



**ASSESSMENT OF THE EDUCATIONAL ENVIRONMENT QUALITY
FROM THE PERSPECTIVE OF OPERATING ROOM
UNDERGRADUATES IN IRAN UNIVERSITY OF MEDICAL
SCIENCES IN 2016 - 2017 YEARS**

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ABSTRACT

Introduction: Assessment of students' perception of educational and learning environment is one of the tools for Knowing the quality of education, promoting and modifying the curriculum, this study aimed to assess the perception of learning environment from the viewpoints of undergraduate students in the operating room of the University of Medical Sciences. **Method:** This is a descriptive study that was carried out in Iran University of Medical Sciences in 2016-2017. The number of 143 undergraduate students completed the DREEM questionnaire. The questionnaire has 50 items that range from 0 to 200. The DREEM questionnaire has five areas: students' perception of learning, teachers, academic ability, atmosphere of education, and the social conditions of education. **Results:** In this study, the total score of the perception of the learning and teaching environment for the undergraduate students in the operating room. It was obtained 76 that reflects the student's view of their learning environment. There was a significant relationship between male and female students' score of 0 ($P = 0.029$). Male students had a more positive attitude toward female students. Also, there was a significant difference between the graded and discontinuous undergraduate student scores. The viewpoint of graduate students from undergraduate students (continuously evaluated more positively). ($P=0, 01$) **Conclusion:** The score of perception of the learning and teaching environment for undergraduate students of the operating room of the University of Medical Sciences indicates that students' perceptions of their learning environment are desirable. The perception of discontinuous undergraduate students was steadily more positive than undergraduate students.

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Introduction

The perception of the learning and learning environment is an indicator of the impact of student learning programs, the result of learning and motivation, as well as an effective factor in learning and academic achievement, and in other words, as the most important determinant of the success of the educational program. "Many Evidence Highlights the Importance of the Learning Environment. have shown students effective learning. The learning and educational environment of why students? How? And what they learn [1]. The importance of learning and teaching environment for quality of education has been confirmed by various research results and stated that the learning environment plays an important role in curriculum, student behavior and sense of Their health [2]. Assessing perceptions of the educational and learning environment of medical science students are very important so that the Liaison Committee of the United Kingdom stated that all the medical university in this country should regularly assess their learning and learning environment.)) Assessing the perception of the learning and teaching environment of nursing schools helps a lot of masters and executives in assessing the perception of the student's learning and teaching environment (knowledge about the learning and learning environment is a prerequisite for the management and implementation of a new curriculum.). It is possible to use various tools to assess the perception of the learning and teaching environment in professional health care professionals, each of which has certain weaknesses and

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strengths in their reliability and validity. The model may have Evaluating Perceptions is the most widely used tools used to identify DREEM from the learning and teaching environment of curriculum problems and the effectiveness of the change in teaching, and to identify the difference between the real environment and the environment that can provide valuable information to managers [3]. According to Mohammadi and Mohammadi, this questionnaire was used in various institutions with different goals such as comparing colleges with each other, calculating the context of learning environment, comparing successful and less successful students, evaluating students' perceptions of the ideal educational environment, examining the expected and desirable learning environment in The same is true of the actual learning environment, the education curriculum reform, the difference in perceptions of the different sexes (male and female) and ultimately used as a means of improving the learning environment [4–10] DREEM questioner has been used for different continent like: Europe, Asia, Africa, North and South America, , and in Different countries have been used and all of these studies have led to find the strength and foibles of this questioner [11–17].

The Medical Education Program in Iran is the main goal of graduate education that can be active in wider areas. The operative field operates directly and extensively in the operating rooms and plays a very important role in the proper functioning of the surgery, which is also very important, it is clear that the more graduates in their learning environment can learn the subjects When working in the operating room, it works better and improves the quality of the surgery, it is better to learn surgical procedures. Considering the importance of the subject and the sensitivity of the work of this group of paramedical students, it seems that so far no research has been conducted on the quality of the learning environment from the viewpoint of the undergraduate students in the operating room, and the researcher has undertaken to assess the perception of the learning and educational environment for this The subjects of this study are to perform.

