Fostering and promoting professionalism in undergraduate medical students

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ABSTRACT

In recent years professionalism has developed increased attention to provide compassionate and ethical health service for the patients and society. Medical students and future physicians are committed to foster this service as a patient-centered holistic manner to be a part of becoming a doctor. We conducted a questionnaire survey with year 4 MBBS students of AIMST University, Kedah, Malaysia to interpret the perceptions of students on professional knowledge, professional skills, and professional attitude. Statistical analysis was performed using SPSS Statistics version 25.0. Students agreed on their up-to-date knowledge with basic science 41.2%, clinical sciences 41.2%, and clinical Skills 42.4%. Among all three elements (professional knowledge, professional skills, and professional attitude), students' positive responses were more in different fields of professional attitude. The top five qualities essential for professionalism as chosen by the students are: appropriate behavior (67.1%), fully aware of patient safety (65.9%), teamwork with batchmates (65.9%), and understand hospital setup and clinic setup (65.9% in each). Survey of student's beliefs on professional requirements would help us to target teaching and assessment so that students develop as professionally responsible doctors.

INTRODUCTION

Presently, professionalism has gained the importance to become an integral part of the field of medical education and medical practices though there is no common understanding of the meaning of professionalism (Jahan et al., 2016). It is defined broadly by the American Board of Internal Medicine (ABIM) in the 1990s composing three commitments that involve 'the highest standards of excellence in practicing medicine, sustain the interests and welfare of patients, and responsibility for the health needs of society' and six elements comprising 'altruism, accountability, excellence, honor, integrity, and respect for others (Shrank et al., 2004).
Future physicians should keep up these humanistic values to provide compassionate, empathic, and quality health care for their patients and society as a whole more than adherence to a set of medical ethics (Swick, 2000; Coulehan, 2005). Professionalism is a core quality required to be achieved by knowledge, skills, and attitudes. Medical students are taught these essential components for preparing them as competent physicians. Medical educationists and teachers foster evaluation processes for the development of knowledge and skills. Professional behaviours among learners sometimes implicit and tend to be ignored because of unsystematic and inadequate technical skills resulting in huge criticisms against medical professionals for their unprofessional conduct (Hilton and Slotnick, 2005).

As adult learners, medical students are accountable for their self-learning because today’s undergraduates will be tomorrow’s doctors and they have to face a lot of changes in medical practice. According to GMC in Good Medical Practice, good doctors are dedicated enough with their knowledge, skills, and behaviours to continue patients care as scholars and scientists, practitioners, and professionals. Medical schools will have robust and fair techniques to equip and guide students as well as new graduates achieving all the outcomes appropriately to run a profession with the highest professional values (Council, 2009).

In 2002, American Board of Internal Medicine (ABIM) Foundation, the American College of Physicians-American Society of Internal Medicine Foundation, and the European Federation of Internal Medicine jointly released a charter with nominated members composed of a set of principles and responsibilities which are valuable indicators for all medical professionals to improve the quality of health service. The principles and responsibilities of medical professionalism must be clearly understood by the medical professionals as well as the society that point out the right direction in health care delivery. The charter encourages doctors’ efforts and integrity for committing patient welfare and gaining public trust (American Board of Internal Medicine, 2002; Sethuraman, 2006).

There is vast progress in medical practice over time, influenced by assessments and reflection. In recent years’ residency programs have been introduced in medical schools to promote curriculum integration to increase attention on professionalism. Types of assessment tools are established for guiding and quantifying medical students to be future physicians (Reiser and Banner, 2003; Whitcomb, 2005). Today erosion in medical professionalism is the common problem that affects the professional development of medical students and resident physicians greatly. Compassionate professional behaviour should be explicit with ethical principles consisting of integrity, honesty, openness, maintaining confidentiality, altruism, respect for patient dignity and autonomy and those qualities lead to willing compliance with the highest ethical standards. Medical students and future physicians should have a constant awareness of commitment for those attributes to be a part of becoming doctors. Such commitment invites trust from their patients (Swick et al., 1999; Epstein and Hundert, 2002).

