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Assessment of Professionalism in Medical Residents from the Perspective of Interns in Kashan University of Medical Sciences in 2017

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Abstract

Background and Objectives: Professionalism includes behaviors, actions, and goals that determine the professional level of an individual. The assessment of the professionalism of learners can help to estimate and determine educational needs and priorities, as well as further interventions. As future faculty members and experts, residents play an important role in the practical education of behavior and scientific commitment of medical students. Therefore, for the first time, this study aimed to evaluate the professionalism of residents from the perspective of interns.

Methods: This cross-sectional study was performed on 138 interns at Kashan University of Medical Sciences in 2017. The research tool was the Persian and edited version of the 15-item questionnaire designed by the American Board of Internal Medicine for the evaluation of professionalism. The mean and standard deviation were estimated related to total scores of professionalism and three domains of excellence, honor/integrity, as well as altruism/respect. Moreover, the relationship between reported scores and demographic characteristics was determined.

Results: Out of 150 distributed questionnaires, 138 questionnaires were analyzed in this study. The total score and three domains of excellence, honor/integrity, and altruism/respect were estimated at 6.07±1.53, 4.24±1.87, 6.56±2.03, and 6.83±1.73, respectively.

Conclusion: In total, the professionalism of residents was moderate from the perspective of interns. Among the three assessed domains, the lowest and highest scores were related to the domains of excellence and altruism/respect, respectively. The low score of excellence reminded the absence of residents as role models. With respect to the hidden educational curriculum and its impact on the formation of professional behavior of students, it seems crucial to plan in this regard.

Keywords: Professionalism, Internship, Residency, Questionnaire.

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Introduction

The basis of professionalism in medicine is mutual trust in the physician-patient relationship. In this regard, the key point is the attitude of a physician in prioritizing the needs of the patient over the needs of him/herself (1). Primacy of patient welfare, patient autonomy and social justice are fundamental principles of professionalism. Commitment to professional competence, honesty with patients, patient confidentiality, maintaining appropriate relations with patients, improving quality of care, improving access to care, a just distribution of finite resources, scientific knowledge, maintaining trust by managing conflicts of interest, professional responsibilities are defined as professional responsibilities (2,3).

The importance of education and evaluation of professionalism in medicine is no secret. There is a long history of assessing medical ethics in

medicine; in the past, Iranian physicians were called “Hakim” (wise). In addition to medicine, they had knowledge of jurisprudence, as well as epistemic and ethical sciences (4).

Currently, many medical universities around the world hold special courses on ethical issues and components, as well as professional behavior, in addition to covering professionalism in the form of a hidden curriculum (taught based on the behavior of professors, instructors or role models) (5,6). In the curriculum of general practitioner (GP) in Iran, a two-credit course entitled medical ethics has been considered for students (7).

During education, specialized residents are the major providers of diagnostic and treatment services for patients and act as role models for medical students. After graduation, these individuals will be the leading health service providers in the healthcare system of the country, and some of them will be recruited by universities as faculty members. Therefore, teaching professional behaviors to these people during their education is of paramount importance (8).

According to longitudinal studies, there is a direct relationship between poor performance and behavior during education with violations and complaints against physicians, as well as the cancellation of medical license (9-11). The Accreditation Council for Graduate Medical Education introduces the education and evaluation of professionalism as one of the most essential principles of the internship course (12).

The level of significance of different principles of professionalism for residents and experts of various fields is debatable. For example, special issues should be considered for the internal, surgery, and orthopedics fields that interact with patients and other colleagues in emergency situations, compared to those in radiology or pathology departments who are less directly in contact with patients in emergency and stressful situations (6,13).

Various methods have been proposed to evaluate professionalism the most important of which include peer assessment, objective structured clinical examination, and direct observation by faculty members, clinical incident report, and a portfolio maintained by learner leading to the facilitation of periodic self-reflection (11, 14, and 15). In the peer assessment method, surveys are conducted among educational colleagues through repeated and unplanned contacts. Therefore, evaluating through this method will lead to valuable results, either conducted anonymously or obviously (15,16).

