



➔ Original Article

Patients' Attitude and Feeling Toward the Presence of Medical Students in Educational Clinics

Tahere Abdian¹, Naser Hatami², Mozhdeh Rahmanian¹, Seyed Ebrahim Sadeghi³, Navid Kalani⁴, Mehrdad Malekshoar^{5*}

¹Department of Nursing, Peymaniyeh Hospital, Jahrom University of Medical Sciences, Jahrom, Iran.

²Student Research Committee, Jahrom University of Medical Sciences, Jahrom, Iran.

³Department of Anesthesiology, Shiraz University of Medical Sciences, Shiraz, Iran.

⁴Research Center for Social Determinants of Health, Jahrom University of Medical Sciences, Jahrom, Iran.

⁵Anesthesiology, Critical Care and Pain Management Research Center, Hormozgan University of Medical Sciences, Bandar Abbas, Iran.

Abstract

Background: Clinical education calls for the interaction between the patient and the medical learner and considering the significance of the patients' satisfaction and its role in clinical education to learners. Accordingly, the present study aimed to investigate patients' attitudes and feelings toward the presence of medical students in educational clinics.

Materials and Methods: This cross-sectional descriptive study was conducted on 274 patients visiting the clinics in 2018, who were selected by the convenience sampling method. The data were collected using the questionnaire of Izadi et al in two parts and then analyzed by SPSS 16.

Results: The results showed that the total score of patients' attitudes toward the presence of the students was 66.3, which was above the expected average score (i.e., 3). In addition, the total score of patients' feelings toward the presence of the students was 67.3, which was above the expected average score (i.e., 3). Moreover, the average score of female patients' feelings toward the presence of the students was significantly lower than that of male patients ($P < 0.05$). Eventually, individuals with education levels below diploma and above bachelors were the most and least comfortable about the presence of the students ($P < 0.05$).

Conclusion: Therefore, patients had a positive feeling and attitude toward the presence of the students in the clinics. These factors need to receive more attention to increase the satisfaction and quality of clinical education.

Keywords: Attitude, Patients' feeling, Clinical education, Medical students

*Correspondence to

Mehrdad Malekshoar,
Anesthesiology, Critical
Care and Pain Management
Research Center,
Hormozgan University of
Medical Sciences, Bandar
Abbas, Iran,
Tel: +0098-09111430600
Email: mdmalekshoar@
yahoo.com



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Introduction

Clinical education is the process during which the students are present by the patient, gradually gain experience, and become prepared to solve the patients' problems using the obtained logical reasoning and experiences. The purpose of clinical education is to provide measurable changes in students for clinical care (1). On the other hand, the patients' involvement in the process of learning can have both positive and negative aspects. The positive aspects include the creation of positive spirit in the patient for receiving attention, a deep examination of the patient, the physicians having conversations with the patient about his/her problems and concerns, and gaining huge amounts of information regarding the diagnosis

and treatment processes by the patient. Several items can be taken into consideration regarding the negative aspects. For example, in bedside teaching, the teacher simultaneously plays the role of a caregiver and teacher and this can influence the teaching and treatment quality (2) because merging the teaching and treatment duties of the clinical teacher provides the opportunity for the patient to receive the care services with delay, and they might sometimes become worried when hearing the scientific and Latin terms (3). At the moment, due to an increase in the costs of caregiving and a reduction in the patient's hospitalized period, senior physicians' involvement with managerial and administrative affairs and the change in attitudes in some cases, the problems

of facing the patients or bedside teachings, and attention to clinical education have increased in conference halls instead of clinical rounds (4). However, some previous studies reported that the satisfaction level of patients in teaching hospitals is lower compared to the other centers (5). For instance, Izadi found that patients felt comfortable in the presence of medical students when getting the patients' medical history and examination. Contrarily, this will increase by an increase in the patients' awareness of the students' presence and the emphasis on their role in teaching the students and observing patients' privacy and confidentiality (6). In another study by Marwan et al demonstrated that most of the students were willing to have an indirect relationship with the students such as investigating the records. It is noteworthy that patients are actively involved in the selection of their care in the new era such that the students will face problems in their teachings if the patients refrain from cooperation. Currently, more attention to patients' rights and informed consent has made the patients decide whether medical students can be present during their treatment period (7). Hence, special attention to the patients in clinical teaching is important because they can play a crucial role in the teaching process. However, few studies have focused on this important issue. Therefore, the present study sought to evaluate patients' attitudes and feelings toward the presence of medical students in the teaching clinics of hospitals affiliated to Jahrom University of Medical Sciences.

