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Teaching and Assessment of Professionalism: A Comparative Study between Two Medical Schools

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ABSTRACT

Background: Medical professionalism, a key element in medical practice, includes values, behaviours and relationships that build up the trust between the public and doctors. As professionalism is not inborn social characteristics, it is vital to be formally taught in the undergraduate curriculum. The study aimed to assess and compare the degree of coverage of professionalism behaviours in Faculty of Medicine, Suez Canal University (FOM-SCU), Egypt, and Ibn Sina National College for Medical Studies (ISNC), Saudi Arabia. **Method:** Two-stage survey was used to obtain information about curricular components related to teaching and assessment of professionalism and to review the programs of both schools against the categories of professionalism behaviours. **Results:** Both schools were found to have curricular components related to teaching and assessment of professionalism. Coverage of professionalism components in FOM-SCU curriculum was 100% of the courses, except for “Honour and Integrity” and “Caring and Compassion”. At ISNC, coverage ranged between (26.4%) to (37.7%), except for “Altruism”. Some teaching and assessment methods of professionalism were common between both schools, while some were specific for each school. The relative amount of professionalism teaching is different in both schools. **Conclusion:** Both schools recognise the necessity to address professionalism as an essential component of their students’ education. FOM-SCU needs to emphasise on *Honour and Integrity* and *Care and Compassion*, while ISNC needs to pay more attention to teaching of most components of professionalism.

Keywords: *Professionalism, Teaching, Assessment, Suez Canal University Faculty of Medicine (FOM-SCU), Ibn Sina National College for Medical Studies (ISNC).*

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Introduction

Medical professionalism includes a group of values, behaviours and relationships that build up the trust between the public and doctors (1). It is considered as a central part for practice of medicine (2).

The view of medical professionalism was developed in late feudal and early renaissance periods, when doctors were eminent social figures with considerable influence in a specific society (3). In the past, the development of professionalism relied on inherent learning from role models.

This method depended mainly on the existence of a similar culture and sharing beliefs (4).

Medical professionalism is the contract between doctors and served community. Patients have full trust and dependence on doctors and they believe that doctors must be professional and qualified (5). Researchers consider professionalism as a pivotal pillar to improve medical errors (6). As professionalism is not inborn social characteristics, it is thus vital to incorporate it into the undergraduate curriculum (7, 8) and this should be obligatory for all medical schools (9).

Medical professionalism is not a solitary skill; instead it is a multi-dimensional competency that is built with several skills (10). It requires the demonstration of all these skills in collection not in isolated style. It is important to plan for teaching professionalism before integrating it into the curriculum and to use a mixture of teaching-learning methods for ensuring appropriate training in professionalism (10).

Although professionalism has been incorporated into most medical schools' programs across the world, it remains rather difficult to define because it carries many connotations and implied meanings (11). However, it is internationally agreed that medical professionalism is a core and should not be left to informal methods to be absorbed (12, 13).

Based on the recommendations of the American Medical Association (AMA) and the Association of American Medical Colleges (AAMC) that medical schools should offer learning experiences intended to promote the development of professionalism among medical students, Swick et al. (14) conducted a survey of united states medical schools to determine if professionalism is taught or not and found that 89.7% of schools offer some formal education related to professionalism

and only 55.2% have obvious systems for assessing professional behaviours. They concluded that the teaching of professionalism in undergraduate differs widely and the strategies used to teach professionalism may not always be sufficient.

Later on, in May 2002, AAMC and the National Board of Medical Examiners (15) prepared an invitational conference assembling 25 experts with diverse perspectives on professionalism. This conference was concluded by an agreement upon a seven categories of observable behaviours that would reflect professionalism.

Moreover, teaching and evaluation of professionalism was stated as compulsory by the Accreditation Council for Graduate Medical Education (ACGME) (16). Consequently, many medical schools in the developed countries have adopted professionalism as a part of their formal medical curricula (17). Thus, medical education reform through integrating professionalism into medical schools' curricula became a major demand in all countries and not only the developed ones (18–21). Added to this is the notion that faculty members have an educational and community obligation of graduating a holistic medical doctor owning the necessary professional competencies (22, 23).

So, the purpose of this study is to assess and compare the degree of coverage of professionalism behaviours in two medical schools in two developing countries (Faculty of Medicine, Suez Canal University, Egypt and Ibn Sina National College for Medical Studies, Saudi Arabia). As each school has its own education strategies and instructional methods and none of them has a structured curriculum of professionalism, this comparison would be a step forward for medical schools in developing countries to integrate a well-structured formal professionalism curriculum into their medical programs.

