



Factors Influencing Patient Satisfaction in Shahroud Hospitals in 2018

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Received: 20 December 2018

Accepted: 13 January 2019

Abstract

Background: Patient satisfaction is one of the important indicators of quality of service measurement. This study aimed at measuring patient satisfaction and factors affecting it in hospitals in Shahroud.

Methods: In this cross-sectional study, 800 patients selected through random sampling were studied in public and private hospitals in 2018. The collected data were entered into SPSS 16 and analyzed using t-test and chi-square. The level of significance in all tests was 0.05.

Results: Most of the inpatients were women and married people. The average score of satisfaction in the public hospitals affiliated with the University was 22.45 ± 6.02 while in the private sector, it was 21.56 ± 5 , which is deemed moderate. Patients were most dissatisfied with the daily change of patient dresses and bed covers (38.3%), hospital food quality (35.3%), room facilities (31.1%). In contrast, they were most satisfied with nursing behavior (87.7%). Chi-square test revealed a significant relationship between the type of hospital ($P=0.002$), age of patients ($P=0.037$), education of patients ($P=0.013$), as well as residence of patients ($P=0.012$) and their satisfaction.

Conclusions: Patients' satisfaction was moderate. Paying more attention to the areas such as daily changes of clothes and bed covers, the quality of hospital food, and the facilities of the patient's room can contribute to improving the satisfaction of the patients.

Keywords: Security feeling, Satisfaction, Public hospital, Private hospital, Patient.

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Please cite this paper as: Amiri M, Sadeghi E, Khosravi A. Factors influencing patient satisfaction in Shahroud hospitals in 2018. Int J Health Stud 2018;4(1): 37-41.

Introduction

One of the goals and missions of health service organizations is to meet the needs and expectations of clients, in order to fulfill their satisfaction.¹ Patient satisfaction is his or her perception of the quantity and quality of services provided in health care centers, which develops during the implementation of the service and through the bilateral interactions of the patients with the medical staff, especially the physicians. It captures the needs, expectations, and experiences of the patient receiving the services.²⁻⁴ Therefore, in order to achieve this, several dimensions of services, such as nursing and medical care and administrative support, as well as other organizational units need to be coordinated so that while taking patient's rights into account, steps could be taken for promotion and better observation of such rights.⁵ Patient satisfaction with medical care is considered an important indicator of the quality and effectiveness of the health care system.⁶ Factors such as the quality of the examination, admission, treatment, care, and providing welfare requirements during treatment, the location of the treatment, as well as the patients' previous experience,

their level of education and awareness can all impact patient satisfaction.⁷ Some studies refer to physicians, nurses, medical instruments and nutrition as the four main factors of patient satisfaction followed by other factors such as gender, education level, and age of patients.^{8, 9} Nevertheless, it should be noted that in addition to the quality of services provided, patient satisfaction is directly related to the level of patient expectations. This means that if the provided services are beyond what is expected by the patient, they will boost the level of satisfaction; otherwise they will reduce patient satisfaction.¹⁰⁻¹³

Patient satisfaction as a tool for evaluating the efficiency and effectiveness of hospital services has received considerable attention in recent years. It can assess hospital performance at a national level,¹⁴⁻¹⁶ and since it is an indicator of the quality of the services provided in various aspects including an interpersonal, organizational and technical areas, evaluation of patient satisfaction can be an important source of information for identifying problems and desirable care programs.¹⁷ Assessing patient satisfaction provides valuable information about the quality of received services and enables service providers to use this information to enhance the quality of care.¹⁸⁻²⁰

The results of some studies suggest that patients are utterly dissatisfied with the information and education provided to them in hospitals.²¹⁻²⁴ Some studies, however, show a high level of patient satisfaction with hospital services,^{3, 25-31} while some others also show moderate,³²⁻³⁴ and low patient satisfaction.³⁵⁻³⁷

Given the importance of this subject, this study was conducted to measure patient satisfaction and the factors that can influence it in hospitals affiliated to Shahroud University of Medical Sciences.

Materials and Methods

In this cross-sectional study, all hospitals affiliated to Shahroud University of Medical Sciences and Khatam-ol-Anbia Hospital, which is a private hospital affiliated with Shahrood Islamic Azad University, were studied in 2018. To collect the data, patients' satisfaction questionnaire was used.³⁸ This questionnaire has 12 demographic items and 13 Likert-type items focusing on the availability of specialized physician, heating, and cooling systems in patient rooms, facilities and equipment in patient rooms, quality of the hospital's food, the daily changes of patient clothes and bedcovers, the hygiene and sanitation of the various parts of the wards, light of the patient's room, admission, behavior and manners of the nurses, and

timely presence of the nurse on the patient's bedside. The response to the items ranged on a scale of one to four representing totally dissatisfied to totally satisfied, respectively. The overall scores are categorized based on Bogardus scale, where a score up to 50% represents low satisfaction, a score from 50% to 75% indicates moderate satisfaction, and a score above 75% shows a high level of satisfaction.³⁹

