



## A SURVEY ON PATIENTS' SATISFACTION OF THE QUALITY OF SERVICES BEFORE AND AFTER IRANIAN HEALTH TRANSFORMATION PLAN IN THE SELECTED HOSPITALS OF ISFAHAN UNIVERSITY OF MEDICAL SCIENCE

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### ABSTRACT

**Introduction:** Patient satisfaction is a complex phenomenon that affect from different factors. The aim of this study is to compare patients' satisfaction rate from the quality of services before and after Iranian Health Transformation Plan in the selected hospital of Isfahan University of Medical Science

**Methods:** The type of study is descriptive – cross and studied population was 4000 of clients 7 selected hospitals of province, sample volume was calculated 430 people by Cocran formula and cluster random sampling method. Data collection tools was researcher's made questionnaire on patient satisfaction that its validity and reliability was confirmed and analysis data in SPSS18 software by helping coupled t tests, F and variance and correlation coefficient analysis.

**Results:** difference of patients' satisfaction average before and after Health System Transformation Plan of design from the Beginnings of Entrance Admission was obtained 0.33, Nursing Services in the ward 0.35, Public and Welfare Services in the ward 0.25, Physician in the ward was 0.31 and it was 0.30 from Administrative and Financial units. Some variables like age and place of residence significant effect in satisfaction but sex, education, insurance type, inpatient ward and hospital stay has had effect on satisfaction rate.

**Discussion:** After implementation of Iranian Health Transformation Plan of patient satisfaction has increased in all studied cases that this case was more tangible in the Nursing Ward, also; it can be hope to a clear vision in the health country with strengthen the positive, eliminate the shortcomings and with evaluation and continuous quality improvement.

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### Introduction

Reform is a process to create basic changes in line with conquest on weaknesses. In other words, any positive changes are reform. But, reforms are higher than improvement of health system and in fact, reform is in the political process, because it changes both process and its politics. Health systems apply some changes and reforms in the structure, identity and or its

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performance according to existence requirements and trail conditions to don't face with problem in responding to requirements (1, 2).

Health system of our country is not exempt from this rule and is seen the necessity of basic changes due to existence deficiencies in the structure and function such as unfavorable hospitals quality of service governmental and academic sector, increasing dissatisfaction and paying a high price for this unfavorable conditions, necessity fundamental changes to in itself is seen (3). Health System Transformation Plan was resolute and administer from 2014 in Iran. This design is including seven axes: decrease payment of inpatients of dependence hospital to ministry of health, support from retention of physicians in the deprived areas, presence the resident physicians, and promote the quality of visit services and the quality of hoteling in the dependence hospital to ministry of health, financial protection of patients' incurable, a special and poor and the promotion of vaginal delivery (2, 4).

Despite of this topic that past years the quantity of health service delivery has set in preference of macro planning in health sector, today's main challenge of politicians of this gamut is setting approaches based on quality as caption. In this regard, it should pay attention that patient satisfaction is a measure of the quality of service guarantees (5).

Today's, their expectation is high from treatment systems according to promoting competitive pressures, developing customer-based, facilities technology in the treatment and increasing knowledge and awareness of people (6).

In addition, because assessment is commenting on services received the right to be informed of their rights of patients arriving with more emphasize on their rights, patient satisfaction is a complex phenomenon influenced by a variety of factors. Patients' satisfaction is not only doing in the framework of public relations, but also is as a basic factor to guarantee obtaining desirable results in health care lookout (5 – 8).

Patient satisfaction rate has effective role in keeping health and prevent from illnesses, such that satisfaction rising is following physical and mental improvement of patient. On the other hand, being low the rate of services' satisfaction may cause to not cooperation with treatment cadre that this case can cause to waste resources and decrease the quality of clinics consequence. Also, dissatisfaction of services and their negative publicity is cause to loss for organization (9-12).

Different studies show that patients' satisfaction is due to using from new technologies, but also is affect different factors such as: providing better health care, support the relation of physician and patient, economic status of patient, method of paying expenses of hospital and Duration Of Stay in hospital. Also, some factors are effective such as age, sex, education rate, social status of patient, Patient Waiting list, services Provider Skill, Quality of Provided Services by physicians and nurses, Education During Ppatient Discharge, reputation, the type of hospital culture and respect to patient's opinion on his/ her satisfaction from services and hospital convenience (12, 13).

The aim of this study is to consider the patients' satisfaction of services quality before and after Health System Transformation Plan in the selected hospitals of Isfahan university of medical science for recognizing strength and weaknesses point and providing proposals in line with its promotion.

