

## Original Articles

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# Perception of Medical Professionalism among Clinical Students at Universiti Sains Islam Malaysia

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### Abstract

**Background:** Medical professionalism can be defined as a set of values, behaviours and relationships. Thus it is imperative that professionalism is incorporated into the undergraduate curriculum. In Universiti Sains Islam Malaysia, medical professionalism is integrated throughout the 6-year medical programme through courses in Fundamental Islamic knowledge, Medical ethics, clinical teaching and community sessions.

**Objective:** Thus a study was carried out to evaluate the perception of the concept of professionalism among clinical students.

**Materials and Methods:** A cross-sectional study was carried out on 142 clinical students of year 4, year 5 and year 6. Participants were given a questionnaire consisting of items on personality and professional characteristics of a good Muslim doctor. Analysis of data was done using SPSS software version 18. The mean, standard deviation, mean score, median and inter quartile ranges (IR) for knowledge, attitude, practice as well as both personal and professional characteristics were determined and the differences between groups were analysed using Mann-Whitney U tests or T tests.

**Results:** Significant differences were seen for perception of professional characteristics between year 4 and year 6 ( $p$  value = 0.0001) and between year 5 and year 6 ( $p$  value=0.002). Significant differences for all items on professional characteristics were seen between year 4 and the final year students and four out of five items between year 5 and the final year students. No significant differences were noted in the perception of personal and professional characteristics among the clinical students by gender.

**Conclusion:** The clinical students seemed to have benefitted from the Islamic-integrated medical curriculum in USIM. Overall, the senior clinical students developed better insight of the desirable personal and professional characteristics of a good Muslim doctor. Improvement in the teaching of professionalism could have greater impact on the development of professionalism among the clinical students.

**Key words:** Professionalism, clinical students, islamic input, medical curriculum.

### Introduction:

Medical professionalism can be defined as a set of values, behaviours and relationships. Teaching and evaluating professionalism are important issues in medical education. However there is no common definition of medical professionalism used across medical education and there are no guidelines on how professionalism should be developed in medical students.<sup>1</sup> The attributes of professionalism which

are most commonly cited in the literature are altruism, accountability, excellence, duty, honour and integrity, and respect for others.<sup>2</sup>

In Islamic perspective, medical professionalism was based on values that consist of faith (*iman*), consciousness (*taqwat*), best character (*ahsan al akhlak*), excellent performance (*itqaan al 'amal*), strife toward perfection (*ihsan*), responsibility (*amanat*) and self-accountability (*muhasabat alnafs*).<sup>3</sup> The importance of incorporating professionalism into the undergraduate curriculum have been acknowledged throughout the world. Various curricula have been designed to integrate professionalism.<sup>4,5</sup> Universiti Sains Islam Malaysia (USIM) is one of few universities in Malaysia that integrates Islamic input in the medical curriculum. This is in parallel with the philosophy of the University of integrating *Naqli* (revealed knowledge through the Al Quran and *Hadith*) and *Aqli* (humanities) knowledge in all programmes. The

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aim of the medical programme in USIM is to produce good Muslim doctors integrated with Islamic values. Fundamental Islamic courses such as *Akhlak* and *Tasawuf*, Medicine and Science in Quran and *Sunnah*, Islamic Jurisprudence and Fiqh Issues and Ethics in Medicine are introduced to the students.<sup>6</sup> These courses provide Islamic knowledge on science and Islamic rules mentioned in Quran, *fiqh*, faith, attitude and behaviour, as well as Islamic principles, ethics and values which serve as guidance in counseling and decision making in their profession as medical practitioners. Medical ethics is also being taught at the beginning of the clinical phase in year 4. Islamic values are also being incorporated in Behavioural Science course, Community health posting as well as formally and informally during the clinical skills sessions in the preclinical years and the various clinical teaching sessions in the clinical years. Memorization of Quranic verses are also emphasised throughout the programme which provides the sense of well being besides allowing them to apply the verses in their dealings with patients.

