



## The Factors Affecting the Tenured Faculty Member Evaluation Score from the Perspective of Students of Jahrom University of Medical Sciences in 2016

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### ABSTRACT

One of the most commonly used methods in most countries, including Iran, to determine the success rate of a professor in achieving educational goals is the evaluation of professors from the perspective of students. Since the identification of the strengths and weaknesses of this type of evaluation from the viewpoint of professors and students plays an important role in improving the quality of education, the present study aimed to determine the factors affecting the professor evaluation score from the perspective of students in Jahrom University of Medical Sciences in 2016. The present research was a cross-sectional descriptive study in which 287 students of Different fields studying at Jahrom University of Medical Sciences in 2016 were selected as the sample. The required data were collected using a demographics form and a standard questionnaire on the factors affecting the students' opinions about the evaluation of professors. The data were analyzed using descriptive statistics (percentage and mean) and inferential statistics (Mann-Whitney U test) in SPSS-21. The results of Mann-Whitney U test showed that there is a significant difference between male and female students about the importance of teaching skills in the professor evaluation ( $p=0.001$ ). Female students obtained higher scores than males in this regard. In addition, a significant difference was observed between students of different semesters about the importance of individual characteristics, teaching skills, communication skills, and educational rules in the evaluation of professors ( $p<0.05$ ). The highest score on the quadruple domain was observed in students of the eighth semester. The results also indicated that there is a significant difference between students of different educational levels in terms of the importance of individual characteristics in the evaluation of professors ( $p<0.05$ ). The highest score on the importance of individual characteristics in the evaluation of professors was related to master students. However, there was no significant difference between single and married students and also students of Different fields about the importance of the quadruple domains in the evaluation of professors ( $p>0.05$ ). The most important domains affecting students' evaluation of professors included teaching skills ( $4.07\pm 0.56$ ), communication skills ( $3.84\pm 0.68$ ), educational rules ( $3.81\pm 0.78$ ), and individual characteristics ( $3.33\pm 0.78$ ), respectively. According to the study results, 75.46% of students believed that teaching skills are the most important domain affecting the evaluation of professors. Communication skills (67.99%), educational rules (63.92%), and individual characteristics (49.58%) ranked second to fourth. The study findings showed that teaching skills are the most important factor for students in the evaluation of professors, and communication skills, educational rules, and individual characteristics are other important factors in this regard. To achieve better and more realistic results in evaluations, it is recommended to correct and improve the evaluation tools and processes. Since teaching skills are the most important domain in the evaluation of professors, it is necessary for professors to broaden and update their knowledge and information by participating in workshops and seminars and studying the resources.

**Keywords:** Professors, Students, Evaluation

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## INTRODUCTION

Education is the key to the actualization of natural abilities which are rooted in each person. Education is not the display of knowledge but it is a process that includes the identification of learning level and decision-making about the interventions accelerating the learning [1, 2]. The success of educational settings depends on not only an appropriate curriculum, physical factors, and education quality but also the enthusiasm of teachers and their teaching styles [3]. Those who are involved in teaching mostly specialize in the relevant fields. Since these people are not considered a trained teacher with enough awareness of the principles of adult education, their performance may cause the dissatisfaction of students during the academic year [4, 5]. It should be noted that evaluation is an integral part of medical education. Evaluation of teachers is recognized as a useful tool to improve the quality of education around the world. These systems have long been used to assess the quality of teaching and lessons in medical education. While there are a large number of resources about the feedback and evaluation of education, the most common source of teaching evaluation is the feedback from students [6-8]. Students' evaluation of professors is very common in most colleges and universities. Evidence from many studies suggests that students' voting is part of the process of education effectiveness evaluation in most universities and colleges [9-13]. Basically, students' evaluation of education seeks two fields objectives; first, providing feedback to professors in order to help them improve their teaching skills or change the educational content and, second, decision-making about faculty members. The process of student evaluation of teaching is usually done at the end of a semester or the academic year using anonymous questionnaires. Items of such questionnaires measure different aspects of teaching effectiveness (e.g. the teacher's ability to communicate clearly) and features of the educational content. The questionnaires are analyzed by the institutions designated in the university and the results are referred to the relevant departments for decision-making [14]. Medical education is of special importance due to the responsibility of its graduates towards human life. Hence, great attention is now being paid to the continuous improvement of the quality of medical education systems. Undoubtedly, one of the most

important components in this training system is professors who play a decisive role in achieving the educational objectives. Therefore, evaluation of them is an impotent part of this system [15]. The present study aims to determine the factors affecting students' evaluation of teaching effectiveness in order to improve the educational process, especially in the field of medical sciences.

