

Patient satisfaction with hospital services after the implementation of the health system

Mitra Sadeghi ¹, Masoomeh Rahimi ², Neda Poornoroz ³, Fatemeh Forouzan Jahromi ^{4*}

¹ Msc of Medical- Surgical Nursing, jahrom University of Medical Sciences, Jahrom, Iran. ² Msc of Critical Care Nursing, educational supervisor, Motahari hospital, Jahrom University of Medical Sciences, Jahrom, Iran. ³ Msc of Medical- Surgical Nursing, Nursing Faculty, jahrom University of Medical Sciences, Jahrom, Iran. ⁴ Msc of Critical Care Nursing, jahrom University of Medical Sciences, Jahrom, Iran.

Abstract

The purpose of this study was to evaluate patients' satisfaction with hospitalizing costs and hospital costs after implementation of the health system plan in Jahrom city hospitals in 2018. This is a descriptive-correlation study. 556 patients hospitalized in Peymaniyah and Motahari hospitals were selected randomly. The data were collected using a questionnaire to determine the level of satisfaction with the provision of hospital services. To assess the validity of the questionnaire, the questionnaire was designed by the method of formal and conceptual validity and for confirmation of reliability, based on the Cronbach's alpha coefficient 0.89. Data were analyzed using abundance and percentage of abundance calculations, and also one-way variance analysis through statistical SPSS-22 software. According to the results, the satisfaction of hospitalizing costs and hospital services after implementation of health system plans in Jahrom city hospitals in nursing services, nutrition services, diagnostic services (radiology/laboratory), accounting, insurance, and services Management is significantly different. Also, these factors have had different outcomes in the two hospitals. In fact, according to the results, Peymaniya Hospital has a higher level of satisfaction in nursing services. However, in terms of the nutrition services, diagnostic services (radiology/laboratory), accounting and insurance, and Hospital management services, Motahari hospital had superior patients' satisfaction in comparison with Peymanian Hospital.

Keywords: Satisfaction, Hospitalizing costs, Health system design, Hospital, Hospital services

INTRODUCTION

Patient satisfaction is comprised of a complex set of factors. To achieve this, several dimensions of services, such as nursing care, supporting sections, in addition to various parts of the organization should follow one another and in full compliance with the patient's rights in all aspects to provide patient satisfaction [1]. The importance of the issue of satisfaction in the provision of health services increases as the illness experience and the need for compliance and follow-up of the treatment process enhances the vulnerability of patients and increase their need for comprehensive support; although, the change in social conditions together with raising public awareness, have also increased patients' expectations of receiving suitable services in recent years. Patient satisfaction can be interpreted in the way that patients during the admission process receive not only essential care but are also pleased with the existing services offered by the staff and the whole system, so that as a result they are willing to return to that center again and even advise others to go there [2, 3]. Johnson et al. (2002) argue that patient satisfaction is an internal perception that should be expressed by the patient himself [4].

The satisfaction of patients with physicians and paramedical staff is a phenomenon that plays an important role in the

prevention and treatment of diseases, so that the higher the satisfaction of individuals, the better physical and mental improvements are made. A study published in the World Health Journal in 1996 states that even the most advanced countries in terms of industrial and health services have not been fully successful in satisfying patients. The importance of this is that some experts have considered it as an effective ingredient in the health status of a person [5]. Patients' satisfaction from other aspects is also of particular importance. Research has shown that dissatisfied patients are less likely to follow the doctor's orders and the correct use of drugs and the improvement rate in these patients is slower

Address for correspondence: Fatemeh Forouzan Jahromi, Msc of Critical Care Nursing, jahrom University of Medical Sciences, Jahrom, Iran.
Email: fatiforouzan50 @ gmail.com.