Medicine is a “noble profession but nowadays there is a rising issue about unprofessional behaviour among medical students and future doctors that keeping them far from their commitments to protect the welfare of patients and violating their identity in society. So rules (white coat ceremonies and taking special oaths) are created to orient medical students' for adjusting them in the medical field also counselling sessions implemented to foster them with professional behaviours. There is oath-taking ceremony for newly graduates, the moment of transformation from students to professional, mentioning ethical codes which are milestones to progress medical profession (Coulehan, 2005; Sethuraman, 2006; Whitcomb, 2005).

Medical students learn professionalism during the course either by direct teaching or experiential learning that helps students to prioritize their learning needs and make the best use of the time available (Kao et al., 2003).

Self-directed learning or independent learning is the way of taking responsibility for their self-study with or without teamwork or a mentor’s help. Here students are fostered to formulate their self-study design for learning needs, learning goals, appropriate learning strategies, and learning outcomes. By self-learning, students will develop a unique style of learning which will proceed to become self-confident and a body to make professional conduct during teamwork with direct participation (Hatem, 2003; Stephenson et al., 2001; Zamnah and Ruswana, 2019).

Professional knowledge, skills, and attitude are the main components to assess learners’ professional competency. Miller’s pyramid (1990) is the basis for ranking professional competence in educational as well as in workplace surroundings which differentiate between knowledge at the lower level and action at a higher level. Professional authenticity is at the topmost level. Students are explicit about express-
ing their knowledge and skills to prove themselves as competent in Miller’s ideas (Epstein and Hundert, 2002; Ginsburg et al., 2000).

The purpose of our study was to interpret the perceptions of year 4 MBBS students of AIMST University on the core elements of professionalism, namely professional knowledge, professional skills, and professional attitude.

MATERIALS AND METHODS

It was a descriptive cross-sectional study conducted in AIMST University in Kedah state, Malaysia. The study population was 85 from year four MBBS students. The study comprised of a questionnaire survey of students using a structured questionnaire. The questionnaire was pre-tested by expert opinion. The questionnaire contained questions on the core elements of professionalism, grouped under professional knowledge, professional skills, and professional attitude [Table 1]. Each question was containing five response options (strongly agree, agree, neutral, disagree, and strongly disagree). Participants were enrolled after explaining the purpose of the study to them and obtaining verbal informed consent from each of them. Students’ were assured of maintaining confidentiality by not including names or other identifiers in the data collection. Four students volunteer were involved in distributing and collecting the questionnaires and were trained in the data collection procedure, which included identification, recruitment, obtaining verbal informed consent, and data collection. The ethical review committee approved the questionnaire (It was an internal audit initiated by deanship).

Data Analysis

All questionnaires were included in the analysis and there were no missing responses. Statistical analysis was performed using SPSS Statistics version 25.0. Data were expressed in frequencies and percentages for numerical data and the chi-square test was used for categorical data.

RESULTS

85 of year 4 MBBS students from both sexes participated in the study. Among them, male students were 35.3% and female students 64.7%. So nearly double of the students were female. Majority of the students were from Indian community (n = 45; 52.9%), only one student was Malay (n = 1; 1.2%) and the rest were from Chinese community (n = 39; 45.9%). Questionnaire survey results showed [Table 1]. Students agreed on them up to date knowledge with

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But variations of students’ responses were observed in the areas of professional skills and professional attitude.

Under professional skills most of the students agreed with self-directed learning (63.5%), solving the problems and making an appropriate decision (58.8%), teamwork with batchmates (65.9%), and logical thinker (60.0%). The least responses came from able to do self-restraint from diversions (41.2%).

Among all three elements (professional knowledge, professional skills, and professional attitude), Students’ positive responses were more in different fields of professional attitude. Most of the students showed agreed responses on understand hospital setup and clinic setup (65.9% in each), respect for own (61.2%) and others (63.5%), maintain integrity/honesty (61.2%), follow appropriate dress code (61.2%) and behaviour (67.1%), fully aware of patient safety (65.9%) and reflection on knowledge and practice (63.5%). The least number of students agreed on the role model for others (31.8%).