Materials and Methods

A total number of 274 patients were investigated in this cross-sectional descriptive study. The convenient sampling technique was used by visiting Motahhari and Peymanieh Teaching Technical Clinics in Jahrom from September to January 2018. All patients who visited the aforementioned clinics on working days in the morning shifts were included in the study with the criteria of literacy and the tendency to participate in the research project. However, they were excluded from the study in case of the lack of cooperation and consent to participate in the study and leaving the questionnaires incomplete. Accordingly, the researcher was present in the aforementioned clinics at the above-mentioned dates and after receiving the permission of clinic management, collected the samples outside the examination room without the professors' and students' awareness and after the patients were visited by the treatment team of the clinic. In the beginning, the purpose and significance of the project was explained and the questionnaires were distributed among them after getting the patients' consent. After completion, the questionnaires were delivered voluntarily by the patients. It should be noted that the patients were assured of the questionnaire confidentiality and that the optional nature of completing the questionnaires.

The research tools included demographic information,

as well as the attitude and feeling questionnaire of Izadi et al. The first part contained demographic information such as age, gender, education level, and marital status. In addition, the patients were asked (by multiple-choice questions) about the reason for selecting and visiting this treatment center, their awareness of the students' presence in the clinic, their willingness for receiving a medical history and being examined by a student of the same or opposite gender, and their willingness to students' presence during their examination by the physician. The second part of the attitude and feeling questionnaire of Izadi et al encompassed 23 items. Sixteen items included the Likert-type scale of "5 = totally comfortable", "4 = Comfortable", "3 = No difference", "2 = Not comfortable", and "1 = Not comfortable at all". Seven items contained the Likert-type scale of "5 = Very much", "4 = Much", "3 = Enough", "2 = A little", and "1 = Little". The validity and reliability of the questionnaire were estimated by Izadi et al with the Cronbach alpha of 75% (1).

After data collection, all statistical analyses were performed using SPSS, version 16. Mean and standard deviation (SD), as well as frequency (n) and percent (%) were applied to describe quantitative and qualitative data. Finally, the one-way analysis of variance (ANOVA) and independent-sample *t* test were used to compare the mean scores in different subgroups.

Results

This study evaluated a total number of 274 patients visiting the educational clinics of hospitals affiliated to Jahrom University of Medical Sciences. In terms of gender, there were 170 (62%) female subjects and the remaining cases were males. Regarding marital status, 194 (71.9%) participants were married and the mean age of the participants was 32 ± 10 years old. Moreover, the youngest and oldest participants were 12 and 61 years old. The education level of most of the participants (5.38%) was a diploma as well (Table 1).

According to Table 2, most of the participants selected the "comfortable" and "very comfortable" options in all the questions. In addition, considering the average score column, the highest score was related to the item "How would you feel if you were informed that you have helped students in their education?" with a mean score of 4.22 ± 0.88 , indicating that their feelings to the presence of the students improve in case of informing the patients. Moreover, the lowest average score belonged to the item "How did you feel that several people examined you?" with a mean score of 3.04 ± 1.02 , suggesting that examination by multiple people discomforts the patients. The total score of the patients' feelings to the presence of the students was 3.67, which was greater than the expected amount (i.e., 3). Overall, 66.4% of the patients felt totally comfortable or comfortable, which was desirable.

As shown in Table 3, most participants selected "very much" and "much" options in all questions, which

Table 1. Distribution of Relative and Absolute Frequencies in Terms of Demographic Indices

Index	Ranks	Number	Percentage
Gender	Female	170	62.0
	Male	104	38.0
Age	Younger than 20	34	12.8
	21 to 30	102	38.5
	31 to 40	87	32.8
	41 to 50	28	10.6
	Older than 50	14	5.3
Marital status	Married	194	71.9
	Single	72	26.7
	Divorced	2	0.7
	Widowed	2	0.7
Education level	Below diploma	54	20.0
	Diploma	104	38.5
	Bachelors	91	33.7
	Above bachelors	21	7.8

Table 2. Mean and SD of the Items Related to Patients' Feelings to the Presence of the Students