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than others ^[6]. In the year 1997, Prabs examined the physician's and patient's satisfaction in outpatient care visits. This study aimed to determine the factors affecting the satisfaction of the physician and the patient during outpatient visits and determine the degree of satisfaction between the patient and the doctor. The results showed that 88% of the physicians were satisfied. The greatest satisfaction with doctors was achieved when they believed that they had enough time to examine their patient's problems more skillfully and communicate with the patient. 78% of the patients were satisfied with the doctor. The likelihood of satisfaction in patients who had a better sense of health was obtained in cases where they were kept waiting less and were covered by insurance. The patients' satisfaction with the waiting time and the belief in the doctor's lack of attention to the patient was correlated. There was no relationship between the patient's and the doctor's satisfaction ^[7].

Many experts believe that patients' satisfaction with hospital services is one of the most important indicators of the effectiveness and quality of services offered in different sectors. In other words, the key to the success of each hospital is to obtain patient satisfaction. On the other hand, patient's satisfaction is one of the most important outcomes of the health system ^[8, 9]; the higher the level of satisfaction, the better the patient's physical and mental health and the faster the rate of recovery. On the contrary, the patient's dissatisfaction leads to irritability, anxiety and consequently delayed recovery, prolonged admission, increased cost of treatment and the occupancy of hospital beds ^[10]. Therefore, patient satisfaction plays a significant role in the health care process and is one of the important indicators of quality and health promotion ^[11]. Since hospitalization during the disease is a stressful process and in many cases is considered as unfavorable experience in the life of individuals, and on the other hand, admission imposes high costs on individuals and the society, assessment of Patients' satisfaction during hospitalization has become of major importance and is regarded as the main goal for the hospital's medical staff and managers ^[12-14]. Concerning the plan for the development of the health system and the goal of reducing the direct payments of patients and protecting citizens against health costs by focusing on the vulnerable populations through the organization of hospital services and the satisfaction of people, we decided to consider this issue.

LITERATURE REVIEW

Due to the announcement of the general health policies by the Supreme Leader and the special attention of the President-in-Office, the plan for the development of the health system from 5th of May 1395, with eight health service packages, includes:

1. A program to reduce the payment of hospitalized patients in hospitals in connection with the Ministry of Health and Medical Education.
2. A program to support the residency of doctors working at hospitals in deprived areas
3. The program includes the presence of specialist physicians residing in hospitals affiliated with the Ministry of Health and Medical Education
4. Improving the quality of visiting services in hospitals affiliated with the Ministry of Health and Medical Education
5. Hospitality quality improvement program at hospitals affiliated with the Ministry of Health and Medical Education
6. Natural childbirth promotion program
7. Monitor the success of health promotion programs
8. The health services tariffs of the Islamic Republic of Iran were officially launched in 2014 in the country and all medical universities affiliated with the Ministry of Health and Medical Education with the primary objective of completing the protection of people against health costs ^[15].

The implementation of this plan has been accompanied by an increase in satisfaction with the health system among all segments of society ^[16], which, moreover, has affected other components of the health system, such as health and medical education ^[17]. Since 1985, with the integration of medical education in the treatment process and the formation of the Ministry of Health and Medical Education, we have seen tremendous progress in all three areas. The result of this integration was the use of expert faculty in both the therapeutic and educational dimensions, resulting in a more equitable distribution of manpower and medical equipment throughout the country, especially in underprivileged regions ^[18].

Providing fair financial resources in health systems means that the dangers that households face due to the costs of the health system are distributed in terms of their ability to pay, rather than the risk of the illness itself. A system with fair financing ensures that everyone is protected financially. An increase in the medical expenses of the health system in the country will result in increased payment putting more financial pressure on the people. The first service package in the healthcare reform plan is a program for reducing the rates of hospitalized patients in hospitals affiliated with the Ministry of Health and Medical Education ^[19]. This will undoubtedly affect the satisfaction of patients. The existential philosophy of the health system is the production of health through the provision of services to patients. For this reason, if the acceptability and trust of patients are not available to service providers, the health department will lose their identity ^[20]. Indeed, patient dissatisfaction and disregard for his views undermine the patient's recovery and the desired outcome of the treatment. The health system development plan in eight steps is the government's response to vulnerable demands in the health sector in the community, which focuses on the stages of expressing principles, values and outlook of health, analysis of trends (social, economic, technological, political and environmental) and the threats posed by them, in addition to identifying existing strengths and weaknesses ^[21].

