

Access this article online
Quick Response Code:

Website: www.jehp.net
DOI: 10.4103/jehp.jehp_1565_21

Effective components of teachers' professionalism in viewpoints of various stakeholders

Fatemeh Keshmiri¹, Sara Jambarsang², Amir Houshang Mehrparvar³

Abstract:

BACKGROUND: The teacher must conduct educational responsibilities in the best way by observing the ethical principles to meet students' educational needs. The aim of the study was to investigate the main factors of professionalism among faculty members from the viewpoints of various stakeholders including learners, peers, and educational officials, as well as the components were assessed from the viewpoints of the stakeholders.

MATERIALS AND METHODS: This was a descriptive analytical study conducted in two phases. In the first phase, a questionnaire was developed and validated to assess the professional behavior of faculty members. In the second phase, the evaluation of the teachers' professional behavior was done from the viewpoint of various stakeholders, including learners, middle and senior education managers and peers. The participants were faculty members from 10 schools enrolled in the study by census ($n = 427$). To extract the factors that constitute professional behavior in faculty members, exploratory factor analysis was used. Data were summarized using descriptive indices (mean, standard deviation, and percent). Exploratory factor analysis (EFA) was used to extract the factors that constitute professional behavior in faculty members. Data was analyzed by using SPSS software (version 23.0).

RESULTS: In the first phase, the questionnaire with 11 items was developed. The validity and reliability of the tool was confirmed. The mean (SD) of the faculty members' scores was $4.54(\pm 0.34)$, with a minimum score of 2.33 and a maximum score of 5.00. The highest scores of faculty members were reported in the items of "altruism to colleagues and students" and the lowest scores were related to "feedback seeking and feedback acceptance". Professional behavior was categorized under two domains: accountability to professional duties and adherence to professional values. Fifty percent of the participants followed the adherence to professional values ($P = 0.22$), but less than 50% of the individuals followed the adherence to professional duties significantly ($P = 0.002$).

CONCLUSION: The results of the present study showed that adherence to professional duties was low in faculty members. Assessment of individuals' adherence in these two domains showed that faculty members' compliance in the domain of accountability to professional duties was significantly lower.

Keywords:

Evaluation, professionalism, teacher, teaching

Introduction

Adherence to professionalism is recognized as an obligation in various professions. Although there is no consensus on the definition of professionalism, it has been introduced as a concept based on

context and emphasized on the commitment of professionals on ethical and professional responsibilities.^[1] Professionalism is defined as a set of behaviors, attitudes, and characteristics that includes adhering to ethical principles, establishing and maintaining effective relationships with colleagues and the audience, being trustworthy, and developing self-awareness in the professional role.^[2]

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite this article: Keshmiri F, Jambarsang S, Mehrparvar AH. Effective components of teachers' professionalism in viewpoints of various stakeholders. *J Edu Health Promot* 2023;12:24.

¹Department of Medical Education, Education Development Center, Shahid Sadoughi University of Medical Sciences, Yazd, Iran, ²Center for Healthcare Data Modeling, Department of Biostatistics and Epidemiology, School of Public Health, Shahid Sadoughi University of Medical Sciences, Yazd, Iran, ³Industrial Diseases Research Center, Occupational Medicine Department, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

Address for correspondence:

Prof. Amir Houshang Mehrparvar, Shahid Rahneemoon Hospital, Farrokhi Street, Yazd, Iran.
E-mail: ah.mehrparvar@gmail.com, ahmehrparvar@ssu.ac.ir

Received: 23-10-2021
Accepted: 03-06-2022
Published: 31-01-2023

Teaching is an important profession in educational systems,^[3-5] with a multidimensional effect on the students' learning and organizational culture. Professionalism of a teacher means observing certain standards in education and its related expertise.^[5] Adherence to professional principles has received special attention in the framework of teachers' competencies.^[6] Professionalism and role modeling are defined in the teaching framework, which includes providing the best teaching and content-based performance. Encouraging learners toward excellence, adhering to ethical principles in teaching, being patient and honest, being a role model in the standards of ethical behavior in their specialized field, being up-to-date, and being responsible for their duties are among the key concepts in a teacher's professionalism.^[6] Ali *et al.*^[2] introduced the improvement of personal and professional capabilities, help to others for learning and team work, as the three prominent characteristics of faculty members' professionalism, which are observed and learned by the students.