### Methodology

The present study is descriptive and cross-sectional. Study population is including 4000 of clients 7 selected hospitals of province like Isa Ben Maryam, Chamran, AlZahra, Mohammad Rasoul Allah of Mobarakeh, Shahid Mohammad Montazeri of Najaf Abad, Heshmatieh of Naeen and Rasoul akram Fereydoon Shahr before and after Health System Transformation Plan in this centers that has done using from Cocran formula and statistical specialist of 430 sample by cluster sampling method and in each cluster, its members is selected as regular random sampling and supplement the questionnaire (patient or patient's attendant). To doing this study, it was used from a researcher made questionnaire including 35 questions in 6gamut with rating scale 1 to 5 (average 3) from extremely dissatisfaction to extremely satisfaction that was design based on reviewing related texts and professionals opinions and then face validity and construct validity its structure was confirmed by specialist of medical education and its content validity by experts involved Health System Transformation and its reliability was supported by pilot Study with completing 30 questionnaires in a similar statistical sample from clients 7 selected university hospitals and calculation of total reliability coefficient and internal consistency coefficient every questions in the Split-Half Test by SPSS18 software and review and obtaining Cronboch Alpha 0.86.

### Findings

Of 430 participants in the study (48% male and 52% female) and age of patients in the range of 1 to 93 years by average  $45.89 \pm 23.50$  years. In general, most frequency of age was in people with more than 60 years old. According to collected data, 75% of patients were urban and 25% were from rural places.

From studied group, 73% have under-diploma and diploma, 18% associate degree, 4% bachelor, 5% has been M.A and more. The type of insurance was most frequency is Social Security Insurance with 53.9 %, then Health Insurance with 33.9 %, Armed Forces Insurance with 4.8 % and insurance of Emdad Imam Khomeini Committee had less frequency with 4.1 and 3.3 % who wasn't under any insurance.

Distribution of frequency percent of present parts in the sample was including: Surgery Ward by 24.4 %, Special Cares Ward (ICU, CCU) by 9.5 %, Internal Ward (male and female) by 28.4 %, Emergency ward by 7.4 %, Clinics by 1.7 %, other wards (Nephrology, Neurology, Cardiology and so on) by 28/6.

The Average length of Stay of patients was  $4.90 \pm 7.91$  days and about 16.7 % of patients was enter to study at Isa Ben Maryam Hospital, 15.3 % at Chamran, 18.4 % at AlZahra, 12.8 % at Mohammad Rasoul Allah Mobarakeh, 24.9 % at Shahid Montazeri of Najaf Abad, 3.5 % at Heshmatieh of Naeen and 8.4 % at Hazrat Rasoul Akram Fereydoon Shahr.

The results of affection of Health System Transformation Plan in the average of patients' satisfaction has provided from different dimensions in table 1.

According to this table, the average satisfaction of patients has a significant increasing by Health System Transformation Plan (0.33). Data show patients' satisfaction rising after Health System Transformation Plan in all dimensions separately, such that most score was in the gamut of nursing services in ward by average of 0.35 and least score was in the gamut of public and welfare services by average of 0.25.

Patients' satisfaction level by Health System Transformation Plan was considered in terms of their sexuality. According to findings, rising patients' satisfaction by Health System Transformation Plan in male by average of  $0.47 \pm 0.03$  had been higher than female by average of  $0.33 \pm 0.02$  significantly (P value < 0.001).

Also, patients' satisfaction level in different ages hasn't have a significant change by Health System Transformation Plan ( $0.0656 > 0.05$ ). In other, it can be said that patient's age hasn't have a significant role in rising or decreasing of his/ her satisfaction from provided services. On the other hand, according to age variable that is a dependent and quantitative variable, the relation of age and patients' satisfaction level was obtained equal to 0.029 using from Pearson Correlation coefficient that this relation had been direct and so weak in terms of statistics (P-Value = 0.547).

In conjunction with the patient's satisfaction level by Health System Transformation Plan in terms of educational level, patients with educational level of M.A and higher had highest rate of satisfaction rising with average  $0.47 \pm 0.14$  and had satisfied rising with average  $0.39 \pm 0.04$  and  $0.39 \pm 0.14$  against patients by educational level of associate degree and bachelor that it couldn't has an effective role on the level of patients' satisfaction in terms of statistics using analysis variance of educational level ( $0.968 > 0.05$ ). In this line, the average of each dimensions of patient's satisfaction were considered in terms of their educational level and was not see a significant difference.