Patients expect to have easy access to medical and nursing services, appropriate care and treatment without delay and long waiting times, with the necessary skills, high accuracy, and continuity. They want to be well-informed, be treated by trustworthy medical teams, have a good relationship with their physician and mutual understanding between doctor and patient. Accordingly, the ability and competence of patient-care skills and having appropriate communication skills and employee knowledge have contributed greatly to patient satisfaction. The patient is the main focus of the hospital and all the services of the hospital are performed in the patient's favor. Patient's satisfaction is partly indicative of proper service and this satisfaction is not achieved through high technology, but rather by the behavior and performance of the staff^[22]. In fact, in addition to satisfaction with cost reduction, patient satisfaction is a mental and unique phenomenon which is impacted by factors such as examination, acceptance, treatment, care, and the provision of therapeutic and welfare needs during treatment and the location of treatment as well as previous experiences of the patient and the level of education and awareness^[23].

One of the indicators of health care quality is patient satisfaction index of health services, which includes: satisfying physical needs by performing professional care, mental and social support, patient's satisfaction from attention and care, as well the assurance of comprehensive services to all patient care providers^[22, 24].

RESEARCH METHOD

The information needed in this research has been gathered using the following tools:

- Library studies: including books, articles, Persian and English journals, research reports, theses and ...
- Questionnaire for statistical data

A checklist containing personal demographic information as well as a questionnaire on determining the level of

satisfaction with the provision of hospital services was provided for patients. The questionnaire is in the Likert scale containing 5 options from totally dissatisfied (1) to completely satisfied (5). After obtaining written consent from the patients admitted to Peymaniyah and Motahari Hospitals to keep their information confidential, questionnaires were randomly distributed among them. After collecting questionnaires, information was analyzed and discussed through SPSS22 software.

Statistical population, statistical sample and sampling method

The present study was a descriptive cross-sectional study. The samples were randomly assigned to the patients admitted in the Pyumaniyah and Motahari hospitals. According to the satisfaction rate of 86.3%, in the previous studies with an alpha of 0.05% and the error rate of 3%, the sample size was determined as 505 people. Based on the drop in questionnaires, 10% was added to the sample size and the total sample size was decided as 556 people. This sample size was divided based on the number of hospitals, and for each hospital, 276 questionnaires were considered.

To assess the validity of the questionnaire, the questionnaire was designed and approved by professionals and academic experts. To confirm the reliability of the questionnaires, using Cronbach's alpha, the questionnaire was completed by 30 people based on the Cronbach's alpha coefficient of 0.89, which is above 0.7% approving the desirable reliability of the questionnaire.

Data Analysis

To evaluate patients' satisfaction with hospitalization costs and hospital services, frequency and percentage of an abundance of characteristics of satisfaction questionnaire were calculated after implementation of the health system plan in Jahrom city hospitals, and the results were presented in table 1.

Table 1: Patient Satisfaction

Total average	Completely dissatisfied		dissatisfied		No opinion		satisfied		Completely satisfied		
	percentage	Number frequency	percentage	Number frequency	percentage	Number frequency	percentage	Number frequency	percentage	Number frequency	
145/46	0/8	4	12/4	24	14/1	75	40/8	215	39/7	209	Measurement metrics, acceptance and clearance services
139/73	1/7	9	4/9	31	18/7	98	45/4	239	31/2	155	Medical services
145/93	0/4	2	2/8	14	16/4	86	42/5	224	38/1	201	Nursing services
136/06	5/3	28	5/2	27	17/4	92	41	217	40	163	Nutrition services