Method

The method of this descriptive study was to understand the educational and learning environment from the viewpoints of undergraduate students of the operating room of Iran University of Medical Sciences. The research population was 143 students of all operating and operating undergraduate students of Iran University of Medical Sciences in 2012-2013.

In this study, 143 people from 181 undergraduate students studying at Iran University of Medical Sciences completed the questionnaires. The response rate to the questionnaire was 95%. Data were gathered using a demographic questionnaire and perceptual assessment questionnaire from DREEM learning and teaching environment.

All questionnaires were completed by the participants themselves. The criteria for entering this study were all the undergraduate students in the operating room, except for the first term students, and the exit criteria included guest students and students who had been dissuaded from doing any work while completing the questionnaire. This tool can help medical universities to identify problematic areas in their curriculum. In a study conducted by Ussony and colleagues at Huddersfield University in England, the tool also evaluates the operating room students, the present questionnaire for this group of paramedical students is also approved.

There are several qualitative and quantitative methods for studying and evaluating the learning environment. Among these, the perception assessment questionnaire from the DREEM learning and teaching environment is specifically designed for educational environments experienced by medical and medical students. This questionnaire was prepared by Susan Ruff and his colleagues in 1997, through a Delphi International Panel at the University of Dundee, in Scotland.

Perceptual assessment questionnaire from the DREEM learning and teaching environment was translated into Persian by Langroudi, Badsar, Hosseini and Rohi in 2012. For the psychometric test, the coefficient of difficulty was calculated and the validity coefficient was used to calculate the validity through factor analysis. The Cronbach's alpha coefficient was used to check validity. The sample of this study was 350 medical students of Guilan University of Medical Sciences. Cronbach's alpha for this questionnaire was 0.9.

The questionnaire contains 50 questions related to the assessment of their perceptions and their expectations of the learning and teaching environment of medical universities, and is divided into five dimensions and areas: students' perception of learning 12 questions and the maximum score of 48, students' perception of Teachers have 11 questions and a maximum score of 44, student perception of their academic ability is 8, maximum score of 32, student perception of the educational environment 12 questions and the maximum score of 48, the perception of the social conditions of the training 7 points and the maximum score of 28. Each phrase is scored with a Likert scale of 5 points between zero and four. The maximum total score is 200 points. In the scope of the questionnaire, the maximum points (scores) for the domains and the overall learning environment are calculated based on the number of questions. The higher the scores obtained in the evaluated location, the more positive and more desirable the educational environment, and vice versa. Nine of the 50 statements of the questionnaire (4, 8, 9, 17, 25, 35, 39, 48 and 50)

The negatives are encoded in reverse: I totally disagree 1, I have no idea 2, I disagree 3, I totally disagree 4

The maximum score of the DREEM questionnaire is 200, which range from 0 to 50 is very poor, the range of 51 to 100 environments has a problem (undesirable), a range of 101 to 150 positive attitudes and a range of 151 to 200, the excellent environment is. Each subscale is divided according to the maximum score of the four domains. For example, the maximum score of perception of learning is 48, the range of 0 to 12 means very poor, the range of 13 to 24 negative attitudes toward learning, the range of 25 to 36 positive attitudes and the range of Scores 37 to 48 means a good picture of learning.

Findings

According to (Table 1), it is clear that 50 (35%) of male participants and 93 (65%) are female. Also 83 participants (85%) were native and 60 (42%) were non-native. 48 students (33%) were graduate students and 95 (4.66%) undergraduate students. In terms of marital status, 101 (70%) of the participants were single and 41 (28%) were married.