The teacher has obligations to themselves, their profession, and the community. The teacher must fulfill their educational responsibilities in the best way by observing the ethical principles to meet students' educational needs. Besides, they should be known as a role model that obliges them to follow professional principles.^[7,8] Therefore, the teachers' behaviors have explicit and implicit effect on learners. In order to develop professional behaviors, proper planning should be done to empower and evaluate competencies among faculty members.

Assessing professional behavior is one of the issues of educational systems at the level of learners and faculty members. Evaluation of professionalism should be done using appropriate tools and proper resources. One of the most common approaches in evaluating professionalism is multi-source feedback (MSF) by which different stakeholders can evaluate an individual's professional behavior.^[9] In the field of professionalism, assessment of psychological skills, management, professional responsibilities, altruism, empathy, attitude, teaching skills and professional development using MSF were suggested in various studies.^[9] Evaluation from various viewpoints leads to a fairer and a comprehensive description of the performance. Valid evaluation can provide a platform for recognizing individual and professional abilities and limitations among faculty members. Results of evaluation can be used in planning for the development of professional values in the organization.

The aim of this study was to investigate the main factors of professionalism among faculty members from the viewpoints of various stakeholders including learners,

peers and educational officials at two levels (senior managers and middle managers) in educational departments. as well as the components assessed from the viewpoints of the stakeholders.

Materials and Methods

Study design and setting:

The present study was a descriptive analytical study conducted in two phases [Figure 1].

Study participants and sampling

Phase I: In the validation process, 22 faculty members participated in the Delphi rounds and 24 faculty members contributed in test-retest reliability.

Phase II: The participants were faculty members from 10 schools enrolled in the study by census ($n = 427$).

Data collection tool and technique

In the first phase, a questionnaire was developed to assess the professional behavior of faculty members. The initial items of the questionnaire were developed by a literature review related to the framework of the faculties' competencies and components of professionalism in an expert panel. Sixteen items were developed in this phase. The content validity of the tool be evaluated qualitatively and quantitatively.^[10,11] The Delphi technique was used to evaluate the content and face validity of the initial version of the questionnaire. The Delphi technique was performed in three rounds with the participation of faculty experts in the professionalism domain ($n = 22$). The number of participants was determined according to the Lawshe's table.^[12] In the first round, the questionnaire was sent to the participants, and their opinions regarding the content validity of the questionnaires were examined qualitatively. After two weeks of each round, the participant's opinions were collected and organized, and the next round was conducted. The implementation of this technique continued for two rounds and no new suggestion was presented in the last round. At this stage, the qualitative content validity of the questionnaire items was confirmed. To evaluate the content validity in a quantitative way, two indicators were used: content validity ratio (CVR) and content validity index (CVI). To determine the CVR, the experts were asked to examine each item on a three-point scale ("necessary", "useful, but not necessary", and "not necessary"). In the CVI, the relevance criterion for each item of the mentioned tools was evaluated using a four-point Likert scale.^[13]

Reliability was assessed by the internal consistency and reproducibility of the questionnaire. Eighty-nine faculty members participated in assessing the internal consistency. In examining the test reproducibility, 24 faculty members completed the questionnaire in two

