

Clinical Professionalism from the Perspectives of Medical Sciences Students: A Case Study in Iran

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Abstract: Professionalism is a crucial factor in responsibility and accountability to patients. Identifying current conditions of professionalism among students is necessary for planning and policy making. The aim of the present study was to investigate professionalism among students of Qazvin (Iran) University of Medical Sciences. This cross sectional study conducted in 2015 and consisted of 200 clinical students of Qazvin University of Medical Sciences. Multistage sampling was used and samples were selected by random sampling. The most important variables were altruism, accountability, excellence, duty, honor, practice habit and respect. The instrument of collecting data was a standard 32-item questionnaire of professionalism. In order to determine the scope of values and beliefs, a 5-scale Likert scale was used in each item. Instrument reliability tools were Cronbach alpha 0.89 and Test-Retest 0.88. Age average of the participants was 23.85 ± 3.93 . 120 participants (60%) were females. The lowest scores of professionalism were for altruism (3.65 ± 0.69) and accountability (4.22 ± 0.58). The highest scores were of respect (4.31 ± 0.57) and practice habit (4.23 ± 0.62). Mean of students' professionalism was 4.29 ± 0.48 . There was a significance difference among gender, grade point average, place of residence and level of academic skills with professionalism ($p < 0.05$). These variables predicted 15% of professionalism. Clinical student of University of Medical Sciences were at an acceptable level of professionalism. However, paying more attention to altruism, duty and accountability among Iranian students may lead to an ideal professional level.

Key words: Professionalism, clinical students, medical sciences, professionalism, Iran

INTRODUCTION

Professionalism is an issue that contains a basis for relationships among service providers and the community therefore professionalism must be taken for granted in medical education (Irvine, 2003). Expectations of the community demand for more attention to professionalism in healthcare system and moral standards must be taken into account entirely (Hojat *et al.*, 2009). Thus, clinical professionalism is said to be of so high importance that it has been emphasized seriously however no instructions have been introduced to develop it among students of medical sciences (Hilton and Slotnick, 2005). But the

most important point is that clinical professionalism is not just a matter of knowledge and science but it inherently carries the notion of accountability and responsibility to patients. It also contains human rights and respect for those who receive the services (Wagner *et al.*, 2007).

A study, done in 2001, has emphasized the importance of professionalism among university students and suggested that reliable scientific evidence on how to implement professionalism in universities is needed (Stephenson *et al.*, 2001). Therefore, there has always been an emphasis on improvement of student's awareness about clinical professionalism, accountability to patients and effective relationships with patients to

institutionalize the issue among students. From the beginning of learning, students should identify values and principles of proper interaction with patients. Generally, professionalism is defined as a self-regulatory, moral and patient-centered skill that should be among service providers (Van Zanten *et al.*, 2005). Various definitions have been provided for professionalism by different medical organizations. American National Publication Association defines professionalism as a duty to provide sufficient clinical care, retain medical operations, bring training and experience together, provide relationships with patients and finally promote health (General Medical Council, 2006). According to ABIM, medical professionalism includes altruism, accountability, excellence, duty, honor and respect and students of medical sciences must be aware of the crucial importance of accountability and uniformity of proper service providing based on values (Royal College of Physicians, 2005).

Because of the importance of professionalism and its promotion among clinical students, there must be much more efforts to provide a comprehensive content to convey the notion of professionalism. Although there have been various fundamental framework in faculties and also changes in educational content in universities as well as providing novel tools and methods, good results have not been attained (Arnold, 2002; Steinert *et al.*, 2005). It should be noted that the education sector's task is to provide principles and rules of professionalism as well as medical information for students and also teach them how to employ medical knowledge and necessary skills (Cooke *et al.*, 2006; Dharamsi *et al.*, 2010; Papadakis *et al.*, 2012). In order to accomplish and institutionalize professionalism among students of medical sciences, uniformity, empathy and culture must be institutionalized among staff, instructors and students and all individuals should practice in it (Martimianakis *et al.*, 2009).

There are 3 major approaches to be considered in medical professionalism: placing the patient at the focal point (patient-centeredness) (Baernstein and Fryer-Edwards, 2003; Scavenius *et al.*, 2006), exercising reflective exercises (Hilton and Southgate, 2007; Shapiro *et al.*, 2004) and moral viewing to professional operations of healthcare (Branch, 2006; Cordingley *et al.*, 2007). Various studies done on medical professionalism have taken many different tools and instruments of measuring the issue into account and there is an agreement that we lack a unique and specific instrument of measuring (Jha *et al.*, 2007; Lynch *et al.*, 2004). In professionalism, it is very important that instructors

encourage students to realize clinical professionalism and proper behaviors in this domain (Murden *et al.*, 2004; Papadakis *et al.*, 2001). It is also very important that unprofessional behavior in healthcare sectors be identified and proper plans be made to eliminate such behaviors and lead them to a more balanced action (Schubert *et al.*, 2008).

