



## ARAŞTIRMA / RESEARCH

# Patients' satisfaction of service quality: the mediating role of sense of security

Hastaların hizmet kalitesinden memnuniyetleri: güvenlik hissinin arabulucu rolü

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*Cukurova Medical Journal 2018;43(4):797-809*

### Abstract

**Purpose:** The aim of this study was to determine the inpatients' and outpatients' satisfaction of service quality by the mediating role of senses of security in patients.

**Materials and Methods:** In this cross-sectional study , the stratified random sampling technique was used with the participation of 600 people in this study. The patients were selected from internal, surgery, women, and children outpatient and inpatient units of hospitals of Mazandaran Province. For data collection , two questionnaires were used; one to measure patient sence of security (sense of security) and the other to assess patient satisfaction (SERVQUAL Service Quality Questionnaire).

**Results:** In general, the effect of a sense of security created in the human dimension on the service quality with standardized path coefficient equal to 0.384 was significant, and the sense of security from the dimension of providing support created a direct effect on the quality of service support with standardized path coefficient equal to 0.524 which was significant. Also the direct effect of sense of security in terms of structure on the quality of services by standardized path coefficient equal to 0.168 was significant.

**Conclusion:** The patient satisfaction is a major challenge for the service-provider organizations, it is necessary to take effective steps and provide targeted strategies to reduce gaps in quality in the field of services to patients while conducting failure analysis and creating opportunities to improve the quality of services.

**Key words:** Quality of service, sense of security, satisfaction, inpatient, outpatient

### Öz

**Amaç:** Bu çalışmanın amacı yatan hastaların ve ayakta hastaların hizmet kalitesinden memnuniyetini hastalarda güvenlik hissi arabulucu rolü ile birlikte saptamaktır.

**Gereç ve Yöntem:** Bu kesitsel çalışmada, tabakalı rastgele örnekleme tekniği 600 kişinin katılımıyla bu çalışmada kullanılmıştır. Hastalar Mazandaran İl'i'nin iç, ameliyat, kadın ve ayakta ve yatan hastanelerden seçildi. Veri toplamak için iki soru formu kullanılmıştır; biri güvenlik (güvenlik duygusu) ve diğerinin hasta memnuniyetini değerlendirmek için hastanın geçerliliğini ölçmek için kullanılmıştır (SERVQUAL Servis Kalitesi Anketi).

**Bulgular:** Genel olarak, insan boyutunda yaratılan güvenlik duygusunun, hizmet kalitesine etkisi, standart yol katsayısı 0.384'e eşit olarak anlamlıydı ve destek sağlama boyutundan gelen güvenlik duygusu, kalite üzerinde doğrudan bir etki yarattı. 0,524'e eşit standart yol katsayısı ile hizmet desteği. Ayrıca, güvenlik duygusunun yapısal anlamda doğrudan hizmet kalitesi üzerindeki etkisini standartlaştırılmış yol katsayısı 0.168'e göre anlamlı düzeyde etkiledi.

**Sonuç:** Hasta memnuniyeti, hizmet sağlayıcı kuruluşlar için büyük bir sorundur. Başarısızlık analizini gerçekleştirirken ve hizmetlerin kalitesini iyileştirmek için fırsatlar yaratırken etkili adımlar atmak ve hastalara sunulan hizmetlerde kalitesiz boşlukları azaltmak için hedef stratejileri sağlamak gereklidir.

**Anahtar kelimeler:** Hizmet kalitesi,güvenlik duygusu,memnuniyet,yatan hasta,ayakta tedavi

## INTRODUCTION

Customer satisfaction is a key element of quality system improvement and one of the most important

indicators of effectiveness and quality of hospital services in different units. This important issue is manifested when customer satisfaction is considered as the basis for improving service quality while

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Geliş tarihi/Received: 14.06.2017 Kabul tarihi/Accepted: 13.10.2017

providing inpatients and outpatients with services<sup>1</sup>. In the competitive healthcare market, those institutions that focus on service recipients' satisfaction will be more successful<sup>2</sup>. The attitudes and feelings of patients towards hospital care definitely influence the overall success of the organization. So, the patient satisfaction is a critical element of organizational effectiveness<sup>3</sup>.

The role of quality in organizational success and failure is to the extent that only those organizations that meet the demands of customers and satisfy their needs with minimum cost and maximum quality will be able to survive. The quality of service arises from comparing the services expected by customers with what actually is provided by the service provider. That is why successful managers have established their service strategies based on continuous feedback received from customers in order to identify their needs and satisfy them, and be finally able to measure customer satisfaction. The key to success lies in the quality of service that customers expect to meet or even surpass it<sup>4</sup>. Satisfaction is one of the results of quality. Though quality in psychological and environmental terms is not directly linked with life satisfaction, it is indirectly creating impact on satisfaction through influencing the other aspects of quality<sup>5</sup>. Since the main purpose of providing healthcare is to promote the welfare of patients, factors on patient satisfaction can create comfort, relaxation and a sense of security for them<sup>6</sup>.