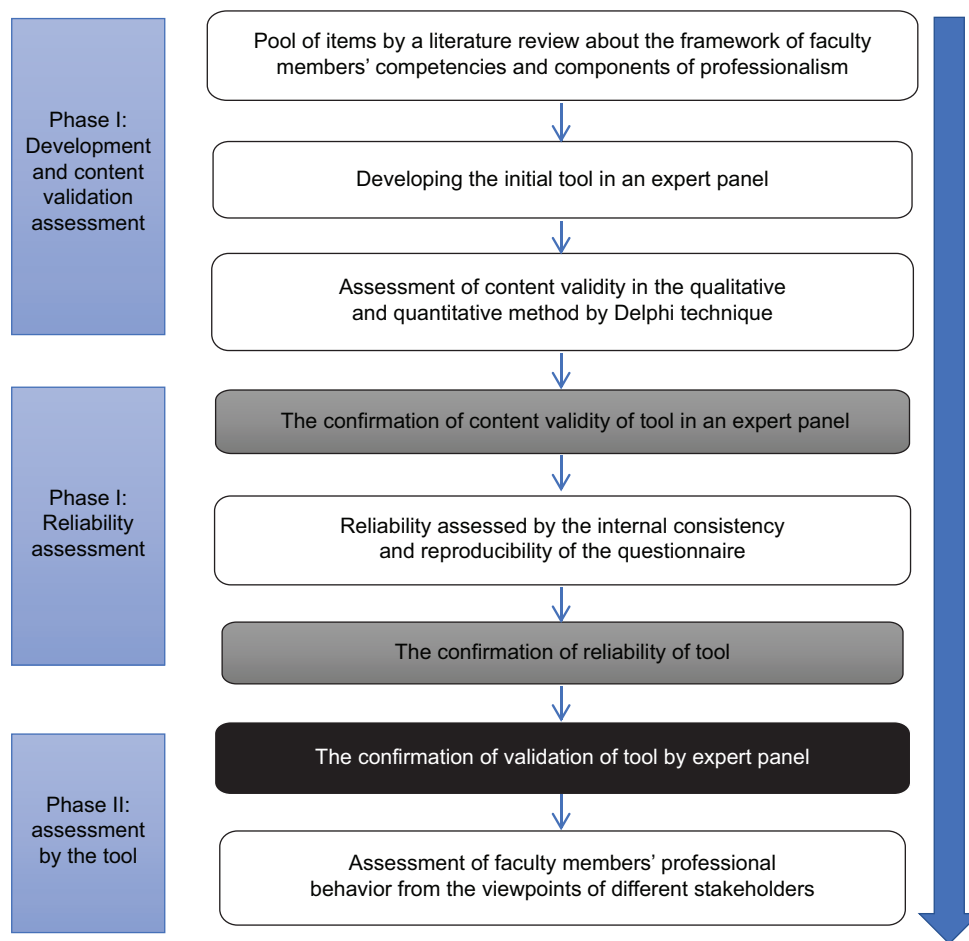


Figure 1: The flowchart of study steps

weeks (test–retest reliability). Finally, the questionnaire was finalized with 11 items of professional behavior. The mean score of 11 questions for each individual, which ranged from 1 to 5, was used as an indicator of professional behavior.

In the second phase, faculty members' professional behavior from the viewpoints of different stakeholders was evaluated. In order to implement the evaluation process, the evaluation resources were determined based on the MSF evaluation approach and the evaluators included various stakeholders, such as learners, mid-level education managers (department heads) and senior managers (faculty heads) and peers (faculty members). The evaluation form was provided electronically to various stakeholders. The inclusion criteria for the evaluators were defined as people who had been in contact with the evaluated person for at least three months. The participants were faculty members from 10 schools in both basic and clinical sciences who entered the study by census.

Data analysis

Internal consistency and reproducibility were assessed via Cronbach's alpha and intra-class correlation

coefficient (ICC), respectively. Data were summarized using descriptive indices (mean, standard deviation, and percentage).

Exploratory factor analysis (EFA) was used to extract the factors that constitute professional behavior in faculty members, after aggregating the opinions of learners, managers and peers. Based on this analysis, in which the adequacy of the data was evaluated and confirmed by Bartlett's test and Kaiser–Meyer–Olkin (KMO) index, effective factor loadings were used after varimax rotation.

The criterion to retain factors was eigenvalues greater than 1.0. Once the number of factors being extracted was determined, varimax rotation was conducted to simplify the factor structure and load the product item factor, and eigenvalues were examined. If the factor loadings were greater than 0.50, items would be assigned to a factor.

The factor score for each domain was calculated by summing the mean response of each item that was weighted by factor loading, and each person received an individual factor score for each identified domain.

Factor scores were then categorized into two groups based on the mean of factor score (0) and used as the outcome variable. Chi-squared test was used to assess the associations between variables (disciplinary category, gender, and academic degree) and factor group.