Method

Data Collection

Data was collected through a two-stage survey at Faculty of Medicine, Suez Canal University (FOM-SCU) and Ibn Sina National College for Medical Studies (ISNC). The period of data collection was from July 2015 to October 2015.

In the first stage, a one-page survey instrument was filled in by the Vice-Dean for Education and Student Affairs at FOM-SCU and MBBS Program Director at ISNC. The survey tool was structured to obtain general information about both schools' curricular components related to the teaching and assessment of professionalism.

In the second stage, a more detailed survey tool was filled in by the curriculum committee members of each school (experts in medical education and phase/year coordinators). The survey was designed to gather detailed information about the number of courses in which professionalism is taught, the methods of teaching and the existence of assessment and its methods. This information covered the seven categories of professionalism that were agreed upon by the American Association of Medical Colleges and the National Board of Medical Examiners (15). The seven categories were: *Altruism, Honour and Integrity, Caring and Compassion, Respect, Responsibility and Accountability, Excellence and Scholarship, and Leadership*. Under each category, examples were given to facilitate the response process.

The whole program and its course specifications were then reviewed against the seven categories by the authors to determine how much both schools satisfied the teaching and assessment attributes of professionalism.

Data Analysis

Simple descriptive statistics (frequencies and percentages) were computed for each survey question. In addition, curriculum material program and courses were reviewed by the authors to ensure when and how a school conveyed categories of professionalism. Percentage of courses in which each category of professionalism is taught at each school was compared using Chi-square. A p -value < 0.05 was considered significant in all statistical tests. Statistical analysis was carried out using IBM SPSS version 22.0 for Microsoft Windows (24).

Results

The first survey results (Table 1) revealed that both schools are similar in having curriculum contents/topics related to professionalism, which are dealt with as components of multiple courses. Such contents/topics are relevant to the educational objectives at both schools.

However, FOM-SCU has an additional course titled Integrated Professional and Ethical Development (PED) and ISNC has a course on Islamic Ethics and Professional Skills. Both courses, although have different titles, are dealing mainly with several attributes of professional behaviours. In addition, both schools admitted that they use different methods to assess their student's achievement and development of professional behaviour.

The results of the second survey and review of curriculum documents (Table 2 and Figure 1) demonstrated the percentage of coverage of different components of professionalism in each school. At FOM-SCU, all the courses (100%) cover *Altruism, Respect, Responsibility and Accountability, Excellence and Scholarship, and Leadership*. On the other hand, only some courses cover *Honour and Integrity* (27%) and *Caring and Compassion* (36%).

Table 1: Initial survey results

Survey Questions	FOM-SCU	ISNC
Does your school offer any curriculum content/topics relating to professionalism?	Yes	Yes
How is professionalism dealt with in the curriculum?		
• During orientation	No	No
• In a single course	No	No
• As a component of multiple courses	Yes	Yes
• In an integrated sequence of courses	No	No
Do you have objectives that deal with professionalism?	Yes	Yes
Do you have a course outline or similar materials?	Yes	Yes
Does your school have any process by which it assesses students' achievement and development of professional behaviour?	Yes	Yes

Table 2: Coverage of different components of professionalism at both FOM-SCU and ISNC curricula (number of courses covering them out of the entire courses at each school)

Component	FOM/SCU	ISNC	P-value [§]
	Number of courses (n = 33)*	Number of courses (n = 53)**	
Altruism	33 (+Research Projects and PHC Field Training)	2	0.0001 [#]
Honour and Integrity	9 (+Research Projects and PHC Field Training)	19	
Caring and Compassion	12 (+PHC Field Training)	20	
Respect	33 (+PHC Field Training)	16	
Responsibility and Accountability	33 (+Research Projects and PHC Field Training)	20	
Excellence and Scholarship	33 (+Research Projects and PHC Field Training)	15	
Leadership	33 (+Research Projects and PHC Field Training)	14	

* Number of courses at FOM/SCU is 33 (including the clinical rotations), in addition to the Research Projects of each batch (from school Year 1 to 6) and the Field Training in the Primary Health Care (PHC) Units as part of the Community-Based Medical Education (CBME) program.

** Number of course at ISNC is 53, including the clinical rotations. No Research Projects or PHC training.

[§] Comparisons were performed by chi-square (χ^2) using contingency table.

[#] $P < 0.05$ is statistically significant.