Thus the purpose of this study was to evaluate the perception of the clinical students on medical professionalism based on Islamic perspective as part of our research project on evaluation of the Islamic input in the medical curriculum.

**Materials & Methods:**

This study was approved by the University Research Committee in November 2012. The study has adopted clustered sampling, with a total of 142 clinical students (61 males and 81 females) of year 4 (n=47), year 5 (n=52) and year 6 (n=43) of 2012/2013 academic session participated in the research project, at the end of the clinical academic session of 2012/2013. Apart from 142 students, 10 respondents from each study year have been excluded as they have participated in the pilot study (n=30). Thus all clinical students of the academic session were recruited in this study.

Research tool that was used in this study was a questionnaire developed by research members in a half day workshop in

February 2013. The questionnaire was validated in a pilot study done in early 2013 involving 30 students representing each academic year, with Cronbach value of 0.816. Each batch of the clinical students was given the questionnaire and was requested to answer the questionnaire truthfully and honestly.

The questionnaire consisted of 3 parts; Part I: Information on the respondent; Part II: Knowledge, attitude and practice (KAP) of Islamic input; Part III: Impact of Islamic input on personality and professionalism. In Part III, statements were developed based on our expectation that the main result of training from a medical curriculum that is integrated with Islamic input would be that of a good Muslim doctor. Items were assessed using an even-point scale (strongly disagree=1, disagree=2, agree=3 and strongly agree=4).

Questionnaires were collected after about 15 – 20 minutes. Data collected were analysed using SPSS software version 18. The mean, standard deviation, mean score, median and inter quartile ranges (IR) for personal and professional characteristics were determined and the differences between groups were analysed using Mann-Whitney U tests or T tests. The sample size included all those who fulfill the inclusion criteria.

**Result:**

Table 1 shows the descriptive statistical results (mean, median, standard deviation, minimum and maximum scores and inter quartile range (IqR) for both personal and professional characteristics as perceived by clinical students by year of study. Significant differences were seen for perception of professional characteristics between year 4 and year 6 (*p* value = 0.0001) and between year 5 and year 6 (*p* value=0.002). Significant differences for all items on professional characteristics were seen between year 4 and the final year students (Table 2) and four out of five items between year 5 and the final year students (Table 3). Table 4 and Table 5 revealed no significant differences in the perception of personal and professional characteristics in the clinical students by gender.

**Table-I**

*Descriptive statistical results of personal and professional characteristics of students by year of study.*

	Personal characteristics			Professional characteristics		
	Year 4 (N=47)	Year 5 (N=52)	Year 6 (N=42)	Year 4 (N=47)	Year 5 (N=52)	Year 6 (N=52)
Mean	20.45	20.69	20.29	16.89	17.00	18.31
Median	20.00	20.00	21.00	16.00	17.00	19.00
SD	2.44	2.60	2.85	2.09	2.11	1.83
Minimum value	15.00	15.00	12.00	13.00	12.00	15.00
Maximum value	24.00	24.00	24.00	20.00	20.00	20.00
Interquartile ranges	5.00	5.00	5.00	4.00	4.00	3.00
<i>z</i>	-.238	-.380	-.604	-3.186	-.309	-3.052
<i>p</i>	0.812	0.704	0.546	<i>p</i> =0.001*	<i>p</i> =0.757	<i>p</i> =0.002#

\* year 4 vs year 6 #year 5 vs year 6

**Table-II**

*Median score, interquartile ranges (IqR) for personality and professional characteristics perceived by year 4 and year 6 clinical students.*

Characteristics	Year 4 (N=47)		Year 6 (N=42)		z	p
	Median	IqR	Median	IqR		
<b>Personal</b>						
Agent of healing	4.00	1	3.00	1	-2.395	0.017*
Responsibility	3.00	1	4.00	1	-1.282	0.200
Respect for superiors	4.00	1	4.00	1	-.825	0.409
Attitude towards healthcare team	3.00	1	3.00	1	-.379	0.705
Attitude towards colleagues	3.00	1	3.00	1	-.076	0.939
Self-accountability	3.00	1	3.00	1	-.698	0.485
<b>Professional</b>						
Conscious of professional ethics	3.00	1	4.00	1	-2.657	0.008*
Conscious of Islamic rules.	4.00	1	4.00	0	-2.936	0.003*
Excellent performance	3.00	1	4.00	1	-2.070	0.038*
Strife toward perfection	3.00	1	4.00	1	-2.738	0.006*
Communicate the concept of good clinical practice	3.00	1	4.00	1	-2.588	0.010*