Barry suggests that professional challenges remain in spite of various preventing strategies therefore there is a great need to have fundamental planning and decision making in this domain (Barry *et al.*, 2000). In a study, Epstein reported that there are different domains of competence in professionalism including cognitive, technical, contextual, relational, moral and behavioral domains (Epstein and Hundert, 2002). Nemati conducted a study "A Review of Professionalism" in which suggested that professionalism is a crucial and effective issue in healthcare sector that will lead to credit and trust from patients to this sector. Commitment to professional principles has many great advantages for health system and promotes accountability in this system (Nemati *et al.*, 2010). In Tsai's study, "Professionalism from American University Students' perspectives", it was reported that the score of seven dimensions of professionalism were at a range of 3.88-4.67, indicating a desirable professionalism among clinical students, however it was much lower than the ideal level (Tsai *et al.*, 2007).

To conclude, we can say that the factor distinguishing professionalism from other jobs is the relationship between the provider and the receiver of services as well as the emphasis on service provision for patient. Because of the significance of the issue of professionalism in healthcare systems and because we lack a helpful study in Qazvin (Iran), we decided to conduct a case study "Medical Professionalism from clinical students' perspectives in Qazvin (Iran).

MATERIALS AND METHODS

This study was a cross sectional done in 2015 on students of Qazvin University of Medical Sciences (Iran). The number of samples was 200 and estimated using sample volume formula considering similar studies in Iran and foreign countries. Cluster and random sampling was used. The samples were from medical (N = 64), dentistry (N = 38), paramedical (N = 58) and nursing and midwifery (N = 36) faculties. The difference in sample numbers was due to the difference in proportion of students of these faculties. A standard professionalism questionnaire consisted of 2 parts: background variables like age,

gender, place of residence, academic field of study, academic skills and the main questions on the seven aspects of altruism (1 question), accountability (3 questions), excellence (7 questions), duty (76 questions), honor (9 questions), practice habit (3 questions) and respect (3 questions). The questionnaire had a total of 32 items, based on Likert 5-item scale, from strongly agree to strongly disagree (scores 5-1), medical professionalism was calculated. The total score of professionalism was the mean of the 32 questions. Inclusion criterion was all students of Qazvin University of Medical Sciences (Iran) whose field of study was in direct relation to the patient or worked in the clinical department of hospitals. Exclusion criterion was students' reluctance to participate in the study. The validity of the questionnaire was confirmed by Tsai's study (Tsai *et al.*, 2007). In order to localize in Iran, experienced professors' opinions were incorporated and after some slight modifications, the pilot study was done on 35 students. Reliability of the instrument was confirmed using Cronbach alpha 0.89 and test-retest 0.88. The data were collected by trained interviewers. A two-hour training workshop was held for the interviewers. Employing the students of the mentioned faculties led to increase the study accuracy and complete filling of questionnaires which in turn led to collecting questionnaires, without any defect or missing. The Qazvin social determinants of Health Research Center (Iran) confirmed this study as a moral study. The importance of this research was explained to the participants and they were ensured that their information would be confidential.

Statistical analysis: They also filled consent forms. SPSS21.00 Software was used to analyze the data using t-test, ANOVA and linear regression with Background method. Kolmogorov-Smirnov test showed that the data were normal and Leven test demonstrated that the variances were equal.

RESULTS AND DISCUSSION

Age average of the participants was 23.85 ± 3.93 . The 120 of the participants (60%) were female and mean of the participants' grade point average was 15.70 ± 1.27 . The 136 participants (68%) lived in dorms and 6 of the participants (3%) declared weak skills in their field study while 78 students (39%) said that they had high levels of skills.

Among the components of clinical professionalism, attention to community benefits, equity, having

conscience more than what is expected, equal contact to the patients, wearing suitable clothes, prioritizing patients and being aware of personal limits were of a mean lower than 4 (Table 1). Among other components, doing the best to accomplish duties and politeness and respect had the highest mean score of 4.49 and 4.42, respectively (Table 1). In professionalism dimensions, altruism, duty and accountability had the lowest mean score of 3.65 ± 0.69 , 4.12 ± 0.50 and 4.12 ± 0.64 , respectively while respect and practice habit had the highest mean score of professionalism (Table 2).