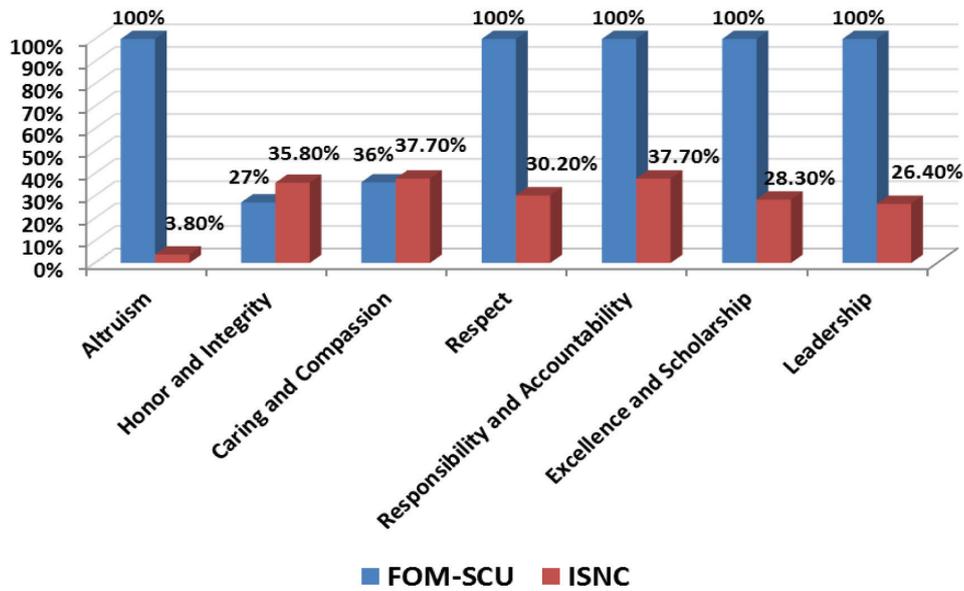


Figure 1: Coverage of the components of professionalism at FOM-SCU versus ISNC curricula (percentage of courses covering them).

At ISNC, coverage of all components of professionalism ranged between (26.4%) to (37.7%), except for *Altruism* that is covered in only 2 out of 53 courses (3.8%).

The relative amount of professionalism teaching in the curriculum (Figure 2) increases steadily from pre-clinical to clinical

years at FOM-SCU. However, at ISNC it increases in the preclinical phase to reach its peak in Year 4, then it drops in the clinical years (Years 5 and 6).

Regarding the teaching methods of professionalism used by both schools, it was found that four teaching methods are

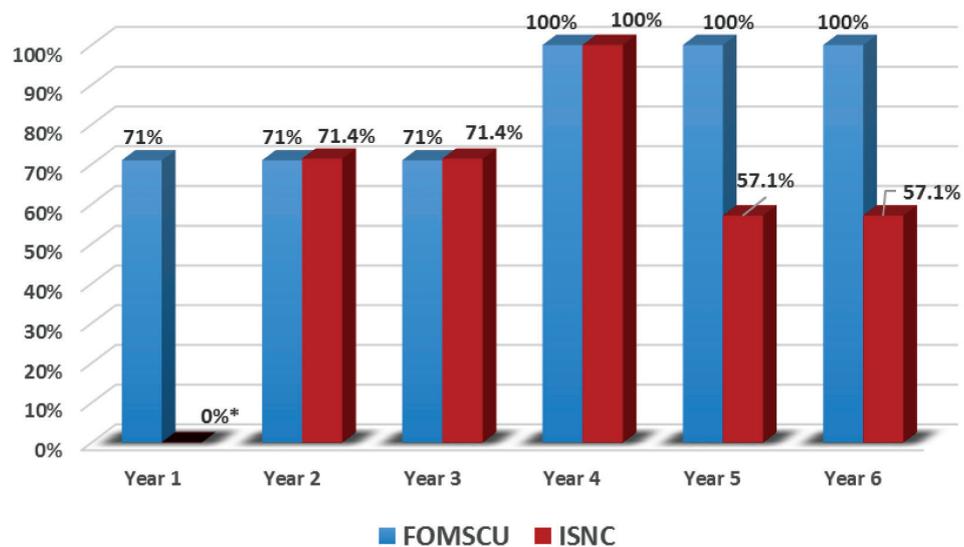


Figure 2: Comparison of relative amount of professionalism curriculum in each year at FOM-SCU versus ISNC curricula.