Also, urban patients' satisfaction level in assessment the level of patients' satisfaction level in terms of patients' residence is higher than rural patients insignificantly ( $0.942 > 0.05$ ). in fact, it can be said that habitat doesn't have a role in increasing or decreasing patients' satisfaction level from provided services.

In table 2, patients' satisfaction level has provided by Health System Transformation Plan in terms of their insurance type.

According to this table, most level of satisfaction from Social Security Insurance with average  $0.47 \pm 0.06$  and least level of satisfaction from Armed Forces Insurance with average  $0.24 \pm 0.12$  that in terms of statistics, these differences had been significant (P-Value = 0.013); on the other hand, insurance type can have an effective role on rising or decreasing the level of person's satisfaction from providing services in the hospital.

Findings related to satisfaction dimensions have shown in different ward in Diagram 1.

As it can be seen in diagram 2, most level of satisfaction from the other ward of hospital (Cardiology, Nephrology, Infection, Digestion and so on) and Special Cares Ward (ICU and CCU) with average  $0.49 \pm 0.04$  and  $0.49 \pm 0.06$ , Surgery ward with the average of  $0.45 \pm 0.05$  and Internal Ward had been  $0.31 \pm 0.03$ . In fact, it can be said in patients' opinion, Health System Transformation Plan is because to be better the quality and method of services provision to patients in above ward and so, it has increased the level of their satisfaction but least level of rising of patients' satisfaction in Emergency ward and Clinics by average  $0.17 \pm 0.04$  and  $0.17 \pm 0.03$ . These significant differences have recognized in terms of statistics using variance analysis test ( $0.011 > 0.05$ ). As it can show, in general, two ward of Emergency and Clinics has had least levels of satisfaction in all dimensions in comparison with other parts of hospital, such that even the level of satisfaction than before was along with decrease in two ward (Nursing Services in the ward of Emergency ward and Medical Services in the Clinics).

In table 3, the level of patients' satisfaction has provided after Health System Transformation Plan at bedridden duration.

According to this table, the level of patients' satisfaction Duration of Stay different times has had significant change by Health System Transformation Plan ( $0.038 > 0.05$ ), such that whatever Duration of Stay in hospital is more, the level of his/ her satisfaction has increased. The relation of Duration of Stay and level of patients' satisfaction using Pearson Correlation coefficient was obtained equal to 0.205 that has been direct and significant in terms of statistical case (P-Value = 0.001).

## Discussion

Based on the present study's consequence after the Health System Transformation Plan of patient's satisfaction from all considered cases including: patients' satisfaction from the Beginnings of Entrance to Admission, Nursing Services in the ward, Public and Welfare Services in the ward, Physician in the ward unit and from Administrative and Financial Units has increased significantly, such that most score is for increasing in patients' satisfaction in the Nursing Services in the ward and least score is for Public and Welfare Services in the ward. In the study of Hashemi et al. least rate of satisfaction is before and during Health System Transformation Plan had been by providing nursing services and nurses attitude, that has difference with results of this study (12).

Also, highest rate of patients' satisfaction is from Physician in the ward that is inconsistent with the results of Hashemi et al study, such that at above study, patients has said that the quality of physician Medical Examinations after administration of Transformation Plan (12).

According to the results of this study had estimated the rate of patients' satisfaction from Transformation Plan in high level (77.9 %). Goodarziyan was concluded during a study that was conducted about the level of patients' satisfaction from Transformation Plan of health at Mazandaran that acceptable percent of patients' has high satisfaction from Provided Services in Hospitals that its reason can be general Health System Transformation Plan in the public hospitals of our country that is consistent with this study (14).

The results of study of Khamis in Tanzania about the level of patients' satisfaction from the quality of Health Care show that high percent of patients doesn't have satisfied from the quality of services provision in the hospital that has difference with the present study's results. The possible reason of this difference can be difference in the statistical society, cultural factors, Hospital Welfare Facilities and physician and nursing attitude that has a significant effect on patients' satisfaction (10).

According to conducted analysis in this study, the level of educations doesn't have effect on the patients' satisfaction rate that is different and know natural being less of satisfaction rate in people with higher education according to being high the level of expectation and people awareness from services by results of studies of Abdollahi, Soleimanpour and Azizi and this difference can be in difference in the population of both studies. .

Also, the effect of patients' residence was not on proof satisfaction of provided services. While in the study of Soleiman Pour has emphasized on being satisfied of rural people than urban about status of hospital services. It seems that this difference in findings was due to less availability of rural people to appropriate facilities in past and on the other hand, more availability to information and higher expectancy level of urban people that both expectation level and availability in the city and village has become nearer to each other by Health System Transformation Plan (15 – 17).