In our observation, there were no statistically significant differences in gender in respect to up to date knowledge of clinical skills (p= 0.038), being self-directed learner (p= 0.171) under professional skills, and being self-confident (p= 0.783) under professional attitude shown in Figure 1.

In Figure 2 it is showing that there were significant relationships (associations) between up to date knowledge of clinical skills with being self-directed learner (p=0.0001) which is under professional skills and between up to date knowledge of clinical skills with being self-confidence (p=0.0001) which is under professional attitude.

Students were asked regarding the best qualities essential for professionalism according to their observation. The top five qualities essential for professionalism as chosen by the students are shown in Figure 3. The top qualities were following appropriate behaviour (67.1%), fully aware of patient safety (65.9%), and teamwork with batchmates (65.9%) and understand hospital setup and clinic setup (65.9% in each).

DISCUSSION

Core competency in the medical profession has emerged globally, which is a prerequisite for a medical practitioner in the 21st century. Medical schools
<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Professional knowledge</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>I am up to date with my knowledge of-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Basic science</td>
<td>3(3.5)</td>
<td>35(41.2)</td>
<td>40(47.1)</td>
<td>6(7.1)</td>
<td>1(1.2)</td>
</tr>
<tr>
<td>b) Clinical sciences</td>
<td>5(5.9)</td>
<td>35(41.2)</td>
<td>40(47.1)</td>
<td>5(5.9)</td>
<td></td>
</tr>
<tr>
<td>c) Clinical Skills</td>
<td>4(4.7)</td>
<td>36(42.4)</td>
<td>39(45.9)</td>
<td>5(5.9)</td>
<td>1(1.2)</td>
</tr>
<tr>
<td><strong>Professional skills</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am a self-directed learner</td>
<td>7(8.2)</td>
<td>54(63.5)</td>
<td>19(22.4)</td>
<td>5(5.9)</td>
<td></td>
</tr>
<tr>
<td>I am able to do self-restraint from diversions</td>
<td>6(7.1)</td>
<td>35(41.2)</td>
<td>35(41.2)</td>
<td>8(9.4)</td>
<td>1(1.2)</td>
</tr>
<tr>
<td>My physical health is optimum</td>
<td>10(11.8)</td>
<td>44(51.8)</td>
<td>27(31.8)</td>
<td>3(3.5)</td>
<td>1(1.2)</td>
</tr>
<tr>
<td>My mental health is optimum</td>
<td>12(14.1)</td>
<td>36(42.4)</td>
<td>31(36.5)</td>
<td>4(4.7)</td>
<td>2(2.4)</td>
</tr>
<tr>
<td>I can solve my problems and make an appropriate decision.</td>
<td>9(10.6)</td>
<td>50(58.8)</td>
<td>22(25.9)</td>
<td>4(4.7)</td>
<td></td>
</tr>
<tr>
<td>I can do teamwork with batch-mates</td>
<td>9(10.6)</td>
<td>56(65.9)</td>
<td>18(21.2)</td>
<td>2(2.4)</td>
<td></td>
</tr>
<tr>
<td><strong>Professional Attitude</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have good communication skills</td>
<td>13(15.3)</td>
<td>43(50.6)</td>
<td>27(31.8)</td>
<td>1(1.2)</td>
<td>1(1.2)</td>
</tr>
<tr>
<td>I am comfortable with a foreign language</td>
<td>8(9.4)</td>
<td>43(50.6)</td>
<td>28(32.9)</td>
<td>5(5.9)</td>
<td>1(1.2)</td>
</tr>
<tr>
<td>I am a-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) logical thinker</td>
<td>8(9.4)</td>
<td>51(60.0)</td>
<td>24(28.2)</td>
<td>2(2.4)</td>
<td></td>
</tr>
<tr>
<td>b) Creative thinker</td>
<td>8(9.4)</td>
<td>42(49.4)</td>
<td>34(40.0)</td>
<td>1(1.2)</td>
<td></td>
</tr>
<tr>
<td>c) Instinctive person</td>
<td>9(10.6)</td>
<td>46(54.1)</td>
<td>25(29.4)</td>
<td>3(3.5)</td>
<td>2(2.4)</td>
</tr>
<tr>
<td><strong>Professional Attitude</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I understand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Hospital setup</td>
<td>5(5.9)</td>
<td>56(65.9)</td>
<td>23(27.1)</td>
<td>1(1.2)</td>
<td></td>
</tr>
<tr>
<td>b) Clinic setup</td>
<td>6(7.1)</td>
<td>56(65.9)</td>
<td>222(25.9)</td>
<td>1(1.2)</td>
<td></td>
</tr>
<tr>
<td>I have respect for-</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>a) Myself</td>
<td>23(27.1)</td>
<td>52(61.2)</td>
<td>9(10.6)</td>
<td>-</td>
<td>1(1.2)</td>
</tr>
<tr>
<td>b) others</td>
<td>21(24.7)</td>
<td>54(63.5)</td>
<td>9(10.6)</td>
<td>-</td>
<td>1(1.2)</td>
</tr>
<tr>
<td>I am a role model for others</td>
<td>3(3.5)</td>
<td>27(31.8)</td>
<td>45(52.9)</td>
<td>10(11.8)</td>
<td>-</td>
</tr>
<tr>
<td>I prefer ethical thinking and behaviour</td>
<td>14(16.5)</td>
<td>49(57.6)</td>
<td>22(25.9)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>I am self-confident</td>
<td>9(10.6)</td>
<td>39(45.9)</td>
<td>33(38.8)</td>
<td>4(4.7)</td>
<td>-</td>
</tr>
<tr>
<td>I always maintain integrity/honesty</td>
<td>15(17.6)</td>
<td>52(61.2)</td>
<td>18(21.2)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>I follow appropriate-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Dress code</td>
<td>23(27.1)</td>
<td>52(61.2)</td>
<td>10(11.8)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>b) Behavior</td>
<td>20(23.5)</td>
<td>57(67.1)</td>
<td>8(9.4)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>I am fully aware of patient safety</td>
<td>19(22.4)</td>
<td>56(65.9)</td>
<td>10(11.8)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>I always reflect on my knowledge and practice</td>
<td>11(12.9)</td>
<td>54(63.5)</td>
<td>18(21.2)</td>
<td>1(1.2)</td>
<td>1(1.2)</td>
</tr>
</tbody>
</table>
Figure 1: Relationship between gender in respect to a) up to date knowledge of clinical skills (p=0.038), b) being self-directed learner (p=0.171), and c) being self-confident (p=0.783)