There was a significant relationship between gender, grade point average and the level of skills in the field of study with clinical professionalism ($p < 0.05$), so that the female students, higher grade point average, lived in dorms, higher level of skills had a higher clinical professionalism (Table 3). Linear regression showed that gender, place of residence, grade point average and skills in field of study were determining factors affecting professionalism and could predict 15% of professionalism scores (Table 4).

One of the important aims of the present study was to investigate professionalism among clinical students and attaining the present conditions of professionalism among Iranian students which have not been observed in any other studies. It was one of the strengths of the present study. In this study, professionalism was at a desirable level among Iranian students but reaching an ideal level requires sufficient interventions and policies. In this study, in the subcategories of professionalism, 7 subcategories got scores lower than 4. In Tsai's study in the United States (Tsai *et al.*, 2007), 4 of these subcategories had scores lower than 4. In the present study, professionalism was at a proper level which was consistent with the results of Tsai's study in the US A, indicating that the two countries (Iran and the USA) are at an appropriate level of human accountability and professional morality, the reason of which can be good moral principles and values in these two countries.

Results of Roth's study (Roth and Zlatic, 2009) showed that measuring clinical professionalism is crucial for clinical students and a suitable plan to institutionalize professionalism among university students is required. Roth also suggested that improving professionalism ensures that patients believe that they get services of the highest standard level and all practices are done at the best of the caregivers to improve their health. Results show that doing the best and having respect and politeness toward patients are among the most important

Table 1: Mean and standard deviation of questions related to medical professionalism from students of Qazvin University of Medical Sciences' (Iran) perspectives (n = 200)

Questions of medical professionalism	Mean and standard deviation
Risk taking when the patient is in danger (prioritizing the patient)	3.98±0.94
Taking the difficulties in accountability to patients' needs	4.20±0.78
Efforts toward active presence in medical organizations	4.08±0.82
Having justice and being plain	4.36±0.62
Voluntary promotion of personal and professional skills for the community welfare	4.07±0.77
Having appropriate clothes	3.93±0.93
Availability and accountability	4.29±0.65
Politeness and respect respect to rules and regulations	4.42±0.66
Respecting cultural values	4.21±0.84
Having commitment and sacrificing	4.19±0.87
Having conscience more than what is expected	3.88±0.96
Participation in meeting social needs	4.16±0.71
Commitment o better access for patients	4.23±0.61
Having self-assessment	4.20±0.64
Having conscience at work to continuous learning (commitment to continuous up-to-date knowledge)	4.32±0.74
Having order and discipline	4.34±0.71
Equal contacts with patients	3.93±0.93
Precedence of community needs to personal needs	3.65±0.69
Respect for the elderly	4.21±0.81
Having justice and prevent some people from availability of some benefits	3.67±0.86
Acknowledgement of the limits and defects of one's self	3.99±0.78
Commitment to maintain a proper relationship with patients	4.21±0.76
Providing the best type of services without paying attention to the affordability of services for a certain patient	4.13±0.82
Intimacy and empathy among patients and the personnel	4.30±0.60
Punctuality and honest	4.38±0.59
Doing one's best	4.49±0.53
Respect to other coworkers (nurses, interns, doctors)	4.37±0.65
Having appropriate relationships with other people like coworkers and directors	4.32±0.76
Deny to personal or professional rules violation	4.26±0.79
Ensuring confidence of patients and their families' information	4.36±0.85
Being careful in delivering services	4.39±0.59
Commitment to correct accomplishment of patients' medical file	4.28±0.63
Total score mean of professionalism scores	4.29±0.48

Table 2: Mean and standard deviation of professionalism dimensions from Qazvin University of Medical Sciences students (Iran) perspectives in 2015 (n = 200)

Professionalism	Altruism	Accountability	Excellence	Duty	Honor	Practice habit	Respect
Mean and standard deviation	3.65±0.69	4.12±0.58	4.20±0.48	4.12±0.50	4.21±0.46	4.23±0.62	4.31±0.57

Table 3: Significance of clinical professionalism with demographic variables of Qazvin University of Medical Sciences students (Iran) in 2015 (n = 200)

Variables	Subject	Frequency	Relative frequency	Mean and standard deviation	Significance level
Gender	Male	80	40.0	4.02±0.40	<0.05*
	Female	120	60.0	4.28±0.43	
Field of study	Nursing-midwifery	36	18.0	4.06±0.42	>0.05**
	Medicine	68	34.0	4.11±0.33	
	Dentistry	38	19.0	4.15±0.48	
	Paramedics	58	29.0	4.35±0.49	
Place of residence	Private home	29	14.5	3.88±0.38	<0.05**
	Parent home	33	16.5	4.09±0.40	
	Dorm	136	68.0	4.26±0.42	
Skills	Weak	6	3.0	3.94±0.85	<0.05**
	Average	28	14.0	4.11±0.56	
	Strong	88	44.0	4.24±0.34	
	Very high	78	39.0	4.15±0.46	