Item	Relative Frequency					SD	Mean
	Not Comfortable at All	Not Comfortable	No Difference	Comfortable	Totally Comfortable		
How did you feel when meeting the specialist at the presence of the students?	31.2	23.9	25.7	14.9	4.3	3.61	1.19
How did you feel that the students prepared your medical history?	22.1	47.5	20.3	7.2	2.9	3.78	0.96
How did you feel that the students examined you?	17.7	33.6	23.6	18.5	6.6	3.37	1.14
How did you feel that multiple students prepared your medical history?	20.4	29.8	28.4	14.9	6.5	3.43	1.15
How did you feel that multiple students examined you?	13.8	24.3	24.6	26.4	10.9	3.04	1.22
How did you feel that the students provided your medical records for the specialist?	31.0	32.8	24.3	7.5	4.5	3.78	1.08
How did you feel that the students provided the specialist with your examination?	27.9	34.2	26.4	8.6	3.0	3.75	1.03
How will you feel if you know that you have helped students in their education?	46.8	34.7	13.6	3.8	1.1	4.22	0.88
In general, how did you feel about the process of examination and preparation of medical records?	27.4	42.6	19.8	8.0	2.3	3.84	0.96
How did you feel that the physician explained about your disease to the students?	36.6	29.8	22.3	6.8	4.5	3.87	1.10
How did you feel about the conversation between the physician and the students about your disease?	27.4	33.5	27.0	7.6	4.6	3.71	1.06
The total score of the patients' feelings about the presence of the students	26.6	39.8	24.8	6.6	2.2	3.67	0.79

Note. SD: Standard deviation.

Table 3. Mean and SD of the Items Related to the Patients' Attitudes Toward the Presence of the Students

Item	Percentage of Responses					SD	Mean
	Little	A Little	Enough	Much	Very Much		
How far do you think the students observe ethical points with regard to the patients?	71 (25.91)	91 (33.21)	95 (34.67)	11 (4.01)	6 (2.19)	0.94	3.76
Do you think that the specialist will spend more time on the patients in the absence of the students?	51 (18.61)	71 (25.91)	101 (36.86)	34 (12.41)	17 (6.2)	1.10	3.37
How do you find the presence and participation of the students in the accuracy of caretaking and treatment of your disease?	43 (15.69)	81 (29.56)	105 (38.32)	33 (12.04)	12 (4.38)	1.02	3.40
What is the role of the limb that is being examined in your satisfaction from the presence of the students?	62 (22.63)	62 (22.63)	92 (33.58)	43 (15.69)	15 (5.47)	1.14	3.40
How essential do you consider the presence of medical students in educational clinics in their learning?	158 (57.66)	79 (28.83)	28 (10.22)	4 (1.46)	5 (1.82)	0.8	4.38
Considering the presence of students, how much could you ask your questions from the specialist and receive guidance?	69 (25.18)	79 (28.83)	83 (30.29)	24 (8.76)	19 (6.93)	1.15	3.56
How willing are you to visit this health center again?	83 (30.29)	101 (36.86)	57 (20.8)	16 (5.84)	17 (6.2)	1.12	3.78
The total score of the patients' attitudes toward the presence of the students	54 (19.71)	143 (52.19)	60 (21.9)	14 (5.11)	3 (1.09)	0.68	3.66

Note. SD: Standard deviation.

indicated that the participants often agreed with the proposed items. In addition, considering the average score column, the highest score belonged to "How far do you think the presence of medical students in educational clinics is essential for their learning?" with a mean of 3.76 ± 0.94 and it demonstrated that most patients considered medical students' presence in the clinic essential for their learning. Moreover, 4.86% of the participants selected "very much" and "much" options for this item. Further, the lowest score was related to the item "Do you think that the specialist will spend more time on the patients in the absence of the students?" The total score of the patients' attitudes toward the presence of the students was 66.3, which was greater than the expected level (i.e., 3). In general, 9.71% of the patients had attitudes above the average level for this item, which was desirable.

According to the results of Table 4, the average score of the female patients' feelings toward the presence of the students was significantly lower ($t = -2.271$ and $P < 0.05$) than that of male patients. In terms of education level, there was a significant difference ($F = 3.024$ and $P < 0.05$) between patients' feelings with different levels of education toward the presence of the students. Therefore, patients with education levels below diploma felt most comfortable and patients with education levels above bachelors felt the least comfortable in the presence of the students. Regarding the knowledge of the patients about the presence of students, it was found that the average feeling of the patients about the presence of the students was significantly higher when they were aware of the students' presence compared to when they were not aware of it ($t = 3.797$ and $P < 0.001$). In addition,

the results demonstrated that the average score of the patients' attitudes toward the presence of the students in cases when they were aware of it was significantly higher than the time they were unaware of it ($t = 4.058$ and $P < 0.001$). In other cases, no significant difference was observed between the score of the patients' feelings and/or attitudes toward the presence of the students in terms of demographic variables ($P > 0.05$).

