



# Does Patient-Centered Attitude Improve During Internship? A Longitudinal Study

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## Abstract

**Background:** The patient-centered approach improves the quality of health care. Promoting this approach will increase the patients' satisfaction and improve interpersonal skills among health care providers.

**Objectives:** The aim of the current study was to compare the viewpoints of interns toward the patient-centered approach in the beginning and the end of the internship at the Kerman University of Medical Sciences (KUMS).

**Methods:** This longitudinal study was carried out at KUMS between March 2017 and July 2018. All medical students who had passed the internship entrance exam were selected through a census. The Persian version of the patient-practitioner orientation scale (PPOS) was completed at the start and the end of the internship. This instrument has 18 items in two 9-item subscales: sharing and caring. The minimum and maximum scores were 1 to 6, respectively. The higher the score, the more the patient-centered orientation. The data were analyzed by SPSS using independent and paired *t*-tests, ANOVA, and multiple linear regression.

**Results:** The mean scores of PPOS were  $3.92 \pm 0.42$  and  $3.86 \pm 0.37$  at the beginning and the end of the internship, respectively. This difference was not statistically significant. The mean score of the caring subscale significantly increased during internship but no significant change was found in the mean score of the sharing subscale.

**Conclusions:** The results of our study showed that the patient-centered attitude toward patient caring improved during the internship in the majority of interns but no significant improvement was found in terms of patient sharing. Significant progress can be made in the quality of physician-patient communication and patient satisfaction if necessary training programs are run on patient-centeredness.

**Keywords:** Medical Student, Patient-Centeredness, Attitude, Internship

## 1. Background

Patient-centeredness is an important dimension of the quality of health care that is often overlooked. Patient-centered care is defined as considering patient values, preferences, and needs in a respectful and responsive manner (1). Previous studies revealed different dimensions for patient-centeredness. The characteristics of the clinician such as honesty, respect, and empathy, the clinician-patient relationship in a trusting and caring atmosphere, and considering patients' feelings, expectations, beliefs, concerns, and their social and psychological contexts are some of these important dimensions (2).

It has been found that patient-centeredness can increase the quality and efficiency and decrease the costs and utilization of health care. In addition, it is specified that this approach comes with higher satisfaction and better

adherence to the treatment in patients (3).

It is the responsibility of medical schools to place value on communication skills and patient-centeredness and provide learning opportunities for their medical students as future doctors to be trained on how to communicate effectively with their patients. Nevertheless, the evidence reveals that patient-centeredness attitude declines during medical education (4, 5).

Ishikawa and colleagues found that patient-centeredness attitude declined in residents during the first year of residency (6). This reduction may be due to how we train our medical students. A curriculum that emphasizes on biological aspects of diseases has no efficiency in institutionalizing of such attitude. The intensity of the workload and responsibilities of medical students, which can lead to burn out, is another reason (7).

However, the evidence on this regard is contradictory so that some other similar studies indicate an increase or no significant change in patient-centeredness attitude during the course of study (8, 9).

Bombeke and colleagues, studying the medical schools of the Universities of Antwerp and Ghent, Belgium, revealed that in spite of the positive attitude toward patient-centeredness among medical students and acquiring patient-centered skills during the years of medical study, the level of competency in graduates is not satisfactory to face real working environment (4). Currently, there is no clear picture on the issue among our medical students at the Kerman University of Medical Sciences (KUMS), Kerman, southeast of Iran. Therefore, it is necessary to evaluate the current situation and plan accordingly to improve patient-centeredness among our graduates.

## 2. Objectives

The current study aimed to evaluate if patient-centeredness attitude improves during the internship at KUMS.

## 3. Methods

This descriptive-analytical longitudinal (panel) survey was carried out at KUMS from March 2017 to July 2018. All medical students ( $n = 82$ ) who had passed the internship entrance exam were selected through a census method. The data were collected using a self-administered questionnaire, consisting of two sections. The first section comprised questions on demographic data, such as age, gender, residence status, and household income. The second part was the Persian version of the patient-practitioner orientation scale (PPOS).