Note: *At ISNC, Year 1 is not included in the study as it is a preparatory year and not counted in MBBS.

common in both schools (Figure 3). These are: *lectures, hospital-based clinical sessions, PBL sessions, and clinical skills laboratory sessions*. Each of the two schools has its own other methods of teaching professionalism. FOM-SCU has two additional teaching methods that cover all the components of professionalism, which are “Research Projects” and “PHC Field Training”. During field training activities, students

start acquisition of basic communication and consultation skills and through an integrated approach, other areas of the curriculum are covered such as: teamwork, leadership, patient rights, and biomedical ethics which cover *Altruism, Leadership, Caring and Compassion, Respect, Responsibility and Accountability, Honour, and Integrity* categories of behaviours of professionalism.

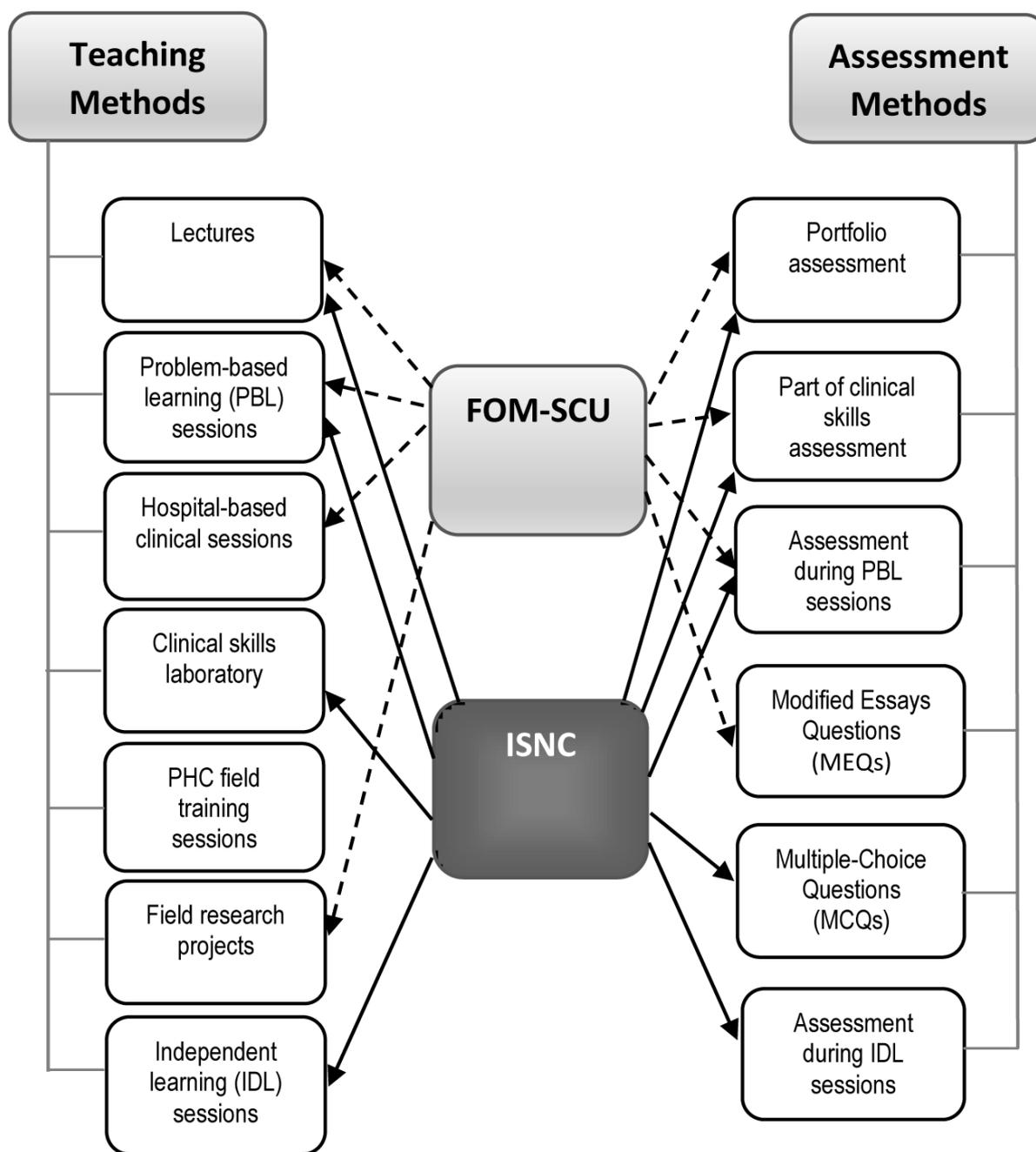


Figure 3: Teaching and assessment methods of professionalism at FOM-SCU and ISNC.