Figure 2: Relationship between a) up to date knowledge of clinical skills with the self-directed learner (p=0.0001) and b) up to date knowledge of clinical skills with self-confidence (p=0.0001)

Figure 3: The top five essential qualities for professionalism according to students
are attempting to start explicit curricula focusing on professional competency, ethics, and behaviour. The practice of medicine is the trust between medical doctors and their patients, so the highest standards of ethical and professional behaviour of the medical profession should be upheld both in medical students and qualified doctors (Adkoli et al., 2011; Byszewski et al., 2012).

In our study, most of the students agreed that Professional skills and professional attitude are important attributes. The majority of the students expressed their comfortability on being self-directed learners, teamwork with batchmates, follow appropriate behaviour, understand hospital and clinic set up, respect to others, and reflect on knowledge and practice. Students also felt positive about their professional knowledge but less than Professional skills and professional attitude.

Two publications expressed that multi-tasking and self-directed learning might have related to student’s comfort that invites a reflective educational practice but in the real-world, the perception of professionalism depends on student’s own choice related to the specific behaviour that requires mentor’s involvement to clarify the components of professionalism in the classroom and clinical setting. It needs long practice to exercise reflective skills for the development of continuous professional attitude within students’ along with professional knowledge and skills. Effective reflection helps in identifying the gap in the education process. Different educational programs should be implemented to foster this process (Henderson and Johnson, 2002).

