

Original article

Satisfaction in orthopedic patients based on Patient satisfaction questionnaire (PSQ)

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Abstract

Aim: The aim of this study was evaluated the satisfaction of patients referred to the Orthopaedic Department of Imam-Khomeini Hospital of sari over a period of 3 years.

Methods: This is a cross-sectional study. Patient satisfaction were collected by Patients Satisfaction Questionnaire (PSQ) and analyzed with SPSS v18.

Results: In this study the highest satisfaction of patients was from para clinical services 69.78 ± 21.45 and the lowest satisfaction was from the department environment and the services 57.20 ± 22.86 . There was no statistically significant difference between the sex ($P>0.05$). Patients with a history of hospitalization were significantly less satisfied with the services provided at the clinic ($P=0.033$). Between rural and urban patients satisfaction from reception and guard was statistically significant difference ($P=0.01$). Patients who had no health insurance less satisfied with the reception and guard ($P=0.044$), physician ($P=0.049$) and drugstores ($P=0.032$).

Conclusion: The highest level of satisfaction was from the para clinical services and the lowest rate of their satisfaction was department environment and the services, that need planning to improve the department and particularly about cleanliness of toilets can be greatly improved this problem and increased patient satisfaction. The present study showed that a history of previous hospitalization, residence, and having health insurance (despite funding) are significantly associated with patient satisfaction of certain levels of service provided. But gender and level of education is not associated with patient satisfaction.

Keyword: Satisfaction, orthopedic patient, hospitalization

Introduction

Increasing costs of health care continuously and resources limitation, suggested hospital as one of the most important and most costly health organizations that the administration of it requires efficient management. Effective management through reduce costs, increase productivity, improve performance and finally improve the quality of services are provided satisfaction and confidence of clients and patients that was the main hospitals customers [1]. Among the various methods of evaluating the performance and quality of hospital services, inpatient satisfaction as users of the services, today be under special consideration of the manager [2]. Patient satisfaction can be explained to the state that

patients not only receive the necessary treatment and care, but also has been satisfied the conditions and the services provided by the employees and the whole system and wish that if necessary refer back to the center and beyond that recommend to others to go to that hospital [3]. According to this definition study of patient satisfaction on the one hand has focused as a tool to measure the efficiency and effectiveness of hospital services and on the other hand can be used to make decisions about the management and improve quality of care. It also enables administrators to evaluate hospital performance at national level [4]. Therefore, it's done as a comprehensive national plan in many european countries in terms of patient

satisfaction survey [5]. Harvard University Researchers in 2001 for the first time studies patient satisfaction at a national level in the United States of America and now in this country as well as European countries annual patient satisfaction with the services provided are studied by the National Committee for Quality Assurance (NCQA) [6,7].

Importance of satisfaction in health system is more than other services, because experience of illness and need to adherence and follow treatment process, Increased the vulnerability of the patients and increase require more comprehensive support. In addition, changing social conditions at the same time with raising public awareness in recent years has increase the expectations of how to get more services [8]. Accordingly, Due to the fact that few studies have been conducted in this state that were not examined The overall patient satisfaction from various units[9,10], Thus we tried to evaluated the level of satisfaction of patients referred to orthopedic department of Emam-Khomeini hospital of Sari in 2011.

Methods

This study is a descriptive - analytical study on the satisfaction of patients in Orthopaedic Department of Imam-Khomeini Hospital over a period of 3 years from jun 2011- Dec 2013. Patients selection were randomized, The first patient was randomly selected from the first 5 patients and other samples selected with specific sequence (every 4 patients) on the list. Thus the probability of all patients, at all hours of operation will be monitored. Data collection methods will be interview and questionnaire. Person exclusive of the questioner selected samples and notify their names to questioner. In this study used 2 questioner and for accurate data catch, before study start, The interviewers received adequate training and information on how to treat patients and questionnaires were given. Patients who are not able to cooperate with the questionnaires for any reason questioning do on the patient escorts. Interviews will be done on patients at discharge from hospital [1]. As noted above, the data collected by the questionnaire for the purpose of Patients Satisfaction Questionnaire (PSQ) is used to assess the level of patient satisfaction. The questionnaire was translated, edited and adjusted to suit the culture and its validity has been demonstrated in previous studies [11,12]. The questionnaire consisted of 46 questions that the services provided and the level of patient satisfaction with the services provides in the center. To answer these questions, 5 items include totally agree, agree, I don't have idea, I am not and totally disagree considered to be in the order of 5 to 1