At ISNC, they use Independent Learning (IDL) sessions, where students in each of the first three years of the curriculum are divided into small groups of 10 to 12 students and are assigned a topic (differs according to the nature of the module they are studying) to research in depth on and make a presentation of the information they found. Students work in teams, through which they acquire different skills like communication and interpersonal skills in addition to the teamwork and leadership skills. These skills cover *Teamwork, Respect, Responsibility and Accountability* and *Leadership* components of professionalism.

Analysis of the used assessment methods of professionalism by both schools showed that three student assessment methods were common (Figure 2). Both schools use *portfolio assessment* and *direct observation using checklist or rating scales* and this method is used for *assessment of professionalism components during PBL sessions, clinical skills assessment at different clinical training sessions (skills lab, hospital or PHC training)*. In addition, during the IDL sessions students at ISNC are assessed using scoring rubrics that contain assessment items about *Excellence and Scholarship, Teamwork, Honour and Integrity* (through avoiding plagiarism). Concerning the assessment of the cognitive aspects of professionalism, FOM-SCU uses the “Modified Essay Questions (MEQs)”, while ISNC, uses “Multiple-Choice Questions (MCQs)”, especially during specific courses like Islamic Ethics course.

Discussion

Professionalism is an integral component of the medical profession. So, teaching professionalism to medical students cannot be left to chance alone (25, 26). It was stated that “consistently demonstrating behaviours that reflect professional values requires sophisticated competencies that must be taught and refined over time of practice” (27). This sort of development needs suitable evaluation, feedback, and, when needed, corrective action (28).

In our study we have described the setting of two Arabian medical schools which officially address the topic of professionalism. This may help other medical schools in planning or reviewing their own professionalism programs.

It is globally agreed that professionalism is a core competency for physicians that should be given the full attention in formal teaching (12, 29). In congruence with that, both schools, in our study, were found to teach professionalism to their students formally. This is similar to the case in several medical schools that have formal curricula for teaching professionalism to undergraduates, such as the University of Washington School of Medicine (30), Harvard Medical School (31) and University of Missouri Kansas City School of Medicine (32). In addition to this formal teaching, the planned learning activities of professionalism are integrated in multiple courses of the curriculum in both schools of the current study. This was in agreement with another study (14) which reported that 60% of their studied sample of medical schools taught professionalism as components of multiple courses.

This is also consistent with the reports of many investigators, who stated that if physicians are to meet their responsibilities to their patients, to the profession, and to society, formal teaching of professionalism should be embedded in the medical school curriculum (33–37).

Teaching of professionalism at both studied schools was found to be based on pre-set educational objectives, which is similar to different international experiences (38, 39).

The components of professionalism, in our study, were found to be differently covered in the courses at both schools. At FOM-SCU, most of the components are covered in all (100%) of the courses. However, at ISNC, coverage of different components of professionalism was found in few courses (ranging from 3.8% to 37.7%). The high coverage percentage found in FOM-SCU curriculum may be due to the educational strategies adopted by this school including

student-centered, problem-based and community based curriculum. This is beside the students' activities related to field training and research projects that help early clinical contact with patients and community (40). FOM-SCU strategies and activities hold the students responsible for their own learning and require them to have the different attributes of professionalism especially those related to *Altruism, responsibility and accountability, excellence and scholarship, and leadership*. The strategies used by FOM-SCU has been identified by different authors to be the best teaching models for professionalism attributes (38, 41).

At ISNC, although all the components of professionalism are covered somewhere in the curriculum, percentages of courses covering such components are far less than those in FOM-SCU curriculum. The exception to this is for *Honour and Integrity* and *Care and Compassion*, where they are covered in slightly more courses in ISNC curriculum than in FOM-SCU curriculum. Although the differences between the two studied schools in covering those two components are quite small, reasons behind that would need to be investigated in depth.

Our results also indicated that most of the professionalism curriculum at FOM-SCU is being delivered in the clinical phase, while in ISNC the highest percentage of professionalism topics were in the preclinical phase. The emphasis of teaching professionalism in clinical years was reported in the study of Byszewski et al. (42) who argued that the professional identity development is primary at the time of clinical years and it is enhanced by role modelling in this phase of study. Also a recent systematic review supports this point of view and stressed on the importance of clinician influence and role modelling in teaching professionalism (43). So it is essential to conduct continuous training and development of the capabilities of our faculty members to ensure that they have satisfactory professional behaviour.