**Table-III**

*Median score interquartile ranges (IqR) for personality and professional characteristics perceived by year 5 and year 6 clinical students.*

Characteristics	Year 5 (N=52)		Year 6 (N=42)		z	p
	Median	IqR	Median	IqR		
<b>Personal</b>						
Agent of healing	3.00	1	3.00	1	-1.165	0.244
Responsibility	4.00	1	4.00	1	-.659	0.510
Respect for superiors	4.00	1	4.00	1	-.597	0.550
Attitude towards healthcare team	4.00	1	3.00	1	-.489	0.625
Attitude towards colleagues	3.00	1	3.00	1	-.413	0.680
Self-accountability	3.00	1	3.00	1	-.018	0.986
<b>Professional</b>						
Conscious of professional ethics	3.00	1	4.00	1	-1.423	0.155
Conscious of Islamic rules	4.00	1	4.00	0	-2.315	0.021
Excellent performane	3.00	1	4.00	1	-2.935	0.003
Strife toward perfection	3.00	1	4.00	1	-2.083	0.037
Communicate the concept of good clinical practice	3.00	1	4.00	1	-2.981	0.003

**Table-IV**

*Descriptive statistical results for personality and professional characteristics perceived by clinical students by gender.*

	Personal characteristics		Professional characteristics	
	Male (N=61)	Female (N=80)	Male (N=61)	Female (N=80)
Mean	20.15	20.75	17.28	17.41
Median	20.00	21.00	18.00	17.00
SD	2.73	2.51	2.26	2.00
Minimum value	12.00	16.00	12.00	13.00
Maximum value	24.00	24.00	20.00	20.00
Interquartile ranges	5.00	5.00	5.00	3.00
z		-1.182		-.283
p		0.237		0.777

**Table-V**

*Median score, interquartile ranges(IqR) for personality and professional characteristics perceived by clinical students by gender.*

Characteristics	Male (N=61)		Female (N=80)		z	p
	Median	IqR	Median	IqR		
<b>Personal</b>						
Agent of healing	3.00	1	3.00	1	-.341	.733
Responsibility	3.00	1	4.00	1	-.772	.440
Respect for superiors	3.00	1	4.00	1	-1.918	.055
Attitude towards healthcare team.	3.00	1	4.00	1	-1.305	.192
Attitude towards colleagues.	3.00	1	3.00	1	-.790	.430
Self-accountability	3.00	1	3.00	1	-1.171	.242
<b>Professional</b>						
Conscious of professional ethics.	3.00	1	3.00	1	-2.42	.809
Conscious of Islamic rules.	4.00	1	4.00	1	-.124	.902
Excellent performance	3.00	1	3.50	1	-.575	.565
Strive toward perfection	3.00	1	4.00	1	-1.374	.170
Communicate the concept of good clinical practice	3.00	1	3.00	1	-.844	.399

**Discussion:**

Muslim doctors are expected to practice medicine in line with Islam and portray highest standards of professional qualities and ethical values.<sup>7</sup> Thus items for assessing the perception of personality and professional characteristics were developed to represent values that are expected of a Muslim doctor. We found that these items that we developed correlated very well with those values of medical professionalism based on the Islamic perspective proposed by Hasan Kasule.<sup>3</sup> Faith, responsibility, attitude/behaviour and self-accountability were being assessed by items on personality characteristics whereas consciousness, best character and strife towards perfection were assessed by items in professional characteristics.