The PPOS has 18 items in two 9-item subscales: sharing (1, 4, 5, 8, 9, 10, 12, 15, and 18) and caring (2, 3, 6, 7, 11, 13, 14, 16, and 17). The sharing subscale evaluates the extent to which the responder believes that the practitioner should share information with the patient and involve his/her in decision-making. The caring subscale reflects whether the practitioner considers the patient's feelings, expectations, and lifestyle. The questions are scored based on a 6-point Likert scale ranging from 1 = completely agree to 6 = completely disagree. Thus, the minimum and maximum scores were 1 to 6, respectively, for each item of the questionnaire. According to the original version of the questionnaire, a mean total score for the whole questionnaire and its subscales is calculated in the range of 1 to 6. The higher the score, the more patient-centered orientation. A mean score of  $\geq 5$  reflects a patient-centered viewpoint, 4.57 - 4.99 indicates a moderate view,  $< 4.57$  points to a doctor-centered

perspective. The psychometric properties of the original and Persian versions were confirmed (10-12). In the current study, using a pilot study on 30 interns, the internal consistency of the PPOS was evaluated and determined as 0.60. These participants then entered into the sample.

The participants completed the questionnaire twice (at the start and the end of the internship). Therefore, a code was given to each questionnaire and the students were asked to remind their code for the second round of the study; thus, it was possible to compare the results. It lasted approximately 10 minutes to complete each questionnaire.

Our study was approved by the Ethics Committee of Kerman University of Medical Sciences (IR.KMU.ACRS.REC.1396.1103). The participants were assured that their data would be used only for research purposes.

The data were analyzed by SPSS version 19 using the Kolmogorov Smirnov test, independent *t*-test, paired *t*-test, and ANOVA.

## 4. Results

In this study, 82 medical students participated (response rate: 80%). The mean age was  $25.50 \pm 0.9$  years with minimum and maximum of 24 and 30 years, respectively. The majority of the participants were female (70.0%) and single (77.0%) with a monthly household income of equal to or more than 20 million RIs (81.7%) (Table 1).

Table 2 shows the mean scores of PPOS and its subscales based on the demographic data. Accordingly, there were no statistically significant differences in the scores of PPOS and its subscales according to demographic data ( $P > 0.05$ ).

Table 3 compares the mean  $\pm$  SD scores of PPOS and its subscales at the start and the end of the internship. Accordingly, the scores of PPOS and the sharing subscale decreased at the end of the internship but this difference was not statistically significant. The score of the caring subscale increased significantly at the end of the internship ( $P = 0.001$ ).

The majority of the participants (74.4% - 95.1%) had a doctor-centered attitude at the start and the end of the internship in terms of PPOS and its subscales.

## 5. Discussion

The current study was carried out to evaluate if the patient-centeredness improves during the internship course among the interns of KUMS. Our findings revealed

**Table 1.** Demographic Data of the Participants in the Patient-Centeredness Study in KUMS<sup>a</sup>

Variable	Value
Age, mean $\pm$ SD	25.50 $\pm$ 0.9
<b>Gender</b>	
Male	33 (40)
Female	49 (60)
<b>Marital status</b>	
Single	58 (71)
Married	24 (29)
<b>Origin</b>	
Native	64 (78)
Non-native	18 (22)
<b>Residence</b>	
Dormitory	22 (26.8)
Private house	34 (41.5)
Parents house	26 (31.7)
<b>Household income, IRRs</b>	
< 20 million	15 (18.3)
$\geq$ 20 million	67 (81.7)

<sup>a</sup>Values are expressed as No. (%) unless otherwise indicated.

the majority of our participants had a doctor-centered attitude at the beginning and the end of the internship. During the internship, no significant change was found in the viewpoint of our participants in terms of PPOS and its sharing subscale. Tsimtsiou and colleagues revealed that the patient-centered attitude significantly decreased while medical students get to higher grades of education, which are compatible with the current study (10). We also found that the mean scores of PPOS and its sharing subscale decreased but the difference was not statistically significant, which may be due to the small sample size.

In the clinical settings, students observe the attitudes and behaviors of the medical professors during the clinical rounds, and informal training sessions. Therefore, the attitude and behavior of clinical professors can be effective in the shaping of students' experiences, thoughts, values, and professional behaviors. It is a concept that is referred to as "hidden curriculum," through which, medical students, as future doctors, get familiar with the medical culture and professionalism (13).

Our finding showed that the hidden curriculum had a weak role in institutionalizing the patient-centered viewpoints in our interns, probably due to traditional practices and skeptical and stereotypical attitude of clinical teachers and other health care providers (14). In addition,

the context in which the patient is being cared for has a very important role in limiting or supporting patient-centered care. The context includes patients, providers, and settings, as well as how the patient-centeredness is defined (15, 16). Mirzazadeh and colleagues showed in Babol University of Medical Sciences in 2010 that clinical faculty members have a doctor-centered viewpoint in general and in terms of patient sharing and caring. This study suggested that doctor-patient communication skills workshops be conducted for clinical faculty members (11). Therefore, it is essential to plan similar workshops at Kerman University of Medical Sciences both for faculty members and students, especially in clinical stages and even before the start of the internship. It is better to use modern and attractive training methods in these workshops.