Ethical consideration

The study was approved by the Ethics Committee at the National Agency for Strategic Research in Medical Education. (ID: IR.NASRME.REC.1400.031).

Results

Participants in the first phase included 22 faculty members who were familiar with the concepts of professional behavior. Of these, 10 were males (45.45%) and 12 were females (54.54%). The mean age of participants was 45 years.^[6] To assess the internal consistency of the tool, 89 faculty members were evaluated, of which 45 were females (50.56%) and 44 were males (49.44%). In assessing test reproducibility, 24 faculty members were evaluated twice at a two-week interval, of which 12 were males (50%) and 12 were females (50%). The mean age of the participants was 39 years.^[4]

In the first phase of the study, a questionnaire with 11 items was designed. The face and content validity of the tool was confirmed by consensus of expert's opinions. The results of calculating CVR showed that according to Lawche's table, all items in this index obtained values higher than 0.42.^[12] The items obtained CVI values higher than 0.79 and were retained in the questionnaire (S-CVI = 0.80). The results showed that the internal consistency of the tool was confirmed via Cronbach's alpha which was 0.94 and the test reproducibility was confirmed by ICC which was 0.93.

In the second phase, all faculty members ($n = 427$) were enrolled in the study. Table 1 shows demographic characteristics of the participants.

The mean (SD) of the faculty members' scores was 4.54 (0.34), with a minimum score of 2.33 and a maximum score of 5.00. The highest scores of faculty members were reported in the items of "altruism to colleagues and students", "excellence and personal and professional development" and "accountability", and the lowest scores were related to "feedback seeking and feedback acceptance, effective communication and punctuality". Table 2 shows the mean scores of the participants in each item regarding gender and majoring subject.

Here, KMO = 0.918 which indicates that the sample was adequate and we may proceed with the factor analysis. The P value of Bartlett's test was 0.001, therefore the factor analysis was valid.

Table 1: Demographic characteristics of the participants

Degree	Number	Percentage
Gender		
Male		
Professor	40	15.03
Associate professor	70	26.31
Assistant professor	142	53.38
Instructor	14	5.26
Total	226	62.29
Female		
Professor	14	8.69
Associate professor	27	16.77
Assistant professor	103	63.97
Instructor	17	10.55
Total	161	37.70
Academic degree		
Professor	54	12.64
Associate professor	97	22.71
Assistant professor	245	57.37
Instructor	31	7.25
Major category		
Basic sciences	174	40.74
Clinical sciences	253	59.25

According to the exploratory factor analysis, two factors were extracted which explained 71.44% of the variability in the performance of professionalism among faculty members [Table 3]. This explains near three-fourth of the variability.

In the present study, the model extracted from the data was developed in two domains, that is, "accountability to professional duties" and "adherence to values". Adherence to values includes components such as respectful behavior, communication, feedback seeking and feedback acceptance, honesty, and justice. In the domain of accountability to professional duties addressed how a teacher needs to play the role of a teacher. This domain includes abiding by rules, being punctual, collaborating with others, showing altruism, responsibility and personal and professional excellence. The results showed that respectful behavior, responsibility and personal and professional excellence had the greatest impact on evaluating the professional behavior of faculty members. Collaboration with others and altruism had the least impact on the evaluation of professional behavior [Table 3].

To investigate the relationship between faculty members' adherence to these two behavioral domains and gender and job characteristics (major and academic degree), at first, participants were divided into two categories: low adherence (factor score < 0) and high adherence (factor score > 0) [Table 4]. Results showed that 50% of the participants observed adherence to professional values ($P = 0.223$), but less than 50% observed accountability to professional duties ($P = 0.002$).