Table 1. Overview of the Whole Statistical Society

Percentage	n		Variable
35.0	50	Male	Gender
65.0	93	Female	
58.0	83	Native	Residential situation
42.0	60	Nonnative	
33.6	48	A.S	Degree
66.4	95	B.S	
70.6	101	Single	Marital situation
28.7	41	Married	
16.8	24	2	
21.7	31	3	Terms
16.1	23	4	
23.1	33	5	
22.4	32	7	
100	143		All

In (Table 2), the mean and standard deviation of students' grades in the dimensions of the perception questionnaire have been reported from the learning and educational environment. It should be noted that the scores are considered as a percentage. According to this table, it is clear that the average score of "Students' perception of learning from learning" is 22.58 ± 7.8 ; the mean score "Students' perceptions of Teachers" is 22.41 ± 6.5 ; mean scores "Students' perceptions of academic ability" is equal to 19.2 ± 3.9 ; the mean score "Students' perceived dimension of the educational background" is 25.83 ± 5.8 ; and the mean score of "perceiving the social conditions of education" is 16.95 ± 3.71 . The mean of total perception of students' learning and educational environment is also 106.66 ± 22.62 . The highest score is related to "Student perception of learning" and the lowest score is "The dimension of student perception of social learning conditions."

Table 2: Mean subscale and total DREEM scores of Students

Percentage	S.D	Mean	Max	Min	
47.5	7.8	22.58	39	3	Perception of learning
50.93	6.5	22.41	34	2	Perceptions of teachers
60	3.9	19.2	27	6	Academic self-perceptions
53.83	5.6	25.83	38	9	Perceptions of atmosphere
60.53	3.71	16.95	25	6	Social self-perceptions
-	22.6	106.76	147	50	Total DREEM Score

According to (Table 3), the total score of perception was 112.32 for male students and 103.77 for female students. According to the above table, male students were more than female. After the independent t test, the relationship between the two was significant ($p=0,031$)

Also, male students had a higher score than "Female" in the "dimension of perception of educational environment" and "their academic ability", which was statistically significant. ($P=0, 35$), ($P=0, 01$)

Table 3. Mean subscale and total DREEM scores of Students by Gender

P	S.D	Mean	n	Gender	Subscale
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0.53	17.47	48.21	50	Male	Perception of learning
	15.67	46.44	93	Female	
0.10	16.10	53.67	50	Male	Perceptions of teachers
	14.11	49.45	93	Female	
0.01	12.92	57.92	50	Male	Perceptions of atmosphere
	10.68	51.63	93	Female	
0.035	13.81	62.94	50	Male	Academic self-perceptions
	11.02	58.42	93	Female	
0.069	12.24	63.29	50	Male	Social self-perceptions
	13.61	59.06	93	Female	
0.031	24.81	112.32	50	Male	Total DREEM Score
	20.88	103.77	93	Female	

Table 4. Mean subscale and total DREEM scores of Students by Degree

P	S.D	Mean	n	Degree	Subscale
0.01	14.86	53.6	48	A.D	Perception of learning
	16.03	43.75	95	B.S	
0.01	10.38	57.19	48	A.D	Perceptions of teachers
	15.88	47.77	95	B.S	
0.02	11.2	57.29	48	A.D	Perceptions of atmosphere
	11.85	52.08	95	B.S	
0.055	13.91	62.76	48	A.D	Academic self-perceptions
	11.08	58.61	95	B.S	
0.092	12.54	63.16	48	A.D	Social self-perceptions
	13.48	59.21	95	B.S	
0.001	20.17	115.68	48	A.D	Total DREEM Score
	22.55	102.25	95	B.S	

According to (Table -4), 95 undergraduate students and 48 undergraduate students were discontinued.

The student's disbursement score was 115.68 ± 20.17 , and the student's continuous score was 102.25 ± 20.55 . After independent t-test, the relationship between them was statistically significant ($P=0, 01$)

In order to determine the relationship between age and overall score of perception, the continuous and continuous undergraduate students in the learning and teaching environment are divided into four age groups (18-21, 25-22), (29-26), (33-30) According to this categorization, the lowest score for students was 18-21 with a score of 75.102 with a standard deviation of 21.24 and the highest score for the group of 30-33 years with a score of 119.94 and a standard deviation of 22.62 Is. To determine the relationship between the ages groups of Scheffe test.

According to the Scheffe test, with the increasing age of students, the perceived score of the learning and learning environment has increased. There was a significant difference between two groups of 18-21 years old and 30-33 years old) $P=0, 03$)

To identify the strengths and weaknesses of the learning environment in the study area, terms with a mean score of 3.5 and higher were considered as positive points, and each of the terms with a mean score of 2 and below indicates difficult areas, and terms with an average A score between 2 and 3 represents a perspective of the educational environment that should be strengthened.