Rating [13]. The questions include how to treat the receptionist, the nurses, the doctors dealing availability receptionist, nurse availability, availability of physician, inform patients about their illness, patient participation in treatment, services and the waiting room. Score is calculated for each area separately. To this end points for each question (between 1 and 5) are added together and divided by the number of questions. The overall patient satisfaction score was calculated by taking the total score for all sectors, divided by the number of cases, respectively. Due to the number of questions in the questionnaire was used to compare different subgroups of satisfactory scores, scores on a scale of 0 to 100 [11].

The collected data were entered into SPSS 18 software. Square test to compare qualitative data from Chi-square and, if necessary, fisher exact test and t-test was used for quantitative data. $P < 0.05$ was considered statistically significant.

In time of questionnaire filling, whilst explanation of study goals and trade their satisfaction, give assure to them that their say are inactive on their care and treatment process and their data will be secret.

Results

Age and sex: In this study 100 patients were included, 67 men (67%) and 33 women (33%). The mean age of the patients was 40.34 ± 18.06 years old (median=37). The mean age of women in this study was 49.15 ± 18.28 years old (median=46) and the mean age of men was 36.00 ± 16.40 years old (median=32) respectively. The mean age of women was significantly higher than men.

History of previous hospitalization: 36 patients(36%) had previous admit and 64 patients(64%) was first admit.

Location(residence): 52 patients(52%) live in city and 48 patients(48%) live in village.

Insured: in the study, 85 patients (85%) had health insurance, and 15 patients (15%) had no health insurance. Types of insurance are also included, 39 patients (45.3%) had Social Security insurance, 27 patients (31.35%) had rural insurance, 12 patients (14%) had NHS, 6 patients (7%) had armed Forces insurance and 2 patients (2.3%) had relief Committee insurance.

Education: In the education of patients, 21 patients (21%) were illiterate, 38 patients (38%) were under diploma, 24 patients (24%) were Diploma, 12 patients (12%) were associated degree and 5 patients (5%) had a bachelor's degree. Overall, in 59 patients (59%) the level of education were

below than diplomas and 41 patients (41%) had higher levels of education from diploma.

Hospitalization: 58 patients (58%) in the study were admitted directly from the emergency room. 36 patients (36%) were referred for elective doctor and 6 patients (6%) were referred from other centers

Length of stay: Average length of stay for patients in the study, 5.53 ± 4.45 days. Minimum stay was 1 day and longest hospital stay was 20 days (Median=4).

Patients Miscellaneous expenses: The miscellaneous expenses was included; 36 patients (36%) the cost of clothing, 22 patients (22%) the cost of the operating room suites, 17 patients (17%) of the cost of equipment needed, and 16 patients (16%) paid miscellaneous costs in their admission.

Patients satisfaction: Average score from different parts of the hospital patient satisfaction is given in the table. As the table suggests, the highest level of satisfaction has been with the para clinic services (69.78 ± 21.45) and the lowest level of satisfaction has been from the environment and the services sector (57.00 ± 22.86)

Table 1. The mean score of satisfaction of the patients studied

	Average of Patients satisfaction(0-100)
Security and Reception unit (Mean±SD)	63/25±24/25
Emergency Physician (Mean±SD)	66/12±23/89
Sector Physician (Mean±SD)	66/69±22/83
Nursing (Mean±SD)	65/67±23/90
Para clinic Services (Mean±SD)	69/78±21/45
Environment and the Services Sector (Mean±SD)	57/20±22/86
Pharmacy (Mean±SD)	65/40±22/73
Discharge unit (Mean±SD)	63/17±22/02
Operating Room (Mean±SD)	65/55±26/24
Clinic (Mean±SD)	63/72±23/37
Overall patient satisfaction (Mean±SD)	64/87±17/12

Satisfaction on the basis of gender: level of satisfaction of the various sectors studied on the basis of gender is given in Table. As you can see in the table statistically was not significant difference between the sexes in any of the studied there.