Teaching of professionalism takes place through methods that are common to both schools as well as specific methods to each school. The common methods are *lectures, PBL sessions, hospital-based clinical sessions, and clinical skills laboratory sessions*.

Lectures have been criticised for being outmoded, ineffective and inefficient (44). However, Baernstein et al. (30) found that lectures helped some students identify and analyse professionalism behaviours they observe.

Small group work also was one of the methods used by both schools. As found by Baernstein et al. (30), small group sessions were reported to help students to learn about professional behaviours and to identify and analyse them. In PBL sessions at both schools (and IDL at ISNC), professional behaviours such as leadership skills, teamwork skills, peer-education and assessment and respect are practiced by the students and monitored by their tutors.

At both studied schools, it was found that during clinical training sessions, either in the hospital or in the clinical skills labs, different professional attributes are dealt with, especially those related to communication with patients and colleagues. At FOM-SCU, this is more apparent as clinical training starts from the first year curriculum (40). Clinical training was found to help in grounding students' professionalism and ethics in the immediacy of real issues (45).

The unique activity in ISNC curriculum is IDL in which the students learn to take responsibility for their own learning. This represents self-directed learning, which is an element of professionalism (46). In addition, teamwork and communication skills are highlighted also in IDLs at ISNC.

Both schools, in this study, have means by which they assess the achievement of their students in learning different components of professionalism. Swick et al. (14) found that only 55.2% of the studied American medical schools have means for evaluating

their students' professionalism. Assessment of professionalism provides a challenge for both students and examiners, because the distinction between objective and subjective areas is hard to define (47). The level of knowledge, skills and attitudes of professional doctors requires multiple assessment instruments to assess from all angles (10, 48, 49). In our study, we found that both schools are using multiple assessment methods that cover both the theoretical aspect of professionalism (like MEQs and MCQs) as well as the practical aspects (like assessment during clinical training and during PBL sessions).

Assessment of professionalism, in this study, takes place through methods that are common to both schools as well as specific methods to each school. The common methods are: *portfolios, as part of clinical skills assessment, and as part of PBL sessions assessment*. Portfolio assessment and assessment at the end of the clinical attachments has been described by Mahboob and Evans (47) to be suitable methods that can assess professionalism as well as other competencies in an integrated manner. In a study about assessment of personal and professional development, it was found that portfolios and interviews are highly effective methods in assessing students' professional development (50). Furthermore, portfolios have been found by Friedman et al. (51) to give authenticity to assessment of different competencies. Finally, the Canadian Medical Education Directions for Specialists (CanMEDS) framework recommended some assessment tools for the professional role, including direct observation, multisource feedback and portfolios (52).

At both schools, leadership skills, teamwork skills, peer-education, respect and subject proficiency of the medical students are assessed throughout the PBL sessions. The PBL classroom evaluation forms and assessment in the IDL sessions are mainly focused on such attributes of professionalism (40, 53).

The knowledge component of professionalism is assessed differently at both schools. At FOM-SCU, the main method of written student assessment is MEQs (40). MEQs are considered by Mahboob and Evans (47) to be a good method for assessing knowledge in professionalism. ISNC depends on MCQs in assessing students' knowledge in different courses (54) as MCQs are appropriate for measuring knowledge (49) and they are being increasingly used due to their higher reliability, validity and ease of scoring (55, 56). Although both schools are different in the assessment methods used for the knowledge component, however both MEQ and MCQs are reported to be suitable for assessing the theoretical component of professionalism (10, 47).

The sole limitation of our study is that we included only two medical schools from the Eastern Mediterranean region as examples of developing countries but we did not include schools from other regions for comparison. This limitation was due to no response from schools in other countries.

Conclusion

We found that both schools recognise the necessity to address professionalism as an essential component of their students' education. Both schools reported having curriculum content related to professionalism with the appropriate methods of teaching and assessment.

However, the review of the course materials indicated that FOM-SCU needs to give more emphasis on two components of professionalism which are *Honour and Integrity* and *Care and Compassion* as they are not well covered in the teaching and assessment. At ISNC, the current findings indicated that more attention should be paid to teaching of most of the components of professionalism. ISNC would benefit from other methods of professionalism teaching.

Moreover, further studies are needed to explore the students' point of view regarding the gaps in (teaching) professionalism behaviours and, accordingly, remediation can be determined to enable standardisation of professionalism curriculum.

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