Values for professionalism may vary with gender, study-year and socio-cultural background.<sup>8</sup> During training, medical students undergo both personal and professional development. In USIM, the Islamic courses were introduced to students in stages and as such some students had not gone through important courses such as Islamic jurisprudence and fiqh issues and ethics in medicine. However, medical ethics has been introduced at the beginning of the clinical phase. Consequently, different groups of students would show different responses to characteristics of personal and professionalism.

The present study revealed that clinical students, in general have good insight of the desirable characteristics of a good

Muslim doctor that are expected of them, based on the median values. This study also revealed that the more senior clinical students who have been exposed to more Islamic courses that are integrated in the medical curriculum developed higher awareness of Islamic values which are necessary in their practice as Muslim doctors.

The year 6 students who have completed the Islamic courses and clinical training including the management and treatment of patients showed significantly better awareness of professionalism compared to the junior clinical students. This should be expected as the final year students have greater opportunity and experience in application of Islamic knowledge and values compared to their juniors. This result is in contrast to other studies that demonstrated deterioration in students' attitude towards professionalism during the years of training.<sup>9,10,11</sup>

Studies have shown that gender has influence on professionalism.<sup>12,13,14</sup> In this study, we found that the male and female clinical students' perception on professionalism were not significantly different. This finding is consistent with the report by Salam et al<sup>10</sup> but other study found a significantly higher score in professionalism.<sup>13</sup>

Items for personal development were well perceived by the clinical students who have been exposed to courses in Islamic input. The course on *Akhlak and Tasawuf* ensures best human interaction between doctor and patient and professional colleagues. The item "agent of healing" represents faith. Faith is an important element in a practising Muslim doctor as it improves professionalism by motivating the practice of holistic medicine and at the same time realising that the doctor is just an agent and not the cause of cure.<sup>3</sup> The basic principle of Islamic medicine is the concept that the Ultimate Healer is Allah, the Creator. This concept requires further strengthening throughout the training period which would be manifested in the attitude, actions and practice of medicine.<sup>1</sup>

This study revealed that the medical students especially the juniors have lower awareness of professional characteristics of a good Muslim doctor compared to their senior counterparts. All the items assessed for the professional characteristics are important for professional development in the undergraduate medical professionalism. Excellent performance together with strife for perfection should motivate the doctors to improve their skills (clinical and non clinical) and knowledge that will ensure excellent quality in their medical practice. Since USIM is the leading university that integrates Islamic component in the medical curriculum, results of this study would be useful for other medical schools with Islamic-integrated medical curriculum to make comparison.

Medical doctors should have sincere intention and take the responsibility of patient care as a trust (*amanah*) from the Ultimate Healer. This is a concept of good clinical practices based on Islamic ethics and values which should be developed during the training period. This ideal requires medical students to acquire the necessary expertise expected of doctors and deliver it in the most ethical manner through good communication and portrayal of compassion in providing care to patients.

Several studies reported that role models are the primary influence of students' professional development.<sup>16,17,18,19</sup> Clinical teachers consciously or unconsciously act as role models to students<sup>1</sup>. Clinical students are generally influenced by their superiors in the medical team and learn professional medical values from them.<sup>20</sup> Educational leaders should then establish a mechanism to equip teachers with the necessary skills to help students learn properly and achieve the desired outcome as teaching, like clinical skills, have to be done correctly or else it might lead to serious implications. The art and skills of teaching can be learnt and it is well established that the teacher is a key element in the creation of the conditions in which learning occurs. Teachers require basic abilities such as understanding of basic educational principles and acquire appropriate technical skills to facilitate the learning process. First and foremost, clinical teachers should understand the objectives and outcome of medical programme and that becoming role models for students are very much desired. Apart from having passion, dedication and commitment should be committed to evaluating and improving their own teaching skills from time to time. Guidebooks, creation of good working environment, intellectual discourses and motivational talks by experts for staff and students are means to improve and strengthen medical professionalism and role modeling in this faculty.

#### **Conclusion:**

The clinical students seem to have benefitted from the Islamic-integrated medical curriculum in USIM. Medical professionalism among the clinical students needs to be strengthened in order to achieve the aim of the Faculty to produce holistic Muslim doctors. Thus study on evaluation of professionalism on clinical students who have direct contact with patients, patients' families and health personnel is useful and relevant as the results could provide feedback on the effectiveness of the teaching of professionalism. A qualitative study to explore their perception and practice of professionalism is beneficial.