Table 2. Average satisfaction of patients according to sex

	Satisfaction of men	Satisfaction of women	P value
Security and Reception unit (Mean±SD)	62/23±24/17	65/30±24/66	0.557
Emergency Physician (Mean±SD)	64/79±22/39	68/69±26/78	0.479
Sector Physician (Mean±SD)	65/55±22/91	68/90±22/86	0.496
Nursing (Mean±SD)	65/52±22/05	65/97±27/61	0.931
Para clinic Services (Mean±SD)	69/55±19/15	70/24±25/79	0.896
Environment and the Services Sector (Mean±SD)	57/04±22/38	57/50±24/12	0.929
Pharmacy (Mean±SD)	67/79±21/83	60/52±24/34	0.257
Discharge unit (Mean±SD)	63/97±24/32	61/38±16/22	0.691
Operating Room (Mean±SD)	63/84±25/45	69/05±28/05	0.440
Clinic (Mean±SD)	65/03±26/50	63/43±14/29	0.808
Overall patient satisfaction (Mean±SD)	63/76±18/00	67/10±15/24	0.379

Satisfaction on the basis of previous hospitalization: compared Satisfaction of patients who had a history of hospitalization to those who had no history of previous hospitalization suggested that Patients with a history of hospitalization were significantly less satisfied with the services offered at the clinic. However, no statistically significant difference were seen between the two groups in terms of other units also reviewed and overall satisfaction

Table 3. Average satisfaction of patients according to admission History

	Patients with hospitalization history	Patients without hospitalization history	P value
Security and Reception unit (Mean±SD)	59/34±18/35	65/39±26/83	0.237
Emergency Physician (Mean±SD)	60/25±19/92	69/33±25/39	0.094
Sector Physician (Mean±SD)	63/15±17/01	68/69±25/45	0.254
Nursing (Mean±SD)	65/51±18/64	65/21±26/47	0.801
Para clinic Services (Mean±SD)	65/94±20/37	72/10±21/96	0.225
Environment and the Services Sector (Mean±SD)	58/68±19/15	56/30±24/96	0.635
Pharmacy (Mean±SD)	66/86±20/93	64/22±24/37	0.664
Discharge unit (Mean±SD)	61/53±19/10	64/44±24/27	0.631
Operating Room (Mean±SD)	64/86±24/45	66/08±17/81	0.849
Clinic (Mean±SD)	56/61±19/78	69/89±24/77	0.033
Overall patient satisfaction (Mean±SD)	66/04±13/92	64/20±18/80	0.620

Satisfaction according Location: Patients' satisfaction separately according Location in Table. As you can see in the table in residents of the village, acceptance and satisfaction level of security is significantly higher than in urban areas. However, in other cases the difference was not statistically significant

Table 4. Average satisfaction of patients according to location

	Patients in urban areas	Patients in villages	P value
Security and Reception unit (Mean±SD)	57/36±27/09	69/78±18/87	0.010
Emergency Physician (Mean±SD)	63/84±26/20	68/70±21/02	0.352
Sector Physician (Mean±SD)	63/31±23/84	70/29±21/37	0.133
Nursing (Mean±SD)	64/47±25/18	66/98±22/63	0.609
Para clinic Services (Mean±SD)	68/53±24/51	71/32±17/32	0.578
Environment and the Services Sector (Mean±SD)	54/02±22/75	61/17±22/64	0.141
Pharmacy (Mean±SD)	65/89±24/94	64/92±20/72	0.873
Discharge unit (Mean±SD)	60/25±22/93	66/20±21/02	0.321
Operating Room (Mean±SD)	64/05±26/07	67/44±26/77	0.595
Clinic (Mean±SD)	63/78±21/71	63/67±25/32	0.986
Overall patient satisfaction (Mean±SD)	63/78±18/28	66/19±15/94	0.467

The impact of health insurance on the satisfaction of the patients: the mean level of patients satisfaction separated by having or not having health insurance is given in Table. Patients who hadn't health insurance were less satisfied with the adoption and maintenance ($P = 0.044$), physician ($P = 0.049$) and pharmacy ($P = 0.032$), respectively. In the remaining cases, there was no statistically significant difference between the two groups ($P > 0.05$).