## MATERIALS AND METHODS

The present research was a cross-sectional descriptive study in which 287 students of Different fields studying at Jahrom University of Medical Sciences in 2016 were selected as the sample. After the approval of the research project, obtaining the permission from Deputy of Research and Technology, and coordination with officials of faculties of Medicine, Nursing, and Paramedicine (Deputy of Education and Deputy of Student Affairs), the research questionnaires were distributed among the participants at the right time (e.g. at the end morning or afternoon classes or breaks in clinical situations) and in a quiet and convenient place and they were asked to fill them out. The measurement tools in this study included a demographics form and a standard questionnaire on the factors affecting the students' opinions about the evaluation of professors. The latter consisted of 24 items which were scored based on a 5-point Likert scale (very high:1, high:2, medium:3, low:4, and very low:5). Wahabi *et al.* confirmed the validity and reliability (with a Cronbach's alpha coefficient of 0.88) of this scale in their study. The data were analyzed using descriptive statistics (frequency, mean, and percentage) and inferential statistics (Mann-Whitney U test) in SPSS-21.

## RESULTS

According to the results, 51.2% of students participated in this study were male and 48.8% of them were female and their mean age was  $21.49 \pm 2.61$ , with a minimum and maximum of 18 and 45. In terms of marital status, 82.1% of participants were single and the rest of them were married. In addition, 73%, 24.5%, 2.5% of them were a bachelor, MD, and master student, respectively. The results also indicated that 24.5%, 15.2%, 22.7%, 19.5%, 7.8%, 8.9%, and 1.4% of participants were studying in Medicine, Operating Room, Nursing, Anesthetics, Laboratory Sciences, Public Health, and Medical Emergency,

respectively. The highest and the lowest frequency of students in terms of the semester were related to the fifth and ninth semesters, respectively (Table 1).

**Table 1: Description of demographic features of participants**

Variable	Number	%	
Gender	Male	140	48.8
	Female	147	51.2
Marital status	Married	50	17.9
	Single	229	82.1
Semester	1	15	5.6
	2	38	14.2
	3	36	13.4
	4	49	18.3
	5	56	20.9
	6	33	12.3
	7	28	10.4
	8	13	4.9
Educational level	Bachelor	206	73.0
	Master	7	2.5
	MD	69	24.5
Fields	Medicine	69	24.5
	Operating Room	43	15.2
	Nursing	64	22.7
	Medical Emergency	4	1.4
	Public Health	25	8.9
	Anesthetics	55	19.5
	Laboratory Sciences	22	7.8

The most important domains affecting students' evaluation of professors included teaching skills (4.07±0.56), communication skills (3.84±0.68), educational rules (3.81±0.78), and individual characteristics (3.33±0.78), respectively. By integrating "low" with "very low" and "high" with "very high" and also calculating the weighted mean, it was found 75.46% of students believe that teaching skills are the most important domain affecting the evaluation of professors. Communication skills (67.99%), educational rules (63.92%), and individual characteristics (49.58%) ranked second to fourth (Table 2).

**Table 2: Description of the most important domains affecting students' evaluation of professors**

Domain	Low	Moderate	High
Individual characteristics	24.41	26.01	49.58
Teaching skills	6.78	17.76	75.46
Communication skills	12.08	19.93	67.99
Educational rules	11.11	24.97	63.92

In overall, 88.17% of students stated that providing practical examples and useful exercises are the most important factor in their evaluation of a professor. The professor's mastery over the

subject (87.72%), the fit between the content of the course and the exam questions (87.11%), the professor's ability to clarify the content to students (86.96%), and class management (81.16%) were other important variables in this regard from the perspective of students (Table 3).

The results of Mann-Whitney U test showed that there is a significant difference between male and female students about the importance of teaching skills in the professor evaluation ( $p=0.001$ ). Female students obtained higher scores than males in this regard. In addition, a significant difference was observed between students of different semesters about the importance of individual characteristics, teaching skills, communication skills, and educational rules in the evaluation of professors ( $p<0.05$ ). The highest score on the quadruple domains was observed in students of the eighth semester. The results also indicated that there is a significant difference between students of different educational levels in terms of the importance of individual characteristics in the evaluation of professors ( $p<0.05$ ). The highest score on the importance of individual characteristics in the evaluation of professors was related to master students. However, there was no significant difference between single and married students and also students of Different fields about the importance of the quadruple domains in the evaluation of professors ( $p>0.05$ ).

**DISCUSSION**

Different methods of assessing the effectiveness of teachers include student success evaluation, investigation at work, and performance measurement [16]. Student feedback method can be regarded as a method of assessing the performance of teachers. Other common sources of information may be peers, principals, and self-assessment [17]. Several studies have shown that there is a significant relationship between students' attitudes towards the evaluation of teaching effectiveness and the success of a teaching evaluation system [18-22]. However, few studies have been conducted on the factors affecting students' attitude toward teaching evaluation and their importance. Cohen (1980) showed that those who had received mid-term feedback obtained a higher rank than the control at the end [23].