In this regard, an applied tool was a questionnaire designed by the American Board of Internal Medicine (ABIM) to assess the professionalism of internal residents (1). This questionnaire was also exploited to evaluate the professionalism of residents in the field of physical medicine and rehabilitation of the United States (17).

In addition, the questionnaire evaluates professionalism in three domains of excellence (i.e., efforts to improve the quality of health services, efforts to improve the quality of education, and efforts to keep knowledge and abilities of oneself up to date), honor/integrity (i.e., truthfulness, as well as not deceiving a patient, his companions and colleagues), and altruism/respect (i.e., respecting the patient, his companions and their beliefs, as well as respecting the colleagues and the laws). The Persian version of the questionnaire was used in 2009 to assess the professionalism of residents in different fields in Tehran and Shahid Beheshti universities (1). A similar study was conducted related to residents of physical medicine and rehabilitation in Iran (18).

Since residents are in close contact with interns in various departments, they are responsible for most of their education in various scientific and professional ethical fields as role models. To date, no study has been conducted to assess the professionalism of residents from the perspective of interns.

Methods

This cross-sectional study was conducted on medical students of internship course (in pediatrics, internal medicine, neurology, psychiatry, Infectious Diseases, surgery, gynecology, and brain surgery departments) in

Kashan University of Medical Sciences during summer in 2017. After the study approval by the Ethics Committee of the University (IR.KAUMS.REC.1395.110), a list of interns of the mentioned departments was obtained from the Education Department of the School of Medicine. One of the researchers, who was well aware of the research objectives and the executor of the project, met the interns individually and ensured them of the confidentiality terms regarding their personal information. In addition, oral consent was obtained prior to the study.

In addition, it was noted at the beginning of the questionnaire that the responses of the individuals will remain confidential and will be analyzed in general. The inclusion criteria were the willingness to participate in the study and working in the affiliated hospitals of Kashan University of Medical Sciences (Shahid Beheshti, Naghavi, Kargarnejhad, Shabihkhani Maternity) during the research time.

Due to the high workload of the interns, the researchers referred to these individuals at appropriate times (not in stressful conditions and not after their shifts) to fill the questionnaires. Some interns completed the questionnaire on the first visit, and some had delays (up to several days later). It was notable that the completed questionnaires were received in-person or through phone calls follow up.

The Persian and edited version of the professionalism questionnaire of ABIM (translated, edited, and standardized by Aramesh et al.) was applied in this study, reliability and construct validity of which were confirmed at 0.88 and based on factor analysis, respectively (1). In the present study, the Cronbach's alpha coefficient of the mentioned questionnaire was estimated at 0.878.

The questionnaire encompassed three sections and evaluated the professionalism of residents by assessing their colleagues. In the first section of the questionnaire, demographic characteristics (e.g., age, gender, and semester) were presented, while the second section included information about the responders' knowledge of "professionalism" term, attending educational workshops on professionalism, and personal review of professional behaviors. In the third part, there were 15 questions on professionalism in three domains of excellent (1-4 items), honor/integrity (5-8 items), and altruism/respect (9-15 items).

Items were scored from never (0 scores) to always (10 scores). While items 1-4 were scored directly, the items 5-15 were scored reversely. In the end, considering the direct and reverse items, 0 and 10 were allocated to the lowest and highest levels of professionalism, respectively. In the excellence domain, the subjects were asked about the presence or absence of proper models in the hospital departments in terms of professionalism level, as well as education to patients and other residents.

The domain of honor/integrity showed the level of responders' belief in the dignity of their colleagues, and how much they avoided unprofessional behaviors. For example, the subjects were asked whether the residents lied or not or demanded the removal of the information from patients' files from other residents. In addition, they were asked whether the residents transcribed medical history or physical examination or not.

The items related to the domain of altruism/respect demonstrated the level of respect the residents hold for patients, other physicians, as well as hospital rules, and how much they avoided the loss of resources and hospital equipment. In addition, the subjects were asked about the level of considering the comfort of patients in scheduling and selecting diagnostic and treatment measures by residents.

One sample t-test was utilized to assess the level of residents' professionalism [and its components] from the perspective of interns. Moreover, independent t-test, analysis of variance, Pearson's correlation coefficient, and regression model were used to evaluate the relationship between professionalism and demographic characteristics. It should be noted that data analysis was performed by SPSS software (version 14).