Discussion

Adherence to professional principles is one of the key concepts in achieving effective teaching, which needs a continuous evaluation and constructive feedback on

the professional behavior of faculty members in the education system. In the present study, the extracted model was developed in two domains of "accountability to professional duties" and "adherence to values". The present results showed that the adherence of faculty

Table 2: Faculty members' score in different items of the questionnaire

Questions	Basic sciences Mean (SD)		Clinical sciences Mean (SD)		Total
	Female	Male	Female	Male	
Respectful behavior	4.47 (0.41)	4.57 (0.33)	4.54 (0.35)	4.68 (0.31)	4.59 (0.35)
Observing academic rules and regulations	4.45 (0.36)	4.48 (0.29)	4.44 (0.48)	4.53 (0.44)	4.48 (0.40)
Punctuality (on-time and continuous presence)	4.42 (0.62)	4.57 (0.44)	4.40 (0.60)	4.46 (0.55)	4.47 (0.55)
Effective communication	4.35 (0.37)	4.43 (0.37)	4.42 (0.43)	4.53 (0.39)	4.45 (0.39)
Feedback seeking and feedback acceptance	4.32 (0.52)	4.40 (0.37)	4.28 (0.45)	4.47 (0.41)	4.38 (0.43)
Honesty	4.51 (0.40)	4.57 (0.28)	4.54 (0.42)	4.70 (0.33)	4.60 (0.36)
Collaboration with others	4.54 (0.52)	4.70 (0.50)	4.47 (0.44)	4.64 (0.39)	4.60 (0.46)
Altruism to colleagues and students	4.60 (0.49)	4.80 (0.34)	4.65 (0.33)	4.75 (0.33)	4.72 (0.37)
Accountability	4.66 (0.45)	4.73 (0.45)	4.47 (0.52)	4.63 (0.46)	4.63 (0.48)
Justice	4.43 (0.44)	4.49 (0.30)	4.47 (0.35)	4.62 (0.38)	4.52 (0.37)
Excellence and personal and professional development	4.65 (0.47)	4.77 (0.38)	4.50 (0.40)	4.63 (0.45)	4.64 (0.43)

Table 3: Extracted category from exploratory factor analysis

	Accountability to professional duties	Adherence to values
Respectful behavior	-	0.872
Observing academic rules and regulations	0.606	0.520
Punctuality (on-time and continuous presence)	0.759	-
Effective communication	-	0.755
Feedback seeking and feedback acceptance	-	0.798
Honesty	-	0.769
Collaboration with others	0.650	-
Altruism to colleagues and students	0.617	-
Accountability	0.870	-
Justice	-	0.747
Excellence and personal and professional development	0.830	-

Table 4: Comparison of the frequency of commitment to two domains of professional behavior regarding gender and academic degree

Professionalism	Factor	*Low n (%)	**High n (%)	P
Adherence to professional values	Gender			
	Female	86 (53.4)	75 (46.6)	0.049
	Male	116 (43.6)	150 (56.4)	
	Major			
Accountability to professional duties	Basic sciences	94 (53.7)	81 (46.3)	0.027
	Clinical sciences	108 (42.9)	144 (57.1)	
	Academic degree			
	Professor	22 (42.3)	30 (57.7)	0.882
Adherence to professional values	Associate professor	45 (48.4)	48 (51.6)	
	Assistance professor	120 (47.6)	132 (52.4)	
	Instructor	15 (50)	15 (50)	
	Gender			
	Female	82 (50.9)	79 (49.1)	0.005
	Male	99 (37.2)	167 (62.8)	
Accountability to professional duties	Major			
	Basic sciences	55 (31.4)	120 (68.6)	0.000
	Clinical sciences	126 (50)	126 (50)	
	Academic degree			
Professor	16 (30.8)	36 (69.2)	0.077	
Accountability to professional duties	Associate professor	38 (40.9)	55 (59.1)	
	Assistance professor	109 (43.3)	143 (56.7)	
	Instructor	18 (60)	12 (40)	

*Respondents with score <0 (mean factor score = 0) on a factor of professionalism. **Respondents with score >0 on a factor of professionalism

members to professional principles from the viewpoint of educational officials, peers and learners was at the desired level. However, establishing a system of continuous mentoring and monitoring can help maintain and enhance the professional performance of faculty members.