There are lots of articles related to measuring the quality of services and measuring the gap, but the most important factors as the mediating factors of comfort, security and processes have received little attention. In the study of Campos Andrade et al., the mediating role of moderators in the quality of social and physical environments in terms of different patients' experiences of healthcare environments is discussed. Inpatients are mainly concerned about the quality of social environment, and the relationship between environmental quality and satisfaction is important, while for outpatients, the quality of physical environment is of great significance<sup>7</sup>. This study sought to determine the quality of services provided to inpatients and outpatients using the tool. In this study, in addition to SERVQUAL standard instrument to collect and analyze the collected data, the role of security agents in patients is also studied. Two questionnaires, one to measure patient security and the other to assess

patient satisfaction were used. Sense of security questionnaire included 74 questions in Likert type scale (in three aspects of human, structure, and support), and SERVQUAL standard instrument consisted of 22 questions in Likert scale with five main dimensions: tangibles, reliability, responsiveness, assurance, and empathy<sup>8</sup>. Security is considered to be one of the most important goals, underlying values, and sustainable resources of a community, and it should be noted that a sense of security is much more important than security itself. In terms of the subjective dimension, security is meant to feel safe. Accordingly, security is directly related to the mentality and perception of patients<sup>9</sup>, and sense of security is among the most basic human needs. Hence, it seems that this primary requirement has a significant impact on the level of people's quality of life and satisfaction<sup>10</sup>, and the patients' security is among the primary responsibilities of healthcare service providers. Sense of security is very effective in the provision of palliative care and improving the patients. Patients who feel safe are better treated and discharged faster resulting in their lower healthcare costs<sup>11</sup>.

Even, sense of security is considered as a very important basic need for caregivers, and as research shows, caregiver security may be a very significant empowering means in their caring for patients at home<sup>12,13</sup>. According to the World Health Organization, at least one in every 10 hospitalized patients in developed European hospitals suffers while receiving medical care, 44 thousand patients per 100 thousand cases in developed countries such as America are victims of medical errors during surgery and treatment. Patients may even be in a well-equipped healthcare setting, but the possibility of error endanger their safety and health. On the other hand, in developing countries, these factors can severely threaten the patients' physical and emotional security. Therefore, a patient's security during the treatment process is not merely limited to the provision of equipped medical treatment facilities<sup>14</sup>, and creating a sense of physical, mental, and social security for patients is a responsibility on the shoulders of every single service provider<sup>15,16</sup>.

Research also shows that there are variety of independent variables affecting quality; in a study on 6000 patients in the United States, the admission process, nursing care, medical care, sympathy for the patients' caregivers, ancillary facilities (food, room cleanliness, etc.) and discharge process were

identified as variables that affect the quality<sup>17</sup>. Factors such as age, sex, education level, socioeconomic status of patients, waiting time for services, specialized hospital staff skills, quality of services provided by doctors and nurses, provision of training to patients at the time of hospital discharge, reputation and cultural atmosphere of the hospital, respect for the opinions of patients have been identified as resulting in patients' satisfaction of services and facilities provided in different hospital wards<sup>18</sup>. Illness period is a stressful process, and in many cases shall be considered as undesirable experience for individuals. On the other hand, hospitalization imposes exorbitant costs to the individual and society. For this reason, patient satisfaction survey has been especially important during hospitalization<sup>19,20</sup>. When patients go to hospitals to receive services, they behave according to their own values in mind, and they appraise structure, physical environment, and the equipment of hospitals, as well as staff dress code so as to declare their satisfaction. For this purpose, hospital factors influencing patient's satisfaction (hospital environment, services provided in a hospital, healthcare, hotelling, nutritional, and hospitalization services, etc.) are evaluated. Several other factors influencing patients' satisfaction are hospital structure, process and results of care such as socio-demographic conditions, physical and mental expectations of patients in different hospital wards. Hence, patient's satisfaction is the basis for all activities and planning in a hospital<sup>21-23</sup>. Since the primary mission of hospitals is to provide quality care for the needs and expectations of patients, their satisfaction could indicate the proper provision of services, and providing lower than expected services to patients has always resulted in a reduction in the credibility of service providers and damaging customer confidence<sup>24</sup>.

Kupfer declares that for increasing patient satisfaction, their needs and values need to be considered and taken into account while making clinical decisions<sup>25</sup>. Given that the main goal of the activities of group therapy is to obtain patient satisfaction, this factor is an index and indicator of quality of services provided to patient in different interpersonal, organizational and technical areas<sup>26</sup>. So, satisfaction surveys can provide valuable information for the researchers to realize the problems and devise desirable programs in the field of health services. Hence, the main aim of this study was to determine the quality of hospital services

provided for inpatients and outpatients in Imam Khomeini, Shafa, and Vali-Asr Hospitals considering the mediating role of senses of security in patients in the year 2015.