Table 5. Average satisfaction of patients according to health insurance

	Patients with health insurance	Patients without health insurance	P value
Security and Reception unit (Mean±SD)	65/33±22/43	51/66±31/05	0.044
Emergency Physician (Mean±SD)	68/37±23/31	55/64±24/57	0.061
Sector Physician (Mean±SD)	68/62±22/78	55/15±20/76	0.049
Nursing (Mean±SD)	66/75±23/44	59/86±26/32	0.308
Para clinic Services (Mean±SD)	68/80±21/42	74/21±21/80	0.397
Environment and the Services Sector (Mean±SD)	58/76±21/41	49/39±28/63	0.148
Pharmacy (Mean±SD)	68/64±19/38	52/99±30/49	0.032
Discharge unit (Mean±SD)	63/14±21/42	63/37±27/72	0.980
Operating Room (Mean±SD)	67/07±25/81	58/92±28/13	0.316
Clinic (Mean±SD)	62/69±22/53	69/10±28/25	0.456
Overall patient satisfaction (Mean±SD)	64/60±17/54	66/58±14/72	0.701

Education level and satisfaction: the mean patients satisfaction separate by education level in table. As you can see in the table no statistically significant difference were seen between the two groups.

Table 6. Average satisfaction of patients according to education level

	Lower diploma	High school Diploma and higher	P value
Security and Reception unit (Mean±SD)	64/10±21/36	62/00±28/22	0.674
Emergency Physician (Mean±SD)	66/17±21/56	66/05±27/52	0.982
Sector Physician (Mean±SD)	66/18±22/99	67/48±22/87	0.787
Nursing (Mean±SD)	66/32±22/59	64/72±25/96	0.748
Para clinic Services (Mean±SD)	68/33±19/13	71/72±24/38	0.497
Environment and the Services Sector (Mean±SD)	57/55±23/37	56/68±22/38	0.861
Pharmacy (Mean±SD)	67/09±20/08	62/21±27/36	0.442
Discharge unit (Mean±SD)	62/11±22/74	64/44±21/38	0.676
Operating Room (Mean±SD)	66/07±25/17	64/87±28/02	0.852
Clinic (Mean±SD)	65/48±22/22	60/01±25/90	0.418
Overall patient satisfaction (Mean±SD)	64/60±18/14	65/27±15/76	0.852

Satisfaction of hospital management: 61 patients responded to the question that in this cases, 32 patients (52.5%) were satisfied, 25 patients (41%) were somewhat satisfied, and 4 patients (6.6%) were dissatisfied on the performance of the unit.

Satisfaction of Nursing Office: Among 67 patients who responded to this question, 39 patients (58.2%) were completely satisfied, 22 patients (32.8%) are somewhat satisfied and 6 patients (9%) were dissatisfied.

Satisfaction with the service provided: 42 patients (42%) answered yes to this question, 45

patients (45%) somewhat, and 13 patients (13%) answered no.

The overall satisfaction of a hospital: in the case, 35 patients (35%) were completely satisfied, 44 patients (44%) are somewhat satisfied and 21 patients (21%) were dissatisfied.

Want to see this ward again? In response to this, 37 patients (37%) noted the need to have a desire to go back to the orthopedic ward, while 31 patients (31%) had no desire to go back.

Other patients (32%) stated that they are not sure to visit again.

Table 7.Overall satisfaction of a hospital units

	Yes	Partially	No
Hospital management	32(52/5%)	25(41%)	4(6/6%)
Nursing Office	39(58/2%)	22(32/8%)	6(9%)
Services	42(42%)	37(45%)	13(13%)
Overall Satisfaction	35(35%)	44(44%)	21(21%)
Tend to readmission	37(37%)	32(32%)	31(31%)

Discussion

Till now, many different researches have been done on patient satisfaction for hospital services. In this research, some factors such as age, gender, educational level, patient social level, waiting time to receive services, hospital employees skills, services provided by physicians and nurses, discharge orders to patients, respect to the patients beliefs is effective on the satisfaction [14,15]. Therefore, knowledge of hospital administrators in this area can providing high quality services to patients, especially those who have more exceptionable. Awareness of patients to their rights and hospital obligations leading in to be more sensitive to the quantity and quality of hospital services, as well as do their commitment to the Hospital to have fewer ambiguities that affecting their satisfaction. Also knowledge of hospital employees about the rights of patients and hospital lead to improved relations between them. Therefore, this study was designed and implemented to evaluate patient satisfaction of orthopedic patients.