Table 5. Statements with score less than 2

S.D	Score	Question	Number	Subscale
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1.026	*1.87	The teaching is often stimulating	7	Perception of learning
1.08	*1.46	The teaching is student-centered	13	
1.03	*1.96	The teaching is well-focused	20	
1.13	*1.83	The teaching helps to develop my confidence	22	
.92	*1.62	The teaching over-emphasizes factual learning	25	
1.15	*1.82	The teaching encourages me to be an active learner	44	
.97	*1.47	The teaching is too teacher-centered	48	
.88	*1.67	The teachers are authoritarian	9	Perceptions of teachers
1.03	*1.77	The teachers provide constructive criticism here	32	
.97	*1.09	The students irritate the teachers	50	
1.03	*1.95	The atmosphere is relaxed during ward teaching	11	Perceptions of atmosphere
1.14	*1.68	This school is well time-tabled	12	
1.14	*1.91	Cheating is a problem in this school	17	
1.04	*1.92	The atmosphere motivates me as a learner	43	
.96	*1.55	I feel able to ask the questions I want	49	
1.13	*1.87	I am rarely bored in this course	14	Social self-perceptions
.89	*1.34	There is a good support system for students Who gets stressed?	3	

According to (Table 5), the students had the most difficult questions in the questions 7, 13, 20,22,25,44, which are the same domain of learning perception. Also after this, "the next was the perception of the learning atmosphere," which has Items 11, 12,17,43,49.

"Then, the perception of the teachers" and also "The dimension of perception of the educational atmosphere" respectively, the third and fourth, students have problems. In "Understanding Your Academic Ability", students were in a better position because in this dimension none of the items scored less than 2 points.

Discussion

The results showed that the mean score of total perception of the educational and learning environment of undergraduate operating room students was 22.6 ± 106 . According to Dreem questioner instruction this score is good [18]. In the study of Mohammadi and Mohammadi at Zanzan University of Medical Sciences, the average perception score of the learning and educational environment for the students of this university were 100.6 this is the same result as the present study. It seems that the similarity of the scores is due to the similarity of the learning environment of the two universities [19]. The perception of the learning and learning environment in Faghani et al.'s studies in 2011 at Zanzan University of Medical Sciences for students in this university (127.53) Lumedan in 2011 for Canadian radiology students (138.8 points), Palmergren et al. In 2015 for Chiropractor students (156), Makhdoum in 2009 for medical students of Taiba University (107), Roqumawati et al. In 2014, for nursing students, a university in the United States (131), part and colleagues in 2013 Of nursing students in Rafsanjan (114,3) and Hmvdalshykh King Fahd University in Saudi Arabia in 2013 for medical students (score 106), respectively [1,2,20–25].

The score of perception of learning environment in a study that has done by Ceron et al. In 2015 for students of a medical university in Chile was 133, the total DREEM score in the Azizaha Gosman study in 2015 for first year medical students in Malaysia was 135, Azizaha Gosman was much lower for Malaysia's first year students (Score 135) Palmergren et al. In 2015 for undergraduate chiropractor students (Score 156) [2,26,27]. Saeed et al showed that if the traditional methods of teaching were used, the overall score of perception of the learning environment would be less than 120, but if student-centered teaching methods were used the overall score of perception from the learning and teaching environment is on average 10 points higher [28]. It seems that the difference in the score of the study with the universities studied was that they had a high score due to the fact that in the environment of these studies, they used modern methods of student-centered teaching [26,27], while in Iranian universities are mainly used in non-student-based approaches and lectures [29]. In a research-focused study, "Determining the quality of the learning environment of the dentistry faculty of Rafsanjan University of Medical Sciences from the viewpoint of dentistry student students based on the DREEM model, the result of the research showed that the mean scores obtained in five dimensions, 72.98 out of a total of 200 scores (49.3), which was evaluated as semi-desirable. There were no significant differences between the five domains. Students' views did not differ significantly in terms of sex, marital status and native and non-native status. The total score of the trainees significantly higher than other levels. The total student

entrance fees are 87b it was significantly higher than other inputs and the total score of students over 30 years of age was significantly higher than the rest of the ages. In this study, the viewpoints of dental students were assessed from the learning environment in the faculty of dentistry with a tendency toward negative, which was the attention of professors and school officials are required to adhere to the principles of educational planning and to create a suitable educational environment and eliminate deficiencies in order to enhance the student's learning environment [25].