The competencies in the field of professionalism have been compiled for a teacher.^[14] Understanding teaching responsibilities, the balance between teaching, clinical and research activities, and personal development about teaching (including reflection, self-awareness of strengths and weaknesses, and the use of new teaching and learning techniques) are important.^[15-18] The extracted categories of the present model include accountability to professional duties and adherence to values. The domain of accountability to professional duties is considered as the duties of a teacher to oneself, the teaching profession, and the educational system. The components of domain related to adhering to organizational rules and fulfilling individual, professional and systemic responsibilities through cooperation and altruism. In the domain of adherence to values, the basic components for value-based teaching include honesty, respect, justice and effective communication. In their study, Cruess *et al.*^[8] identified commitment, confidentiality, altruism, honesty, ethical behavior, professional accountability, and teamwork as elements of professionalism in teaching that were similar to the present results. The present results showed that respectful behavior, responsibility and personal and professional excellence were the most important influential components in the professional behavior of faculty members. In other words, these three components, from the viewpoint of evaluators in the present study, had a greater impact on the professional behavior of the faculty members. Respect is an important concept that affects interpersonal communication and interprofessional collaboration. Respect for the audience and client such as patients and students, respect for colleagues and respect for system requirements can be observed and learned by learners.^[19,20] Accountability to individual and professional duties and responsibilities were recognized as a key competency of a teacher.^[4,18] The important point is the integration of the two components of accountability and excellence, which can indicate the faculty members, in their teaching route, are required to make an effort for personal and organizational development besides their professional responsibilities. The factor loading of the component of observing academic rule and regulations was reported in both of the domains, which could be due to its importance in the two extracted domains. Observing academic rules and regulations is important as a professional value for a teacher and is also known to be important in accountability to professional duties. Then, in the extracted model, this component was placed in both

domains. However, in the domain of accountability, it had more factor loading.

The results of the present study showed that the three components of altruism towards colleagues and students, accountability, personal and professional excellence received the highest scores among faculty members. Altruism means "creating the best interests for the stakeholders" and accountability means "responsible behavior and full performance of assigned duties and responsibilities."^[4,21] The development of these two components in a teacher can lead to the provision of high-quality education in a responsible and altruistic manner. Among faculty members of basic and clinical sciences, altruism gained the highest score. Basic science faculties scored high on accountability and personal and professional excellence. The improvement of the quality of education in the system can be expected by integrating accountability and personal and professional excellence. The results of the present study were different from the results of the Asghari *et al.* study. In the study by Asghari *et al.*,^[22] from the students' point of view, the lowest scores of faculty members and residents were in the domain of excellence. In that study, only clinicians were evaluated from the viewpoints of residents, but in the current study, different stakeholders evaluated faculty members in both basic and clinical sciences, which can affect the results. The present results showed that the highest scores of clinicians were reported in the components of honesty and respectful behavior. The honesty of the clinical teachers in the patient management and the respectful relationships with various stakeholders is very important. The present results showed that clinical faculties in the components were evaluated in favorable level.

The present results showed that faculty members of basic sciences were less adhered to professional values in terms of commitment. They received the lowest scores in the feedback seeking and accepting effective feedback and communication items. The establishment of effective and respectful relationships among teachers and students create an interactive and constructive climate for learning. Additionally, due to the fact that teachers are considered as role models in the classroom and educational environments, it is necessary to monitor teachers' performance and provide feedback to them.^[23] Fewer adherences of clinical faculties in accountability to professional duties were reported. Their lowest scores were related to feedback seeking and acceptance and punctuality. It seems that high workload, playing different clinical and educational roles simultaneously and stressful conditions can affect the professional performance of clinical faculty members in personal excellence and adherence to organizational regulations. While clinical faculty members are mostly observed

by students through multifaceted interactions and experimental learning cycles, it is important to observe personal excellence and adhere to organizational principles. The present results showed that the lowest reported scores related to feedback seeking and acceptance of feedback among faculty members of basic sciences and clinical sciences. Consistent with the present results, Garshasbi *et al.*^[24] showed that recognizing individual limitations and admitting errors had the lowest scores among the evaluated items. In the investigated university, the development of formative evaluation, feedback-reflection and mentoring mechanisms have not been seriously considered, which can affect the present results. Regarding self-assessment, reflection and self-regulation to improve individual performance and personal and professional excellence are defined as the basic competencies and duties of a teacher.^[18] This requires the establishment of organizational infrastructure and systematic support to develop opportunities for evaluation, constructive feedback and reflection.