In this study the highest satisfaction of patients was from para clinical services 69.78 ± 21.45 and the lowest satisfaction was from the department environment and the services 57.20 ± 22.86 , that seems with planning to improve the department and particularly about cleanliness of it and specially the toilets can be greatly improved this problem and increased patient satisfaction. In Arefi and et al study that evaluated the level of satisfaction of the patients in Baharloo hospital, the highest level of satisfaction was nurses timely being of the bedside and rapid admission and guidance of receptionist. Which as noted earlier this is in contrast to our study that there was dissatisfaction with the reception and the lowest level of satisfaction was with the facilities, the quality of food and clothing and bed sheets changed daily, which was similar with our study [16]. In the study of Ahmadi and et al that have done in type I hospitals of Tehran University of Medical Sciences to evaluate patient satisfaction, the highest satisfaction was related to the cleanliness of the hospital environment that was completely opposite was with our study, and the lowest level of satisfaction was hospital room which had bad air conditioning and improper temperature and bad toilets conditions that was

close to our study [17]. In a study of Haji-fatahi and et al in Taleghani Hospital of Tehran, Patient satisfaction from the services provided by this center was 83% and The highest patient satisfaction (91%) of their relationship with their physicians that is higher than our study [18]. Akbari and et al designed study at hospitals under observation of Tehran University of Medical Sciences and showed the satisfaction of medical services was 83.8%, nursing was 79.5%, clinic services was 94.1% and emergency department was 82.2%. In this study, almost similar to our study, the highest level of dissatisfaction with the feeding unit (38%), environment and hospital facilities (34.5%), discharge unit (29.3%) and other service personnel (25.3%) [1].

In a study of Salaheddin hospital in Bane, Rahimi et al concluded that 96.7% of patients were satisfied from acceptance unit, 94.2% from the presence of personnel, 93.1% from the personal care, 88.6% from medical care, 93.4% from personnel behavior, 90.2% from bed and dress and grooming and 46.8% from nutritional status [19]. Seems that In most studies conducted in the country as we The lowest level of satisfaction is on the part of the hospital environment Which indicates the need to redesign and build a standard hospital environment and In addition, notify need to the teaching of service providers. In Narenjiha et al study that works on Qods clinic of Tehran client satisfaction of physician relationship and correlate ingredient, they find significant different between satisfaction and education level and higher satisfaction were in higher level of education [12]. While in study in America by Cramer et al was inverse relationship between education level and the level of satisfaction [21]. In our study there was no significant difference between the two. present study showed that admission, residence and having health insurance (having financial support) can affect some patients' satisfaction levels, although the overall satisfaction of patients had no statistically significant differences were observed. However, in a study of Garrouette et al in 2004 in America between patient satisfaction and personal characteristics, such as age, gender, education level, there is a significant relationship, In the present study does not [21]. In addition, in a study in America Fan et al found that patients'

satisfaction related with age, education, patient's health status, insurance and services center. But unrelated to the gender of the patient, and the number of referrals and physician degree[22]. Overall view of the World Health Organization 10 aspects of patient satisfaction is include: access to care services, access to information, the ability of the medical team, adequate emotional support to patients, cost of service, coordination of services with the needs of the clients, the physical environment of service, wait time to receive services, the number of the patient visits, the duration of each visit, ethics, quality and efficiency of health care to meet the needs of the patient[23].

Conclusion

The highest level of satisfaction was from the para clinical services and the lowest rate of their satisfaction was department environment and the service, that need planning to improve the department and particularly about cleanliness of toilets can be greatly improved this problem and increased patient satisfaction. The present study showed that a history of previous hospitalization, residence, and having health insurance (despite funding) are significantly associated with patient satisfaction of certain levels of service provided. But gender and level of education is not associated with patient satisfaction.

Conflict of Interest

The Authors declare that there is no conflict of interest.

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