The questionnaires were distributed during January to march 2018 by a trained research assistant (a non-medical assistant) among the patients, so that to the extent possible they could complete it in person in their last treatment session. In the case of very young patients, the questionnaire was completed by the patient's attendant. Finally, for the illiterate or low literacy patients, the questionnaire was completed by the research assistant through interviewing the patient. The reliability of the questionnaire in its study was 0.92.³⁸

Using Cochran's formula and with an error estimate of 0.05 ($d=0.03$) and taking into account a type 1 errors ($\alpha=0.05$) and satisfaction proportion of 0.8, the sample size was estimated to be 800, who were selected through proportional stratified random sampling method according to their active beds in each hospital. The inclusion criteria for the study were being a patient or companions of patients referring to public and private hospitals in Shahroud and willingness to participate in the study. The questionnaires were completed anonymously and participation in the study was voluntary. Note that this study was conducted after obtaining oral informed consent from the voluntary participants. In addition, this proposal of the study was approved by the Committee of Medical Research Ethics of Shahroud University of Medical Sciences (IR.SHMU.REC.1396.28). The collected data were fed into SPSS 16 and analyzed with t-test, and chi-square test. The level of significance in all tests was 0.05.

Results

Most of the hospitalized patients were women (69%) and married people (86.1%). Patients under the age of 20 and over 50 years old had the lowest (5.8%) and highest (36%)

frequency, respectively. Among the participants, 79.2% high school diploma or lower education, 37.7% had an independent income while the rest lacked such an income. More than 75% of the patients were city dwellers. Further, 2% did not have any insurance coverage; however, 55.4% of the patients were covered by social security. In terms of income, 27.2% of patients had a monthly income of less than \$100 (5500000 Rials), and 20% had no income. The majority of patients were recommended to the hospitals by physicians (43.4%) and emergency departments of hospitals (37.1%). Of all patients, 75% were admitted to governmental hospitals affiliated with Shahroud University of Medical Sciences (Bahar and Imam Hossein hospitals) while 25% were hospitalized in a nongovernmental hospital.

The mean satisfaction score of patients in the public hospitals affiliated with the University was 22.45 ± 6.02 and in the private sector, it was 21.56 ± 5 . Overall, in all hospitals under study 21.1% of the patients ($N=169$) showed low satisfaction, 55% ($N=440$) presented moderate satisfaction, and 23.9% ($N=191$) showed high satisfaction. Patients were most dissatisfied with daily change of their clothes and the bed cover or sheets (38.3%), hospital food quality (35.3%), room facilities (31.1%), while they were most satisfied with nursing behavior and the care they received (87.7%). In all cases, except for food quality, there was a significant difference between public and private hospitals (table 1 and table 2).

In response to the question of whether you will return to this hospital in case you need to be hospitalized in the future, 79.8% of the patients responded positively. Also, in response to the question of whether you will recommend this hospital to your relatives and friends, 73.9% of patients responded positively. Chi-square revealed a significant relationship between the type of hospital and the willingness to refer to the hospital for further treatment ($P=0.03$) as well as the recommendation of this hospital to relatives ($P=0.005$); the patients in private hospitals showed greater willingness to return and the willingness to recommend the hospital to their relatives (table 2).

Table 1. Frequency distribution of participants based on satisfaction

Satisfaction domain	Hospital	Satisfaction Level; N(%)				χ^2	P.V
		Utterly dissatisfied	Dissatisfied	Satisfied	Completely satisfied		
Availability of a specialist doctor	Public	19(3.2)	107(17.8)	337(56.2)	137(22.8)	8.91	0.030
	Private	6(3)	19(9.5)	131(65.5)	44(22)		
Heating and cooling system	Public	25(4.2)	82(13.7)	340(56.7)	153(25.5)	19.96	0.001
	Private	5(2.5)	17(8.5)	148(74)	30(15)		
Facilities in the room (chair, comfortable bed, chest of drawers, bathroom, telephone)	Public	36(6)	165(27.5)	287(47.8)	112(18.7)	12.94	0.005
	Private	9(4.5)	39(19.5)	125(62.5)	27(13.5)		
Quality of hospital food	Public	55(9.2)	166(27.7)	301(50.2)	78(13)	5.57	0.134
	Private	19(9.5)	42(21)	118(59)	21(10.5)		
Daily change of clothes and bedcovers	Public	78(13)	182(30.3)	238(39.7)	102(17)	28.16	0.001
	Private	17(8.5)	29(14.5)	115(57.5)	39(19.5)		
Sanitation of different parts of the ward	Public	36(6)	98(16.3)	329(54.8)	137(22.8)	10.76	0.013
	Private	11(5.5)	17(8.5)	133(66.5)	39(19.5)		
Patient room's light	Public	20(3.3)	50(8.3)	339(56.5)	191(31.8)	21.82	0.001
	Private	0(0)	7(3.5)	146(73)	47(23.5)		
The convenience of admission and help provided to the patient	Public	27(4.5)	89(14.8)	326(54.3)	168(26.3)	28.16	0.001
	Private	7(3.5)	6(3)	154(72.5)	42(21)		
Nursing manners	Public	24(4)	69(11.5)	295(49.2)	212(35.3)	33.21	0.001
	Private	1(0.5)	5(2.5)	139(69.5)	55(27.5)		
Timely attendance to patients	Public	18(3)	78(13)	316(52.7)	188(31.3)	18.92	0.001
	Private	3(1.5)	9(4.5)	136(68)	52(26)		
Cooperation of the ward staff with patients' attendants	Public	27(4.5)	88(14.7)	320(53.3)	165(27.5)	37.35	0.001
	Private	2(1)	4(2)	147(73.5)	47(23.5)		