Self-awareness and self-monitoring are challenging skills to facilitate autonomous professionalism. It includes the development of an understanding of the self as an individual and as a professional of any incompatibilities. Our study found there were highly significant associations between up to date knowledge of clinical skills with being a self-directed learner and being self-confident. Nicholas et al. showed that the students’ active performances through the inter-professional spectrum could increase the capability of being self-constructive, which will support quality improvement initiatives on a large scale. The student with well-developed self-knowledge and self-consciousness is unlikely to reduce the robustness of professional attributes while working with patients and colleagues enthusiastically (Hartman et al., 2018).

Role modelling is one of the vital components of professionalism, where knowledge and skills are studied and implemented in personal interaction while dealing with patients and peers (Kenny et al., 2003). Although our students expressed a positive professional attitude, they felt less interested in being role models for others and in being ethical thinkers. However, as a hidden curriculum, a good role model can create a constructive learning environment for transmitting communicable skills. A recent publication suggested that role modelling should be highlighted at the institutional level for the development of faculties though it is still untapped as an essential component (Byszewski et al., 2012). Another study explained Two-thirds of students opine, they like to prepare themselves as role models to make professional identity and role modelling should be the most valuable component for the medical school curriculum. Medical ethics education has been considered as one of the major elements producing role models in newly qualified medical doctors who are obligated to maintain moral, professional values, compassionate societal communication, integrity, and good interpersonal skills for health care development. Although the initiative has been taken to incorporate ethics for curriculum development in medical education to achieve goals, sometimes it is failed to get adequate recognition as a major element forming professional commitments in medical professionals (Kenny et al., 2003).

Rajib et al. stated that ethical thinking and understanding ethical practice should be placed in systematic decision making during work plan in duty and implementation of the plan in practice. Taking a careful moral decision and practicing ethical behaviours can be an ethical responsibility for medical students and qualified doctors dealing with ethical dilemmas (Badyal et al., 2016).

Lapse’s professional behaviours by our current generation of medical students and qualified doctors are not uncommon. A great majority of the learners in medical schools are showing unprofessional behaviour comprised of early academic difficulties, unsatisfactory progress, poor clinical performance, a predictor of serious misconduct among practitioners. In this perspective, medical teachers have to pay much attention to identifying unprofessionalism among medical educators appropriately as they are conducting teaching in the classroom and clinical settings (Byszewski et al., 2012).

In a medical study, students are coming from diverse communities and different socioeconomic statuses, races, cultures, and personalities. It is the teachers’ responsibility to take care of their students equally and identify weak points, distracted attitudes also personal preferences in learners which will be helpful to assist their students robustly in a systematic
way (Henderson and Johnson, 2002). Traditional medical education does not mention communication skills that are an essential attribute making connections with patients and getting the highest compliance. Choudhary and Gupta (2015) studied communication skills with year four students and found that the majority of the students showed an optimistic approach towards learning significant communication skills. As they were year four students, they had a direct connection with patients during their clinical posting, so they would have understood the importance of active communication during patients dealing (Brockbank et al., 2011; Choudhary and Gupta, 2015). On the other hand, in our study, almost 50% of year two students agreed with having good communication skills which suggest that they might gradually improve good communication skills under the guidance of their seniors, teachers, and mentors and with continuous practice.

Cruess introduced The McGill physicianship program and explained the principles of cognitive-based professionalism which should be educated explicitly along with social connections followed by practical implementation and all these combined actions are encouraged for faculty level development (Byszewski et al., 2012).

CONCLUSION

The students’ view in different elements of professionalism is praiseworthy; however, in some areas, they could not reach a satisfactory level. These areas should be specified and targeted for teaching to make our students professionally skilled. Students with a good sense of professional behaviour must be less likely to involve in professional errors.

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Conflict of Interest

The authors declare that they have no conflict of interest for this study.

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