Result

Among the 161 medical interns listed in the Education Department of the School of Medicine, 8 individuals were guests in other universities and not present in the hospitals affiliated with Kashan University of Medical Sciences. In addition, 3 subjects were unwilling to participate in the study, and 12 individuals failed to complete the questionnaires. Ultimately, 138 interns (i.e., 68 male and 70 female participants) with the mean age of 24.83±0.61 years participated in the study, 101 of whom (73.2%) were single and the rest were married.

The subjects were selected from interns of the 12th (27.5%), 13th (34.1%), and 14th≥ (38.4%) semesters. These individuals were active in the departments of pediatrics (16.7%), internal medicine (23.2%), surgery (18.1%), gynecology (15.3%), psychiatry (7.2%), infectious disease (7.2%), brain surgery (7.2%), and neurology (5.1%). In terms of professionalism, 91 subjects (65.9%) expressed their familiarity with the term, while 15 participants (10.9%) had passed educational courses or workshops on medical professionalism. On the other hand, 17 individuals (12.3%) studied personally in this field.

Table 1. One sample t-test for evaluation of residents' professionalism level (along with components) from viewpoints of interns

Variable	Mean	SD	T	DF	P-value
Excellence	4.24	0.87	-4.76	138	<0.001
Honor/dignity	6.56	2.03	9.02	138	<0.001
Altruism/respect	6.83	1.73	12.41	138	<0.001
Professionalism(total score)	6.07	1.53	8.20	138	<0.001

Parametric indicators were used for analysis and description with regard to the normal distribution of professionalism and its components. Amounts below the median (meaning five) were indicative of a “low level”, while higher or equal amounts of the median were recognized as “moderate level” (up to 90%). In addition, amounts above 90% were considered “high or favorable level”. Therefore, with regard to the results presented in Table 1, the mean component of the "excellence" of residents was significantly “low” from the perspective of the interns. In addition, the interns reported that the mean professionalism (total score) and the components of "honor/dignity" and "altruism/respect" were at the “moderate level” (P<0.001).

Table 2 tabulates the relationship between the demographic characteristics of the interns and residents' level of professionalism. The results were indicative of a significant association between semester and interns' type of department with the residents' professionalism (P<0.05). In this regard, the interns of the 12th semester assessed residents' professionalism at a lower level, compared to the level reported by the students of the 14th semester. In addition, the level of residents' professionalism was significantly lower from the perspective of the interns of the surgery departments, compared to those working in other departments.

Table 2. Evaluation of relationship between residents' professionalism with gender, marital status, semester, and type of internship

Variable	Level	Mean	SD	T	P-value
Gender	Female	5.89	1.50	1.41	0.159*
	Male	6.25	1.55		
Marital status	Single	6.09	1.62	0.37	0.714*
	Married	6.00	1.25		
Semester	12	5.55	1.43	3.19	0.045**
	13	6.22	1.49		
	14	6.31	1.57		
Type of discipline	Surgery	5.59	1.48	-3.47	0.001*
	Non-surgery	6.46	1.46		

*Independent t-test / ** Analysis of variance

The results were indicative of concurrent relationship between demographic characteristics of interns with residents' professionalism. According to the stepwise regression model, the only significant variable was the interns' type of department. In other words, the type of department had a significant effect on the level of residents' professionalism from the viewpoint of interns (regression coefficient: -0.285, and p-value: 0.001).

Discussion

The present study aimed to evaluate the professionalism (in three domains of excellence, honor/integrity, and altruism/respect) of residents from the perspective of the interns at Kashan University

of Medical Sciences. According to the results, the professionalism score of the residents was reported to be 6.07±1.53 (score range: 0-10).

In 2009, Aramesh et al. evaluated residents' level of professionalism of various medical fields in Tehran and Shahid Beheshti universities. The total score of professionalism of the colleagues reported by the residents was 6.12±0.37 (moderate level) (1). Moreover, in two other studies carried out by Delisa et al. (2002) and Ahadi et al. (2015) on the professionalism of residents in the field of physical medicine and rehabilitation, the total scores of professionalism of the subjects were reported as 7.7 and 7.67 (out of 10), respectively.