Discussion

The results of the analysis in this study showed that in general, the average score of the patients' attitudes toward the presence of medical students were positive and above the desirable level while they were being examined by the doctor, which is consistent with the research results of the study by Rima that evaluated the patients' attitudes toward the presence of medical students in educational hospitals in Damascus (8). In both studies, the patients' attitudes toward the presence of the students was positive during the examination process. In the present study, the greater share of the participants (i.e., 4.86%) selected the significance of the students' presence in clinical environments. In the aforementioned study, the greater share of participants (i.e., 5.81%) agreed to be examined by the students under training. Therefore, considering the fact that patients participate in the process of treatment in new medical care, their positive attitudes toward the learners can be influential in students' education. In addition, Malhotra and Hosdurga studied the patients' attitudes toward the presence of the students while anesthetic injection in the operating room. The results revealed that 72% of the patients had no complaints about

Table 4. Comparison of the Average Score of the Patients' Feelings and Attitudes Toward the Presence of Students Separated by Demographic Variables and Patients' Awareness

Item	Ranks	Patients' Attitude				Patients' Feeling			
		Mean	SD	Test Statistic	P	Mean	SD	Test statistic	P
Gender*	Female	3.67	0.61	.0520	0.959	3.59	0.73	-2.271	0.024
	Male	3.66	0.78			3.81	0.87		
Age**	<20	3.69	0.61	1.151	0.333	3.74	0.56	0.415	0.798
	21 to 30	3.60	0.75			3.64	0.67		
	31 to 40	3.67	0.91			3.64	0.80		
	41 to 50	3.83	0.67			3.73	0.50		
	> 50	4.02	0.89			3.82	0.52		
Marital status*	Married	3.67	0.68	-0.444	0.657	3.69	0.81	0.078	0.938
	Not married	3.71	0.60			3.68	0.69		
Education level**	Below diploma	3.86	0.70	2.324	0.075	3.82	0.62	3.024	0.030
	Diploma	3.69	0.73			3.63	0.68		
	Bachelors	3.60	0.85			3.66	0.64		
	Above bachelors	3.37	0.91			3.31	0.82		
Awareness of the presence of students*	Yes	3.88	0.62	4.058	0.000	3.91	0.6	3.797	0.000

Note. * Independent t test; ** One-way analysis of variance

the presence of the students, which is in line with the results of the present study (9). In the current study, the highest frequency of the visitors to clinics was related to those visiting orthopedic clinics, women's clinics, as well as internal and surgical clinics, which corroborates with the findings of the study of Temesgen that investigated the patients' attitudes toward medical students' participation in health care in technical medical hospitals. Based on the results, most patients had a positive attitude toward the students in internal-surgical and women's sectors, which is consistent with the results of this study. In other words, the patients in women's and internal-surgical sectors had a more positive attitude toward the presence of the students (10). The other result of this study is the very desirable feeling of patients about the presence of the students while being examined by the doctor. In total, 4.66% of the patients felt totally comfortable or comfortable about this item. Some of the patients stated that in case they were informed that they were helping the students in their education, they would feel good about the students' presence. In the study of Mol et al that reviewed the patients' attitudes toward the presence of the students while consulting or being examined by the doctor, it was shown that most patients allowed the students to be present at the time of examination by the doctor. Furthermore, the emotional factors and the need for confidential examination were the reasons for their refrain from the students' presence. In this study, the patients did not have a good feeling to be examined by multiple people other than their doctor, which indicates the consistency between the studies in this regard (11). In addition, female patients in this study were more sensitive

regarding the gender of the student preparing their medical records and/or examining them compared to male patients. Moreover, considering the aforementioned percentages, it was found that examination by the students of the same gender was of greater significance and sensitivity for both male and female patients was compared to the preparation of medical records by the students of the same gender. Regarding this issue, it can be mentioned that factors such as culture, religion, and research environment can be influential and thus they call for more studies and attention. In the study of McLean et al, it was demonstrated that more than 50% of women did not accept to be examined by male students (12), indicating that examination by the students of the same gender is of great importance for patients, especially Muslim women (13).

The present study only evaluated the perceived factors by the patients. However, it seems that the characteristics of medical students and their behavior should have some effects on patients' feelings. Based on the results of Hosseini-Ghavam-Abad et al, the awareness and attitudes of medical students about patient privacy were fundamental to gain patients' trust (14). Furthermore, nowadays, patients have more access to information about medicine in various social media and medical students may face with patients who have more detailed questions from their physicians which may be a big challenge (15).

Conclusion

Finally, the research results showed that the attitudes and feelings of patients visiting the clinics affiliated to the Educational Hospitals of Jahrom University of Medical

Sciences were positive and most of them felt good to be informed that they were helping the students' education, which can be effective in increasing the quality of clinical education.

Conflict of Interest Disclosures

The authors declare that they have no conflict of interests.

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Ethical Statement

This study was derived from a research project under the code of ethics of IR.JUMS.REC.1397.055.

Authors Contributions

All the authors met the criteria of authorship based on the recommendations of the international Committee of Medical Journal Editors.

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Informed Consent

A consensus was obtained from all patients participating in this study.

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