94/8	12/1	64	6/8	36	38/6	83	38/6	83	26/6	141	Diagnostic services (radiology / laboratory)
139/46	0/6	3	5/4	28	20/9	110	43/1	227	30/3	159	House-keeping
144/6	3/1	16	4	20	16/1	85	32/5	172	44/4	234	Patient's rights
130/46	15/9	84	5/8	31	9/7	51	27/9	147	40/6	214	Accounting and Insurance
140/13	7/6	40	8	42	10/6	56	25/6	135	103/8	254	Management services

According to Table 1, it can be speculated that most satisfaction, in general, is in association with nursing services, measurement criteria, acceptance and discharge

services, patient charter, management services, medical services, custodial services, nutrition services, and ultimately accounting and insurance, respectively,

Table 2: One-way variance analysis of patients satisfaction rate of hospitalization cost and hospital services after implementation of health system design in Jahrom hospitals

Sig.	F	Mean Square	df	Sum of Squares		
0/914	0/012	0/007	1	0/007	Between groups	Measurement metrics, admittance and clearance services
		0/632	525	332/053	Within groups	
			526	332/060	total	
0/200	1/645	1/177	1	1/177	Between groups	Medical services
		0/715	525	375/488	Within groups	
			526	376/664	total	
0/000	14/597	13/592	1	13/592	Between groups	Nursing services
		0/931	525	487/914	Within groups	
			526	501/506	total	
0/000	30/053	32/832	1	32/832	Between groups	Nutrition services
		1/092	525	572/455	Within groups	
			526	605/287	total	
0/000	55/853	83/081	1	83/081	Between groups	Diagnostic services (radiology/laboratory)
		1/487	525	779/445	Within groups	
			526	862/525	total	
0/212	1/563	1/832	1	1/832	Between groups	House-keeping
		1/172	525	614/091	Within groups	
			526	615/923	total	
0/099	2/733	3/066	1	3/066	Between groups	Patient's rights
		1/122	525	457/690	Within groups	
			526	460/756	total	
0/000	40/404	95/488	1	95/488	Between groups	Accounting and Insurance
		2/363	525	964/241	Within groups	
			526	1059/728	total	
0/000	17/084	30/443	1	30/443	Between groups	Management services
		1/782	525	727/043	Within groups	
			526	757/486	total	

According to table 2, one-way variance calculation showed statistical difference in individual's satisfaction with services provided by the nursing staff, nutrition services, diagnostic services (radiology/laboratory), accounting, insurance, and management services (p <0.001).

At this stage, the one-way variance calculation was used to investigate the relationship between the service provider's departments and patients' satisfaction. According to P values, it was found that they have seen a meaningful difference

between the different departments of the provider concerning nursing services, nutrition services, Diagnostic services (radiology/laboratory), accounting and insurance, and management services. LSD test was used to examine these differences more accurately and the satisfaction of the services examined as compared to all possible pairs averages. The results of the significant differences are summarized in Table (3).

Table 3: Comparison of satisfaction between Peymanieh and Motahari hospitals

95% confidence interval		P Value	Standard deviation	Difference in mean values	Average value		
High limit	Low limit						
4/36	4/16	0/943	0/842	-0/01	4/26	Peimanieh	Measurement metrics, admittance and clearance services
4/36	4/18		0/739		4/27	Motahari	
4/26	4/04	0/122	0/957	-0/09	4/15	Peimanieh	Medical services
4/33	4/16		0/702		4/24	Motahari	
4/73	4/45	0/000	1/174	0/32	4/59	Peimanieh	Nursing Services
4/35	4/19		0/663		4/27	Motahari	
3/98	3/66	0/000	1/281	-0/6	3/81	Peimanieh	Nutrition Services
4/40	4/22		0/699		4/31	Motahari	
3/58	3/22	0/000	1/527	-0/8	3/4	Peimanieh	Diagnostic services (radiology/laboratory)
4/29	4/10		0/749		4/2	Motahari	
4/51	4/20	0/233	1/335	0/11	4/35	Peimanieh	Hous-Keeping
4/32	4/15		0/707		4/24	Motahari	
4/34	4/05	0/087	1/157	0/19	4/20	Peimanieh	Patient's rights
4/15	3/87		0/821		4/01	Motahari	
3/46	3/03	0/000	1/803	-1/03	3/25	Peimanieh	Accounting and Insurance
4/40	4/15		0/736		4/28	Motahari	
3/89	3/52	0/000	1/538	-0/58	3/71	Peimanieh	Management services
4/42	4/10		0/763		4/29	Motahari	