Effective communication is emphasized as the most important ability of a teacher in different contexts.^[18] Moreover, many elements of professionalism are shown in the communication of a teacher that are observed and learned by learners. The present results showed that after feedback seeking, the score of effective communication of teachers was lower than other components of professionalism. In the Garshasbi *et al.*^[24] study, the communication skills of the clinical faculty members and the residents were evaluated in three areas: feedback to the student, respectful communication, and abuse of power. They showed that about 60% of the learners in residency and fellowship courses assessed the communication skill of the clinical faculty members in the moderate level, which needs improvement. Therefore, empowerment programs in the field of interpersonal and interprofessional communication skills and establishment of formative evaluation mechanisms are recommended to improve the communication capabilities of faculty members.

The results showed that adherence in both domains were higher in male than female faculty members. Given that the ratio of assistant professors and instructors among females was more than males, less experience and unfamiliarity with the duties and principles of the professional role of a teacher may have affected the results. In general, the present results showed that the compliance of faculty members in terms of accountability to duties was low. Considering the role of organizational culture in guiding the professional behavior of faculty members, the dominance of the culture of relationship orientation to task orientation in the studied context may have affected the results. This management style

and organizational culture can reduce the compliance with regulations and perform the expected tasks of the organization. Consistent with the present results, faculty members have obtained lower scores in the components of punctuality and observance of academic regulations. Furthermore, the weakness of supportive policies for the implementation of tasks by faculty members and the lack of a monitoring and feedback system for them can affect the results. The results of the study conducted by Garshasbi *et al.*^[24] at Tehran University of Medical Sciences showed that trainees had little satisfaction with the professional performance of clinical faculty members and did not consider them as ideal role models. In another study, the results showed that more than half of the learners assessed the frequency of professional behaviors of clinical faculty members in moderate level and about 30% of learners believed that the frequency of their professional behavior was less than expected.^[25]

Limitation and recommendation

Observational evaluation, establishing feedback mechanisms from stakeholders, cultivating collegial relationships, and developing lifelong learning opportunities and learning from the experiences of others are recommended to develop teachers' professional behaviors.^[18] In this regard, the 'personal and professional development' courses was recommended to consider in the empowerment program of clinical teachers.^[25] The results of the present study showed the extracted model was developed in two domains, that is, "accountability to professional duties" and "adherence to values". Since, professionalism was defined as a complex and context-based concept, there is a need to further study this model in other contexts. Furthermore, qualitative studies are recommended to explain the factors affecting the differences reported in this study (by gender or field) in context. Although in this study, evaluation was done from the viewpoint of different people, due to the nature of the survey, complete control of subjectivism was not possible, which is one of the limitations of the present study.

Conclusion

The results of the present study showed that the professional behavior of faculty members was categorized into two domains, that is, "accountability to professional duties" and "adherence to values". Assessment of the individuals' adherence in these two domains showed that faculty members' compliance in the domain of accountability to professional duties was significantly lower. Faculties of basic sciences were more committed to the components of the professional duties domain and faculties of clinical sciences were in a better status in terms of commitment to professional values. Feedback seeking and acceptance of feedback

and effective communication had the lowest scores, and accountability and altruism had the highest scores among faculty members. It is recommended to establish developmental evaluation mechanisms and provide feedback for faculty members of clinical sciences and to establish a mentoring system to increase the commitment of faculty members of basic sciences.

Acknowledgments

We would like to express our sincere thanks to experts and faculty members who participated in the present study.

Financial support and sponsorship

This project was funded by the National Agency for Strategic Research in Medical Education. Tehran. Iran. Grant No. 993969.

Conflicts of interest

There are no conflicts of interest.

