professionalism can be learned through practice and self-reflection on teaching practices and measuring the right behavior.<sup>25</sup> Faculty and students agreed that the top qualities of professionalism were up to date knowledge, teamwork, and good communication skills. There was no statistically significant difference in good communication skills, self-management, and self-restraint/risk management between faculty and students. The literature also supports that encouraging participation and strengthening self-efficacy may help to enhance medical student performance and further motivation in learning strategies.<sup>26</sup>

Medical teachers need to encourage their students to elevate their professionalism. Our study population is well aware of this, and there is a consensus on a few attributes. Personal and environmental factors play an important role in the development of professionalism.<sup>27</sup> One study showed that the core elements of professionalism can be taught but may not be fully assimilated by students, and student's perception in their first year of medical school might be different.<sup>28</sup> Professionalism as a whole is beneficial in patient care for all healthcare professionals. This should be seen as a necessary process to preserve and enhance our ability to meet the needs of our patients.<sup>29,30</sup> Teaching and learning professionalism is an integral part of medical education. Assessment at all levels is mandatory for feedback, improvement, and to establish positive attributes in medical students.<sup>31,32</sup>

The sample size in this study limits the ability to generalize the results. However, some interesting trends highlight the need for further research. There are some agreements and some differences between students and faculty response, so further research is essential to determine the cause of such perceptual differences.

## CONCLUSION

Certain aspects of professionalism seem to be underdeveloped in medical students. To improve recognition of the relationship of physician self-care to the ability to care for patients, we need to recognize that personal and organizational factors influence the professionalism of individual physicians. These aspects of professionalism may need to be targeted for teaching and assessment so that students develop as professionally responsible practitioners. Students with a well-developed understanding of professionalism may be less involved in medical error and have the personal values to help them deal with error honestly and effectively.

### Disclosure

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