In the current study, there was no significant difference in the scores of PPOS and its subscales at the beginning and the end of the internship based on demographic characteristics such as gender, marital status, residence status, and income. In addition, no significant relationship was found between age and the scores of PPOS and its subscales. Similarly, Wang and colleagues, in China, showed that there was no correlation between the demographics of physicians and patient-centeredness, which is consistent with our study (17). Therefore, considering the demographics of physicians may not seem necessary as the first step in conducting communication skills workshops to create a patient-centered approach. However, similar studies have shown different results in this regard.

Mirzazadeh and colleagues showed that with increasing age and history of clinical practice in clinical faculty members, the overall patient-centeredness score reduces (11). Ribeiro and colleagues in Brazil found that female students, senior students, and those with lower family income studying in the medical schools had a more patient-centered perspective (5). Lee and colleagues showed that female medical students had a higher patient-centeredness score (8). Taghipour revealed female interns, compared to their male counterparts, scored themselves lower in their support for patient-centered communication. Krupat et al. found female physicians are more patient-centered than male physicians (18).

Our finding showed that the score of patient caring subscale significantly increased during the internship period, which is consistent with a Chinese study. It seems that the conditions of our clinical settings at Kerman University of Medical Sciences to some extent paved the way for creating such attitude in interns to consider patients' expectations, feelings, and lifestyles during medical consultation.

One limitation of our study was that the data were collected through a self-reported questionnaire and in two stages; thus, it is possible that the questionnaires were not

**Table 2.** The Comparison of the Mean Scores of PPOS and Its Subscales According to Demographic Data<sup>a</sup>

Variable	Total Score of PPOS	P Value	Sharing Score	P Value	Caring Score	P Value
<b>Gender</b>		0.32		0.13		0.71
Male	3.98 ± 0.4		4.05 ± 0.6		3.93 ± 0.4	
Female	3.88 ± 0.4		3.87 ± 0.4		3.89 ± 0.5	
<b>Marital status</b>		0.91		0.64		0.58
Single	3.93 ± 0.4		3.93 ± 0.5		3.92 ± 0.5	
Married	3.92 ± 0.3		3.99 ± 0.5		3.86 ± 0.4	
<b>Origin</b>		0.72		0.42		0.43
Native	3.93 ± 0.4		3.92 ± 0.5		3.92 ± 0.4	
Non-native	3.89 ± 0.3		4.03 ± 0.4		3.82 ± 0.4	
<b>Residence</b>		0.88		0.75		0.81
Dormitory	3.91 ± 0.4		4.01 ± 0.5		3.86 ± 0.5	
Private house	3.90 ± 0.3		3.90 ± 0.5		3.90 ± 0.4	
Parents house	3.96 ± 0.4		3.94 ± 0.4		3.95 ± 0.5	
<b>Household income, Rls</b>		0.70		0.17		0.77
< 20 million	3.96 ± 0.5		4.11 ± 0.4		3.87 ± 0.5	
≥ 20 million	3.91 ± 0.4		3.90 ± 0.5		3.91 ± 0.4	

<sup>a</sup>Values are expressed as mean ± SD.

**Table 3.** The Comparison of the Mean ± SD Scores of PPOS and Its Subscales at the Start and the End of the Internship<sup>a</sup>

Scores	At the Start of the Internship	At the End of the Internship	t	P Value
<b>PPOS</b>	3.92 ± 0.4	3.86 ± 0.4	1.15	0.25
<b>Sharing</b>	3.94 ± 0.5	3.79 ± 0.5	1.92	0.06
<b>Caring</b>	3.90 ± 0.4	4.25 ± 0.5	-4.55	0.001

<sup>a</sup>Values are expressed as mean ± SD.

completed accurately. Another limitation was our small sample size.

### 5.1. Conclusions

The results of our study showed that the patient-centered attitude toward patient caring improved during the internship in the majority of interns but no significant improvement was found in terms of patient participation. The lack of awareness about patients' rights and not paying attention to the impact of patient participation in treatment on health outcomes can be the reasons for these results. The lack of proper training for interns to communicate with patients may be another reason.

Based on the study, it seems that significant progress can be made in the quality of the physician-patient relationship, patient satisfaction, physician acceptance by patients, and community health outcomes if necessary training programs are considered on patient-centeredness and

patients' rights in the treatment process before and during the internship.

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### Footnotes

**Authors' Contribution:** All authors participated in all stages from concept to edit the manuscript.

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