In the present study, there was a significant difference between the students' gender and the perception of their learning and learning environment. This difference was also observed in the studies of El-Aid, Norumal, Sumanteri, Brown, Ugusens, Ricollma and Ceron et al [5,27,28,30–33].

This result was opposed to the results of the study by Ceron et al, partly and aggressively, Fadima and Verma. In these studies, female students had a more positive perception, but in the study of Faghani, Parth, Joybari et al. The perceived score was more positive than the male students' learning and teaching environment [20,21,25,32,34,35].

It seems that the difference between the score obtained by male and female students can be due to different ways of learning between men and women. In this study, two groups of continuous and discontinued undergraduate students have also been studied. The overall score of perception of the learning and teaching environment was higher in the bachelor's degree from the continuous bachelor's degree group. This result was not seen in any of the studies studied, which can be said to be due to the fact that so far a study has been conducted to compare between two continuous and discrete baccalaureate groups Not yet Using the age group of students and then performing statistical tests, it was determined that with increasing age of students, perceived scores were more positive than learning and teaching environment and specifically between two groups of students (18-21 years) and (30-33) There was a significant difference. Accordingly, according to the fact that 89% of students aged 30-33 years are bachelor dissatisfied and 90.3% of students aged 18-21 are undergraduate students, as well as the fact that age is one of the students' demographic information, It can be said that a meaningful difference between two groups of continuous and discontinuous undergraduate students can be due to their age difference. There is a relationship between the learning styles and the age of Voghan, and as an advanced educational program, these different learning styles should be taken into account because age is one of the variable information in student demographic studies. Trainers must Methods of teaching that include lecture techniques, e-learning, peer education, or small group seminars to ensure that all student groups are included [36]. In this way, it can be ensured that applying different teaching methods can reduce the difference between continuous and discontinuous baccalaureate groups and ultimately increase the overall score of perception from the learning and teaching environment for both groups of students and all age groups Became Based on the literature review, a study that directly evaluates the effect of age on the level of students' perception of the status of education was not found, but the results of some studies showed that the assistants significantly higher scores than interns and interns higher than Trainees have had an unpredictable look at these outcomes, given the older age range of these people [37–39].

In the examination of questionnaires, questions 25, 44, 22, 7, 13, 20, all related to the "dimension of learning, perception", contained the most problematic area, and then "the dimension of the perception of the educational atmosphere" that included questions 11, 12, 17 and 49, the second was the problem area. Given the interpretation of these wedges, students acknowledged that excessive teaching methods rely on professors.

Also, professors do not have a student-centered education and that there is no proper support system for stress-stricken students in Iran's Medical Sciences University, which is consistent with Alhamzi's and El Hazimi's [29,40].

Conclusion

The overall score of perception of the learning and teaching environment for undergraduate students in the operating room of the University of Medical Sciences indicates the positive conditions for learning for this undergraduate student. Male students had a more positive attitude toward their female learners than their female students. The gradual bachelor students (B.S) score was higher than undergraduate students (A.D). The highest score was related to "The dimension of students' perception of learning" and the lowest score was "The dimension of students' perception of social learning conditions." The questionnaire items also showed that the areas of the teaching method for supporting the system.

Higher students need special attention. Considering the total score of perception of the learning and educational environment and its dimensions in all dimensions, there is a need to improve the learning and teaching environment. By comparing dimensions with each other and other studies, it was found that in the "understanding of learning" dimension, students' perceptions are negative. Also, the score "Teachers' Perception" indicates that this area needs more attention. According to the score "The dimension of perception of teachers" in the present study, it is suggested that a study be conducted on the effect of student-centered methods of perceiving the students' learning and teaching environment. I appreciate all the professors who guide me during the writing of this article.

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