References

1. Birden H, Glass N, Wilson I, Harrison M, Usherwood T, Nass D. Defining professionalism in medical education: A systematic review. *Med Teach* 2014;36:47-61.
2. Ali A, Anakin M, Tweed MJ, Wilkinson TJ. Towards a definition of distinction in professionalism. *Teach Learn Med* 2020;32:126-38.
3. Dieter PM, Hudak NM, Robinson PR. Promoting faculty professionalism: A case-based approach. *Perspect Med Educ* 2015;4:188-90.
4. Demirkasimoğlu N. Defining 'teacher professionalism' from different perspectives. *Learning and Teaching Around The World*. Routledge; 2018. p. 138-44.
5. Demirkasimoğlu N. Defining "Teacher Professionalism" from different perspectives. *Procedia Soc Behav Sci* 2010;9:2047-51.
6. Srinivasan M, Li S, Meyers F, Pratt D, Collins J, Braddock C, *et al.* "Teaching as a competency": Competencies for medical educators. *Acad Med* 2011;86:1211-20.
7. Cruess RL, Cruess SR, Boudreau JD, Snell L, Steinert Y. Reframing medical education to support professional identity formation. *Acad Med* 2014;89:1446-51.
8. Cruess S, Cruess R. Teaching professionalism—Why, what and how. *Facts Views Vis Obgyn* 2012;4:259-65.
9. Donnon T, Al Ansari A, Al Alawi S, Violato C. The reliability, validity, and feasibility of multisource feedback physician assessment: A systematic review. *Acad Med* 2014;89:511-6.
10. Ghadrdoost B, Sadeghipour P, Amin A, Bakhshandeh H, Noohi F, Maleki M, *et al.* Validity and reliability of a virtual education satisfaction questionnaire from the perspective of cardiology residents during the COVID-19 pandemic. *J Educ Health Promot* 2021;10:291.
11. Sholikhah EN, Susani YP, Prabandari YS, Rahayu GR. Is there a relationship between personal reflection ability and moral reasoning ability in Indonesian medical students? *Int J Med Educ* 2018;9:213-8.
12. Lawsche C. A quantitative approach to content validity. *Pers Psychol* 1975;28:563-75.
13. Gilbert GE, Prion S. Making sense of methods and measurement: Lawsche's content validity index. *Clin Simul Nurs* 2016;12:530-1.
14. Snoek A, Swennen J.M.H, Van der Klink M. The teacher educator: A neglected factor in the contemporary debate on teacher education. In: Hudson B, Zgaga P, Astrand B, editors. *Advancing Quality Cultures for Teacher Education in Europe: Tensions and Opportunities*. School of Education, Umeå University; 2010. p. 33-48.
15. Al-Eraky MM, Donkers J, Wajid G, Van Merrienboer JJ. Faculty development for learning and teaching of medical professionalism. *Med Teach* 2015;37(suppl 1):S40-6.
16. Matveevskii A, Moore DL, Samuels PJ. Competency and professionalism in medicine. *Clin Teach* 2012;9:75-9.
17. Sethy SS. Academic ethics: Teaching profession and teacher professionalism in higher education settings. *J Acad Ethics* 2018;16:287-99.
18. Maxwell B, Schwimmer M. Seeking the elusive ethical base of teacher professionalism in Canadian codes of ethics. *Teach Educ* 2016;59:468-80.
19. Brady L. Teacher values and relationship: Factors in values education. *Aust J Teach Educ* 2011;36:56-66.
20. Khalajinia Z, Alipour Z, Safaeipour R. Exploring medical teachers' and interns' experiences regarding professional ethics. *J Educ Health Promot* 2020;9:131-139.
21. Pavenkov O, Pavenkov V, Rubtcova M. The altruistic behavior: Characteristic of future teachers of inclusive education in Russia. *Proc Soc Behav Sci* 2015;187:10-5.
22. Asghari F, Fard NN, Atabaki A. Are we proper role models for students? Interns' perception of faculty and residents' professional behaviour. *Postgrad Med J* 2011;87:519-23.
23. Daryazadeh S. Considerations about teaching and assessing professionalism for faculty members. *J Educ Health Promot* 2020;9:86.
24. Garshasbi S, Bahador H, Fakhraei N, Farbod A, Mohammadi M, Ahmady S, *et al.* Assessment of clinical teachers' professionalism in Iran: From residents and fellowships' perspective. *Acta Med Iran* 2017;55:59-67.
25. Siraj HH, Salam A, Juriza I, Mahdy ZA, Nabishah M. Professional conduct of clinical teachers: Perspectives of medical students. *Educ Med J* 2014;6:13-19