The considerably higher score of professionalism in the aforementioned studies, compared to that in the present study, might be due to the assessment of only the residents of physical medicine and rehabilitation (which is a field with no shift, operating room, and surgery). However, residents of all fields (both with and without surgery room/surgery) were included in the present study.

The findings of the present study demonstrated that there was a significant association between the type of department (in terms of having surgery and operating room) and the level of reported professionalism of residents. Effective factors on the professionalism of individuals may include the level of stressful conditions for residents, emergency cases, excessive number of shifts, stress imposed by professors, insomnia, impatience, and less opportunity to study.

In another study conducted by Askarian et al. in which the professionalism of medical students (interns) was assessed in Shiraz, the total professionalism score was reported to be 5.9 (19), which was lower, compared to those in all studies performed on residents. Given the lack of availability of studies on the professionalism of interns of other universities and professionalism of residents of Shiraz University of Medical Sciences, the professionalism score of interns of the medical university cannot be analyzed, and complementary studies are required in this regard.

In the present study, the scores of excellence, honor/integrity, and altruism/respect were estimated at 4.24±1.87, 6.56±2.03, and 6.83±1.73, respectively. In other words, the lowest and highest scores were related to the domains of excellence and altruism/respect, respectively. In fact, responders believed that residents acted better in terms of respect to hospital laws, avoiding resource loss, and attention to the comfort of patients in treatment procedure, compared to the priority of patients' needs over their own interest and efforts to improve education quality.

The above-mentioned findings are inconsistent with a part of results obtained by Aramesh (1), Delisa (17), Ahadi (18), and Asgarian (19) and in line with some other parts, in a way that in the four aforementioned studies, the highest and lowest scores were related to the domains of honor/integrity and excellence, respectively. The low score obtained in the excellence domain from the perspective of residents of Kashan University of Medical Sciences was indicative of the absence of residents as role models based on the opinions of interns. Given the hidden curriculum and its impact on the formation of professionalism in university students, it seems necessary to provide more planning for improving the level of professionalism, along with proper scientific education.

The present study evaluated the responders' knowledge level of professionalism concept, attending educational workshops on professionalism, personal study of medical ethics, duration of educational activities in a week, and their association with the score of professionalism. The attitude of individuals toward professionalism, their personal study of the field, and attending conferences and workshops on this subject might affect the scoring of colleagues by the individuals. In this regard, the more a person is knowledgeable about the topic, the more he/she is expected to adhere to professionalism rules. Therefore, the score he/she gives to his colleagues will be lower and more cautious. The findings of the present study demonstrated that the interns, who were familiar with professionalism or had personally studied the topic or attended special

courses on this subject, considered the professionalism of the residents lower, compared to other interns, thereby giving lower scores to these individuals. However, while the scores were numerically lower, they were not significant.

We evaluated the relationships of professionalism with some personal characteristics such as the type of discipline (from the point of view of having an operating room/night shifts), age, gender, and marital status. Future studies are suggested to evaluate the relationships of professionalism with other factors such as patients' conditions, faculty-resident ratio, patient-resident ratio, and workload.

Conclusion

In the present study, residents' professionalism was evaluated from the perspective of interns, and the professionalism score of the residents was estimated at 6.07±1.53, which was higher than the average (meaning five). The mean professionalism (total score) and components of honor/integrity, as well as altruism/respect, were at a moderate level. Furthermore, the mean of residents' excellence was significantly low from the perspective of interns.

In fact, interns believed that the residents had a better condition in terms of respecting hospital laws, avoiding resource loss, and paying attention to patients' comfort in the treatment procedure, compared to the prioritization of needs of the patients over their own interests, attempts made to be scientifically updated, and efforts dedicated to improving education quality.

Actually, interns reminded the absence of residents as role models in Kashan University of Medical Sciences by allocating a low score to the domain of excellence. With regard to the effect of the residents' behaviors on the formation of professional behavior in medical students, it seems crucial to conduct efficient planning about this issue.

Conflict of interest

The author declares no conflict of interest.

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