Table 2. Relationship between the type of hospital and future reference or recommendation of the hospital to others

Question	Type of hospital	Yes	NO	X ²	P.V
		N(%)	N(%)		
Will you return to this hospital in case you need to be hospitalized in the future?	Public	468(78)	132(22)	4.55	0.030
	Private	170(85)	30(15)		
Will you recommend this hospital to your relatives and friends?	Public	428(71.3)	172(28.7)	8.03	0.005
	Private	163(81.50)	37(18.50)		

The results of Chi-square test indicated a significant relationship between the type of the hospital ($P=0.002$), age of patients ($P=0.037$), patient education ($P=0.013$), place of residence ($P=0.012$), and satisfaction. Further, patients with higher levels of education presented higher satisfaction, while those who were younger than 20 years old did not show high

levels of satisfaction compared to other age groups. In addition, the frequency of high satisfaction was lower among those who were living in rural areas. Finally, chi-square test showed no significant relationship ($P\geq 0.05$) between gender, marital status, income, type of insurance, as well as place of referral and satisfaction (table 3).

Table3. Relationship between satisfaction levels and some variables

Variable	Satisfaction; N(%)			X ²	P.V
	Low	Moderate	High		
Gender				3.86	0.150
– Female	124(22.5)	291(52.7)	137(24.8)		
– Male	45(18.1)	149(60.1)	54(21.8)		
Marital status				1.08	0.580
– Single	26(23.4)	56(50.5)	29(26.1)		
– Married	143(20.8)	384(55.7)	162(23.5)		
Educational level				19.38	0.013
– Illiterate	48(27.6)	96(55.2)	30(17.2)		
– Below high school diploma	59(22.6)	147(56.3)	55(21.1)		
– High school diploma	37(18.6)	110(55.3)	52(26.1)		
– Bachelor's degree	20(14.8)	74(54.8)	41(30.4)		
– Master's degree and higher	5(16.2)	13(41.9)	13(41.9)		
Patients' age				16.40	0.037
– Less than 20 years	16(34.8)	19(41.3)	11(23.9)		
– 20-29 years	37(19)	109(55.9)	49(25.1)		
– 30-39 years	21(13.4)	95(60.5)	41(26.1)		
– 40-49 years	26(22.8)	56(49.1)	32(28.1)		
– Over 50	69(24)	161(55.9)	58(20.1)		
Patients' job				14.16	0.080
– Unemployed	62(22.6)	147(53.6)	65(23.7)		
– Employed	31(15)	113(54.9)	62(30.1)		
– Retired	23(24.2)	57(60)	15(15.8)		
– Housewife	51(23.4)	121(55.5)	46(21.1)		
– University student	2(28.6)	2(28.6)	3(42.8)		
Place of residence				8/78	0.012
– City	121(20.1)	322(53.5)	159(26.4)		
– Village	48(24.2)	118(59.6)	32(16.2)		
Type of insurance				21.58	0.088
– No insurance	4(25)	7(43.8)	5(31.3)		
– Private insurance	0(0)	1(33.3)	2(66.7)		
– Self-paid insurance	2(20)	3(30)	5(50)		
– Government employees' insurance	40(24.8)	86(53.4)	35(21.7)		
– Social security insurance	81(18.3)	251(56.7)	111(25.1)		
– Supplementary insurance	12(34.3)	20(57.1)	3(8.6)		
– Health insurance	10(27.8)	15(41.7)	11(30.6)		
– Others	20(20.8)	57(59.4)	19(19.8)		
Economic status of the family				12.75	0.120
– ≤ 100 \$	36(27.1)	69(51.8)	28(21.1)		
– 100-150\$	20(23.6)	49(57.6)	16(18.8)		
– 150-300\$	50(23.5)	114(53.5)	49(23)		
– ≥ 300 \$	40(19.1)	121(57.9)	48(23)		
– No income	23(14.4)	87(54.4)	50(31.3)		
Referred to the hospital by				3.74	0.710
– Physician	72(20.7)	190(54.8)	85(24.5)		
– Emergency Ward	63(21.2)	158(53.2)	76(25.6)		
– Healthcare center	8(17)	28(59.6)	11(23.4)		
– Other	26(23.9)	64(58.7)	19(17.4)		
Hospital type				12.65	0.002
– Public	133(22.2)	309(51.5)	158(26.3)		
– Private	36(18)	131(65.5)	33(16.5)		