**Table 3: Description of the most important factors affecting students' opinions about evaluation**

	Very low Number (%)	Low Number (%)	Moderate Number (%)	High Number (%)	Very high Number (%)
Professor's gender	97(33.8)	39(13.6)	58(20.2)	48(16.7)	45(15.7)
Professor's age	63(22.0)	54(18.8)	79(27.5)	60(20.9)	31(10.8)
Appearance	16(5.6)	34(11.9)	87(30.5)	83(29.1)	65(22.8)
Sense of humor	7(2.4)	12(4.2)	74(25.8)	98(34.1)	96(33.4)
Timely attendance in the educational environment	11(3.9)	16(5.6)	74(26.1)	114(40.1)	69(24.3)
The professor's mastery over the subject	2(0.7)	10(3.5)	23(8.1)	60(21.1)	190(66.7)
Teaching based on the lesson plan presented	6(2.1)	22(7.7)	62(21.8)	108(38.0)	86(30.3)
The fit between content and scientific level of learners	3(1.0)	14(4.9)	50(17.4)	110(38.3)	110(38.3)
The fit between the content of the course and the exam questions	7(2.4)	7(2.4)	23(8.0)	93(32.4)	157(54.7)
Providing practical examples and useful exercises	2(0.7)	3(1.1)	28(10.0)	117(41.9)	129(46.2)
Use of teaching aids	2(0.7)	7(2.5)	63(22.6)	105(37.6)	102(36.6)
The professor's ability to clarify the content to students	2(0.7)	1(0.4)	33(12.0)	67(24.3)	173(62.7)
Class management	9(3.3)	10(3.6)	33(12.0)	112(40.6)	112(40.6)
Allocation of enough time to answering the questions and addressing students' weaknesses	7(2.5)	11(4.0)	51(18.3)	104(37.4)	105(37.8)
Encouraging students' participation in discussions	11(4.0)	22(7.9)	68(24.5)	103(37.2)	73(26.4)
Conducting academic achievement tests during the semester	18(6.5)	31(11.2)	99(35.9)	80(29.0)	48(17.4)
Motivating students to study and research	9(3.2)	12(4.3)	64(23.0)	98(35.3)	95(34.2)
Establishment of effective communication with students	7(2.5)	10(3.6)	38(13.6)	95(34.1)	129(46.2)
Your interest in a course	9(3.2)	23(8.3)	45(16.2)	99(35.7)	101(36.5)
The effect of professors' awareness of evaluation on teaching quality	19(6.9)	32(11.6)	75(27.2)	91(33.0)	59(21.4)
Intervention of student-professor relation in evaluation	7(2.5)	27(9.7)	63(22.7)	114 (41.2)	66(23.8)
Introduction of appropriate syllabus	11(3.9)	18(6.5)	75(26.9)	98(35.1)	77(27.6)
Strictness of the professor during classes or in exams	16(5.7)	30(10.8)	81(29.0)	89(31.9)	63(22.6)
Observance of ethical standards by the professor	8(2.9)	10(3.6)	53(19.0)	79(28.3)	129(46.2)

**Table 4: The relationship between demographic features of students and their score on the quadruple domains of evaluation**

		Individual characteristics		Teaching skills		Communication skills		Educational rules					
		p-value	Mean	P-value	Standard deviation	p-value	Mean	P-value	Standard deviation	p-value	Mean	P-value	Standard deviation
Gender	Male	3.34	.69	0.55	4.00	.52	0.001	3.89	.61	0.39	3.75	.86	0.64
	Female	3.32	.86		4.14	.59		3.80	.74		3.86	.70	
Marital status	Married	3.28	.92	0.43	4.12	.53	0.58	3.85	.68	0.93	3.88	.79	0.35
	Single	3.35	.74		4.05	.57		3.84	.69		3.79	.77	
Semester	1	3.38	.51	0.04	4.17	.36	0.01	3.81	.52	0.01	4.08	.45	0.002
	2	3.35	.73		3.86	.57		3.70	.58		3.60	.88	
	3	3.22	.70		4.21	.54		3.92	.70		3.95	.79	
	4	3.16	.69		4.04	.50		3.62	.74		3.90	.70	
	5	3.36	.85		3.99	.49		3.81	.56		3.55	.67	
	6	3.21	.66		4.11	.60		3.89	.66		3.67	.90	
	7	3.50	.90		4.12	.49		4.15	.61		4.13	.60	
	8	4.14	1.04		4.49	.71		4.35	.84		4.31	.87	
Education level	Bachelor	3.34	.81	0.02	4.09	.55	0.36	3.87	.68	0.41	3.82	.77	0.75
	Master	4.03	.35		4.22	.36		3.96	.30		4.00	.51	
	MD	3.23	.66		4.00	.55		3.75	.63		3.76	.83	
field	Medicine	3.22	.66	0.520	4.00	.54	0.30	3.74	.62	0.15	3.77	.82	0.15
	Operating Room	3.40	.79		4.01	.46		3.76	.72		3.64	.66	
	Nursing	3.45	.93		4.21	.55		3.99	.67		3.95	.84	
	Emergency	3.00	.16		3.90	.39		3.69	.13		3.67	1.12	