**Conflict of interest:** None

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**References:**

1. Paice E, Heard S and Moss F. How important are role models in making good doctors? *BMJ* 2002;325:707-10.
2. American Board of Internal Medicine (ABIM) Foundation; American College of Physicians-American Society of Internal Medicine (ACP-ASIM) Foundation; European Federation of Internal Medicine. 2002. Medical professionalism in the new millennium: A physicians charter. *Ann Intern Med* 136:243-46.
3. Omar Hasan Kasule. Medical professionalism and professional organizations. *Journal of Taibah Medical Sciences* 2013;8(3):137-41.
4. Humprey HJ, Smith K, Reddy S, Scott D, Madara JL and Arora VM. Promoting an environment of professionalism: the University of Chicago roadmap. *Acad Med* 2007;82:1098-1107.
5. Parker M, Luke H, Zhang J, Wilkinson D, Peterson R and Ozolins I. The pyramid of professionalism: seven years of experience with an integrated program of teaching, developing and assessing professionalism among medical students. *Acad Med*. 2008;82:733-41.
6. Jamilah J, Najib AA, Dzulkhairi M, et al. Integration of Islamic Input in Medical Curriculum—Universiti Sains Islam Malaysia (USIM) Experience. *International Medical Journal of Malaysia* 2014;13(2):73-7.
7. Ariff HO. Workshop for teaching medical professionalism at the Kulliyah (faculty) of medicine at International Islamic University Malaysia (IIUM). *FIMA Yearbook* 2009.
8. Nath C, Schmidt R and Gunel E. Perceptions of professionalism vary most with educational rank and age. *J of Dental Education*. 2006;79(8):825-34.
9. Sobani ZA, Mohyuddin MM, Saeed SA et al. Professionalism in medical students at a private medical college in Karachi Pakistan. *J Pak Med Assoc*. 2013;63:935.
10. Salam A, Chew OS, NurFarhana M, Hayati H, Lim SL and Muhammad Hazwan A. A pilot study on professionalism of future medical rprofessionals in UniversitiKebangsaan Malaysia (UKM) Medical Centre. *Procedia-Social and Behavioural Sciences*. 2012;60:534-40.
11. Brown D, Ferill MJ, Lloyd L. The taxonomy of professionalism: reclaiming the academic pursue of professional development. *Am J of Pharmaceu Edu*. 2009;73(4): Article 68.
12. Ahn JH. The influence of gender on professionalism in female trainees. *Korean J Med Educ*. 2012;24(2):153-62.
13. Johnston JL, Cupples ME, McHlade KJ, Steele K. Medical students' attitude to professionalism: an opportunity for the GP tutor? *Educ Prim Care*. 2011;22:321-27.
14. Nomura K, Yano E, Fukui T. Gender differences in clinical confidence: a nationwide survey of resident physicians in Japan. *Acad Med*. 2010;85:647-53.
15. Hatta Shaharom. Teaching medical professionalism: An Islamic approach. *FIMA Yearbook* 2009.
16. ByszewskiA, Hendelman W, McGuinty C, Moineu G. Wanted: role models- medical students' perceptions of professionalism. *BMC Med Ed* 2012;115-120.
17. Baernstein A, Oelschlagel AEA and Chang TA. Learning professionalism: Perspective of preclinical medical students. *Acad Med*. 2009;84(5):574-81.
18. Howe A, Barrett A and Leinster S. How medical students demonstrate their professionalism when reflecting on experience. *Med Educ* 2009;43(10):942-51.
19. WeissmannPF, Branch WT, Gracey CF, Haidet P and Frankel RM. Role modeling humanistic behavior: learning bedside manner from the experts. *Acad Med*. 2006;81:661-67.
20. Fard NN, Asghari F and Mirzazadeh A. Ethical issues confronted by medical students during clinical rotations. *Med Ed*. 2010;44:723-30.