Discussion

Patient satisfaction was moderate in public and private hospitals, which is consistent with some studies in Iran and the world.³²⁻³⁴ In a number of hospitals, patient satisfaction was higher than that in the present study,^{26, 29-31, 40-43} while in some others it was lower than the results of this study.^{35-37, 44} Perhaps these differences are due to the differences in the type of the personnel and their skills, working environments, and management procedures as well as cultural, and social factors, and expectations of patients, which significantly influence the quality of services provided and the satisfaction of patients.

According to the results, 23.9% of patients had a high level of satisfaction, 55% had moderate satisfaction, and 21.2% had low satisfaction. Studies in Tehran and Mazandaran suggested that overall satisfaction levels of patients were 78.1%, 66.7%, and 52.5% respectively, which is consistent with the current results.^{3, 33, 45} Further, in this study, 81.1% of the patients were satisfied with the services of doctors and 87.7% satisfied with nursing manners. In a study in one of the western provinces of Iran, the satisfaction with the doctor's services was 83.6% and with nursing services was 85.7%.²⁸ In army hospitals, these figures stood at 94.7 and 91.9%, respectively. In line with the current findings, many review studies reported higher patient satisfaction with the nursing services than with services received from doctors.²⁶

Most hospitalized patients were married and women, which is in line with the results of some studies,^{29, 30, 46} but inconsistent with others.^{31, 37} There was no significant relationship between the satisfaction of patients and their gender. This finding is also consistent with the findings of some studies,^{25, 27, 29, 33, 35, 47} but not congruent with some others.^{3, 31, 46, 48} Perhaps one of the reasons for such a difference is cultural differences and the type of hospital under study and similar gender of patients and doctors in those studies.

There was no significant relationship between patient satisfaction and their marital status, which is not consistent with the results of some studies^{3, 27, 29, 33} while corresponding to the results of some others.²⁵ However, there was a significant relationship between the patients' satisfactions and their age. This finding is not congruent with some reports.^{4, 25, 27, 32, 33} These findings may imply that demographic characteristics are a small but important criterion in predicting patient satisfaction.

The results also indicated a significant relationship between the patients' satisfaction and their education which is in line with the findings of some studies.^{27, 30, 32, 33, 37} However, some other studies reported no relationship between satisfaction and the education level of patients, which is not consistent with the current results.^{25, 35} Raising the awareness of hospital managers of these relationships can lead to the provision of high-quality services to patients, especially those with more critical attitudes.

There was no significant relationship between satisfaction of patients and their economic status or their insurance type, which is consistent with the results of some studies,³³ while a number of other studies confirmed such a relationship which is not consistent with the present results.^{3, 25, 32, 35} Also, a significant relationship was observed between the satisfaction

of patients and their occupations. This finding is also consistent with the results of some studies,³³ but not with the findings of some others.^{3, 35}

There was a significant relationship between satisfaction of patients and the type of hospital, which is congruent with the results of some studies.^{27, 49} Patients were most dissatisfied with the daily change of their clothes and bedcovers, the quality of hospital food, facilities and equipment of the patient's room, which is consistent with the results of some studies.^{25, 32} In a study in Mazandaran, the highest dissatisfaction was with admission, which is not consistent with the recent results.³ In a study in Iranian military hospitals, the greatest dissatisfaction was observed with welfare facilities, while the lowest dissatisfaction was with medical services. These reports are in line with our findings.²⁶ In the current study, the highest satisfaction was found with the behavior of nurses, which is consistent with the results of some studies.²⁵ In another study in Iranian military hospitals, the highest satisfaction was reported to be with medical services, which is not consistent with the results of the present study.^{3, 26, 32} It seems that the physical environment and specialized care are the most important issues in satisfying Iranian patients.

Since the findings indicate a moderate level of patient satisfaction, paying more attention to the areas of daily change of clothes and bedcovers, hospital food quality, facilities and equipment of patients' rooms and catering issues can lead to higher satisfaction for most patients.

Acknowledgement

We appreciate financial support from Shahroud University of Medical Sciences as well as the participants.

Conflict of Interest

The authors declare that they have no conflict of interest.

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