In this study, the LSD test was used to compare the average satisfaction of patients from hospital services after the implementation of health system design. The results of mean differences indicated that the satisfaction of the patients with the services in Pimanjeh and Motahari hospitals had a significant difference with each other. Additionally, according to the obtained values for differences in the average value of significant meanings ($P < 0.00$), the average satisfaction rate of hospitalization and hospital services after implementation of the health system design in nursing services (0.32) of the hospital Peymaniya had a higher level of satisfaction, but this difference in nutrition services (-0.6%), diagnostic services (radiology/laboratory) (-0.8), accounting and insurance (03.03), and management services (-58%) of Motahari Hospital were higher than patients' satisfaction with Peymanieh Hospital (based on the analysis of the difference in mean values).

CONCLUSION

Comparison of the results of the present study on the satisfaction with medical services of patients from the hospitalization costs and hospital services following the implementation of health system design in Jahrom's hospitals showed that patient' satisfaction was achieved in the following order: nursing services, measurement criteria, admission and discharge, patient rights charter, management services, medical services, house-keeping, nutrition services, and finally accounting and insurance. These items were evaluated in Peymaniyah and Motahari hospitals relatively. Considering that the role of hospital services in nursing and medical services is decisive in improving the health of patients, it contributes significantly to patient satisfaction.

The findings of this study showed that there was a significant difference between the patients' satisfaction with the services provided by the hospitals. The results showed that patients' satisfaction with hospitalization costs and hospital services after implementation of the health system in Peymaniyah and Motahari hospitals in Jahrom city concerning nursing services, nutrition services, diagnostic services (radiology/laboratory), accounting, insurance, and management services have a significant difference. These factors have had different impacts on the two hospitals. In fact, according to the achieved results, Peymaniya Hospital has a higher level of satisfaction in nursing services. However, in nutrition services, diagnostic services (radiology/laboratory), accounting and insurance, as well as management services, patients had higher levels of satisfaction with Motahari hospital in comparison with Peymaniya Hospital. Based on these results, nursing services, nutrition services, diagnostic services (radiology/laboratory), accounting and insurance, and appropriate management services in these hospitals have been able to satisfy the patients' satisfaction from hospitalization costs and hospital services after the implementation of the health system plan.

Finally, the results of this study indicate that public service authorities and health system managers and policymakers should pay more attention to the provision of public services to patients and their companions which can attract and satisfy patients and their companions in the first stage for giving points to hospital services. To improve the quality and quantity of services and satisfaction of patients and their companions, it is recommended that:

- When admitting patients, in addition to the verbal explanation, an educational package should be provided for the patient or his/her companion, concerning the process of admission and familiarity with the regulations and provision of patients' needs.
- Training courses for technical staff and trainees that are trained in hospitals, as well as nurses and even caregivers, to promote the level of interaction between patients and staff and increase the ability to help patients and their accompanies.
- To increase the satisfaction of patients and their companions, the supervision of the quality of nursing services in the sectors should be monitored in both tangible and intangible manners at different periods and job shifts.
- In the hospital rooms, the occupancy of the patient's bed (arrangement and number of beds in the rooms) should be at a standard level, and the patient's admission should be in consistence with the hospital's capacity
- Training health requirements to service personnel and increasing continuous monitoring concerning the time and manner of cleaning in the departments and the distribution of appropriate technical and service personnel in the sectors concerning the number of beds and workload.

Improvement in nutrition services, diagnostic services (radiology/laboratory), accounting and insurance, as well as management services at Peymanieh Hospital, can contribute to an enhancement of patient satisfaction in this hospital similar to Motahari Hospital.

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