Although there are a few long-term studies, long-term effects have been proven in studies accompanied by counseling [24-26]. Studies have

shown that variables related professors (age, gender, teaching experience, personality, and research productivity), students (age, gender,

educational level, GPA, and personality), courses (calls size and time), and administration (single time during the semester) usually do not influence students' evaluations about teaching quality [27]. Various indicators have been discussed in previous studies. For the first time, Feldman (1976) proposed 5 indicators including the professor's motivation and interest, the professor's knowledge on the subject, the professor's speaking skills, the nature and value of materials, and the intellectual scope of the professor. In another study, Marsh (1982) analyzed the data collected and developed 9 dimensions of teaching effectiveness, which overlap many of the indicators proposed by Feldman. His dimensions included value learning, interest and enthusiasm, organizing, group interactions, individual communication, breadth of view, tests and scoring, appointment, and tasks density [28, 29]. The quadruple domains of evaluation, including teaching skills, communication skills, educational rules, individual characteristics, were studied in the present research. Based on the results, students believe that teaching skills are the most important domain affecting the evaluation of professors. Communication skills, educational rules, and individual characteristics rank second to fourth. In addition, in the domain of teaching skills, providing practical examples and useful exercises were mentioned by students as the most important factor in their evaluation of a professor. In a study conducted by Crumbley, Henry, and Kratchman (2001), teaching style and presentation skills were introduced as the most important variables in the evaluation of professors [30]. Greimel-Fuhrmann and Geyer (2003) proposed four components of teaching quality, clear explanation, responsiveness, and having a creative approach to teaching as the fields factors affecting the evaluation process [31]. In addition, Okpala and Ellis (2005) stated that teaching skills, background knowledge, and verbal skills are the main factors in this regard [32]. The professor's sense of humor, in the domain of individual characteristics, and effective communication with students, in the domain of communication skills, were identified as the most important factors. In the study of Seif (2009), it was shown that students' view about teachers is mainly influenced by the friendly behavior of teachers, entertaining techniques, and general characteristics and reputation of teachers [33]. Spencer and Schmelkin (2003) studied the

individual characteristics of professors and reported that paying attention to students, valuing their ideas and opinions, and clarity in relationships are the most important factors in this regard [34]. In addition, in the study of Onwuegbuzie *et al.* (2007), positive ethical traits in professors were mentioned as one of the decisive components [35]. In the domain of educational rules, observance of ethical standards was introduced as the most important factor in the evaluation. Class preparation and organizing and fairness in scoring (Crumbley, Henry, and Kratchman, 2001) [30], the impartiality and politeness of the professor (Schaeffer, Epting, Zinn and Buskit, 2003) [36], and class management (Onwuegbuzie *et al.*, 2007) [35] have been mentioned as the most important factors in the evolution of professors. In overall, most of the students participated in this study believed that providing practical examples and useful exercises are the most important factor in their evaluation of a professor. The professor's mastery over the subject, the fit between the content of the course and the exam questions, the professor's ability to clarify the content to students, and class management skills (81.16%) were other important variables in this regard from the perspective of students. One of the limitations of this research was the small size of the sample. Moreover, this study was conducted on only one university. The findings of this research can be used as a basis for future studies on this subject. In addition, the results can be applied to practically improve the quality of existing questionnaires and increase the level of students' evaluation skills.

## CONCLUSION

The findings of studies on this subject are different which is due to differences between academic environments in terms of facilities, academic level, number of students, number of professors, native values, etc. However, previous studies have shown that teaching skills are the most important factor affecting students' evaluation of professors, and communication skills, educational rules, and individual characteristics are other effective components. Hence, it is recommended to conduct more studies in universities and educational settings and use the results in the same centers in order to correct the defects as much as possible. To achieve better and more realistic results in evaluations, it is

recommended to correct and improve the evaluation tools and processes and also encourage students and professors to participate in evaluations. Finally, it is necessary to provide professors with the results of evaluations at the end of each semester in order to make the necessary changes and modifications to their teaching skills.

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