While in the study of Noor Al Nesa, there is not a significant relationship between patients' satisfaction and the type of insurance, the results of this study showed that the type of organization of insurant can have an effective role on increasing or decreasing satisfaction from services provision in the hospital that its reason can be a combination of society and the level of covered people income after Health System Transformation Plan and uncovering the insurance in the time of study (18).

In this study, there is a significant relationship between patients' sex and his/her satisfaction was more than women which these results are inconsistent with studies of Noor Al Nesa. Also, the present study showed the age of patient is unaffected on the rate of his/her satisfaction from services, while there is a relationship in the study between demographic features of patients such as his/her age with the rate of patients' satisfaction. We can know this difference in the size of the study population and variety in the hospitals and patients (18, 19).

### Conclusion

Based on the results of present study, implementation of Iranian Health Transformation Plan of patient satisfaction has increased in all studied cases was including patients' satisfaction from the Beginnings of Entrance to Admission, Nursing Services in the ward, Public and Welfare Services in the ward, Physician in the ward and Administrative and Financial Units significantly. Also, we can hope that with detected and change some of the variables and reinforce a positive effect on satisfaction such as age, education, type of insurance, the duration of stay, eliminate shortcomings with evaluation and continuous quality improvement, Witnessed a clear vision on our country's health system.

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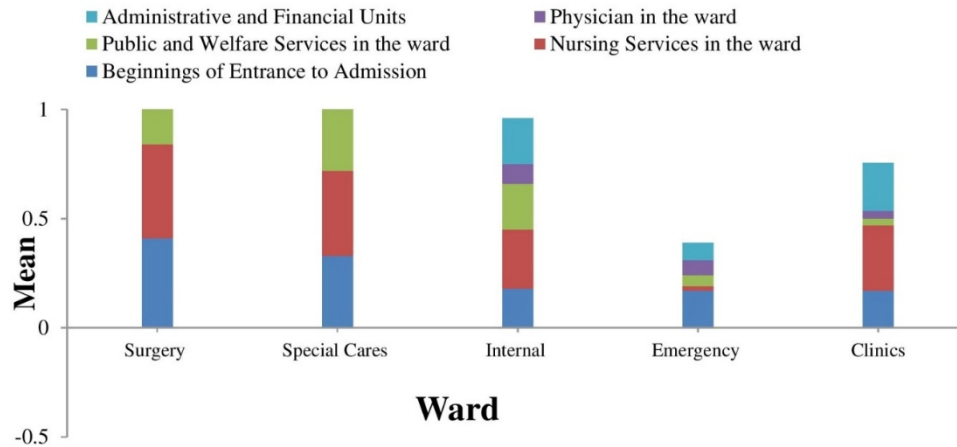
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**Table 1: The average of patients' satisfaction in gamut of measurement before and after minister of change design in the health system**

Measurement gamut	Before Health System Transformation Plan	After Health System Transformation Plan	P-Value
	Standards deviation ± average	Standards deviation ± average	
Beginnings of Entrance to Admission	35 ± 3.65	3.98 ± 0.43	< 0.001
Nursing Services in the ward	3.55 ± 0.42	3.90 ± 0.55	< 0.001
Public and Welfare Services in the ward	3.59 ± 0.41	3.84 ± 0.57	< 0.001
Physician in the ward	3.74 ± 0.45	4.05 ± 0.61	< 0.001
Administrative and Financial Units	3.41 ± 0.34	3.71 ± 0.45	< 0.001

**Table 2. The mean patients' satisfaction from Health System Transformation Plan in terms of covered insurance type**

Insurance type	Standards deviation ± average	F test statistics	P-Value
Social Security Insurance	0.47 ± 0.06	0.717	0.013
Health Insurance	0.32 ± 0.04		
Armed Forces Insurance	0.24 ± 0.12		
Emdad Imam Khomeini Committee	0.27 ± 0.08		
Free Insurance	0.40 ± 0.19		
Others	0.43 ± 0.03		



**Diagram 1: The average of patients' satisfaction dimensions from Health System Transformation Plan separate from ward**

**Table 3. Assessment of relation of patients' satisfaction with bedridden duration after administration of change design in the health system**

Duration of Stay	Standards deviation ± average	F statistics test	P-Value
Less than 3 days	0.32 ± 0.03	2.452	0.038
3 to 6 days	0.37 ± 0.04		
More than 6 days	0.50 ± 0.08		