*T-test **ANOVA test

Table 4: Regression coefficients between medical professionalism and significant demographic variables of students of Qazvin University of Medical Sciences (Iran) in 2015 (n = 200)

Model liner regression*	β	Std.	Beta	Confidence	Interval	Sig.
Constant	2.683	0.404		-1.887	3.480	0.000
Gender	0.217	0.074	0.241	0.071	0.362	0.004
Place of residence	0.108	0.036	0.196	0.037	0.180	0.003
Grade point average	0.063	0.027	0.181	0.010	0.116	0.019
Skill	0.077	0.040	0.137	0.009	0.158	0.048

R = 0.410; R² = 0.168; Adjusted R² = 0.151; SE = 0.407

points of Roth's study (Roth and Zlatic, 2009) which have been demonstrated by the students participating in this study. Since, different factors must be considered in developing medical professionalism in a study it was reported that the best way to develop and institutionalize professionalism among students of medical sciences is to consider the five key factors, namely planning and training program for students of medical sciences, proper selection of students, implementing appropriate teaching methods, introducing new learning methods, applying creative patterns and expert evaluation methods (Passi *et al.*, 2010).

According to Santen's study, reflective norms and employing valuable experiences are important informational sources of appropriate behaviors in order to promote professionalism. Reflecting scientific experiences can be an informational substitute for developing professionalism among students and assistants (Santen, 2011). Two issues, voluntary promotion of personal skills and commitment to continuous knowledge acquiring among Iranian students were at a desirable level. This result was consistent with Santen's study (Santen, 2011). In Borgstrom's study paying attention to values and principles of professionalism were observable. Students had a great emphasis on patient-centeredness and delivering comprehensive care (Borgstrom *et al.*, 2010). In current study, the student attention was on values and patient service availability too.

There were three points which had the potential of conflict including morality, relationships with patients and service provision and finally mental and mind limits. Borgstrom's study also indicated that the newest professionalism pattern included paying attention to empathy, participating in patient's emotions, open relationships; patient-centeredness and patient autonomy in selecting the type of services (Borgstrom *et al.*, 2010). Howe's finding showed that use of helpful clinical experiences through the way to promote clinical professionalism is a very good solution for developing university students' professionalism. Howe also suggested that lessons from experiences, group working, patient-centeredness and finally interactions between patients and providers are crucial to promote professionalism (Howe *et al.*, 2009). In the present study, Iranian students were at a desirable level of making good relations with patients and responding patients' needs with a score higher than 4 but they got a score lower than 4 in prioritizing patients which seems to be normal.

Miller's study showed that all students had a positive attitude toward professionalism and gave more importance to interactions with patients and learning lessons from experiences (Karnieli-Miller *et al.*, 2010). In Yamani's study it was reported that 5 major bases in professionalism information interchange, kindness and confidence, reliance, accountability and making formative

relationships need to be institutionalized in clinical students (Yamani *et al.*, 2010). Yamani also reported that positive and negative experiences during attendance in university have a great impact on students' perception of professionalism. Ainsworth reported that two groups of doctors and students had similar potentials of error and deviance in uniformity and accountability toward patients (Ainsworth and Szauder, 2006). In the present study lack of acknowledgement of the limits and paying too much attention to personal benefits, having discrimination toward patients are among points of deviance for Iranian students. Conduction of this study in one number university was one of the limitations on this study. This subject can be generalized with a more comprehensive study.

CONCLUSION

The results of this study showed that professionalism was at an acceptable level among students of Qazvin University of Medical Science (Iran) with a mean score of 4.29 ± 0.48 and the only dimensions that need much more attention are altruism, duty and accountability. Since professionalism is crucial in healthcare, its improvement among university students of medical sciences can ensure patients' satisfaction and security as well as healthcare system objectives such as accountability. The practical importance of these findings is that they can show the present conditions of university students in the domain of professionalism and we can decline defects by emphasizing weaknesses and appropriate interventions and train students who commit to professionalism principles. In order to improve professionalism among university students, there have been suggested to pay attention to patients, special attention to values, the importance of equity in healthcare, precedence of community benefits over personal ones and institutionalizing patient-centeredness. Conducting a complementary research to investigate weaknesses and strengths of professionalism from instructors and patients' point of view can pave the way for future studies.

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