## MATERIALS AND METHODS

In terms of purpose, the current research was an applied study, and in terms of method, it was descriptive and analytic study. Stratified random sampling technique was also used with the participation of 600 people in this study. The patients were selected from internal, surgery, women, and children outpatient and inpatient units of Imam Khomeini Hospital, 290 cases (48.3 percent), Shafa Hospital, 170 cases (28.3%), and Vali-Asr Hospital, 140 cases (23.3 percent) from Mazandaran Province. The data were collected from 12 units; 12 inpatient and 3 outpatient units. 357 outpatients (59.5 percent) and 243 inpatients (40.5 percent) were involved in this study. The average age of the patients was 39.94 years with a Standard Deviation equal to 10.99 years. Also, 6 percent of them were illiterate with no formal education, 13.2 percent not finished their secondary education, 26.8 percent with diploma, 5.7 percent with Associate degree, 40.3 percent with Bachelor degree, and 8 percent in postgraduate levels.

### Research instrument

Two questionnaires were used in this study; one to measure patient sense of security and the other to assess patient satisfaction.

### Sense of security questionnaire

In order to assess the sense of security, the questionnaire including 74 questions in 5-choice Likert type scale and considering three main criteria (the human, structural, and support) was used. The questionnaire included the following indices regarding human dimension; patient rights, and medical and nursing factors. In terms of structural dimension, it also consisted of; advanced facilities, hospital physical factors, factors of patient welfare, factors of caregiver welfare, factors of hospital green space, sanitation and hygiene factors, and hospital bed standard. In terms of support, it also included these indicators; psychological factors, economic factors, regulatory factors, and pharmacological factors. The validity and reliability of the questionnaire has also been fully approved

and reported in detail by Nadi et al., in a research article<sup>27</sup>.

### SERVQUAL Service Quality Questionnaire

This questionnaire consisted of 22 questions in Likert scale with five main dimensions; tangibles, reliability, responsiveness, assurance, and empathy. The validity of the questionnaire is confirmed to be according to the standards, and to test reliability of the questionnaire based on an initial sample of 30 patients, Cronbach's alpha equal to 0.87, 0.84, 0.91, 0.82, and 0.88 was respectively gained in each dimension. In this study, with the permission of the authorities of the hospital and patient or caregiver consent and in line with the main objectives of the study, both questionnaires were submitted to the selected patients. In case of any ambiguity in the question, the researcher resolved ambiguity, and once the questionnaires were completed, they were returned by patients. In this study, before the start of the research and data collection, first, the purposes of the study were fully explained to participants, It was also explained that the participate in the study is voluntary and all the information will remain confidential. After all of these cases and obtaining certificate from the Ethics Committee of Mazandaran University of Medical Sciences, the written informed consent were obtained from all participants.

### Statistical analysis

In this study, the assumptions and Structural Equation Modeling (SEM) were analyzed and tested using AMOS 23 Software. Through SEM, the

researcher was able to determine the models of estimating the relationships among the measured (observed) and hidden (structure that can not be measured directly) variables. The latent variables of the model were; a sense of security in the human dimension, a sense of security in the structural dimension, a sense of security in terms of support and service quality, and any of these latent variables were assumed to have their own specific indicator (Figure 1). First, the parameters for all samples were calculated according to their being inpatient or outpatient. Then the process was repeated using multi-group analysis. In all stages of analysis, standard deviation parameters were estimated using maximum probability. Also, to check the adequacy of the model, Comparative Fit Index (CFI) and Goodness of Fit Index (GFI) were considered to be above 90.  $\chi^2/df$  with about 3 degrees of freedom and the root mean square error of approximation (RMSEA) of below 0.1 indicated a good fit of the data with the model.

### RESULTS

Descriptive study of sense of security variables showed in Table 1. As is seen in the table one, the variable of nursing factor has a mean of 3.76, median of 3.72, mode of 4.00, and standard deviation of 0.72 in the range of 1.27 to 5.00. At the same time, the variable of medical factors is documented to have a mean of 3.88, median of 3.88, and mode of 4, while the value for SD is 0.87 with a minimum amount of 1 and a maximum amount of 5.

**Table 1. Descriptive analysis of safety indices**

Variables	Mean	Median	Mode	SD	Min.	Max.
Nursing	3.76	3.72	4	0.72	1.27	5
Medical factors	3.88	4	4	0.87	1	5
Patient Rights	3.62	3.66	3	0.95	1	5
Advanced Features	3.80	4	4	0.94	1	5
Hospital physical factors	3.37	3.4	3	0.80	1	5
Factors welfare of patients	3.43	3.33	3	0.75	1	5
Factors welfare of people with patients	3.16	3.5	4	0.13	1	5
Factors green space	3.43	3.50	3	0.97	1	5
Sanitation and hygiene factors	3.69	4	4	1.06	1	5
Standard hospital bed	3.66	3.66	4	0.84	1	5
Psychological factors	3.56	3.50	4	0.76	1	5
Economic factors	3.47	3.37	3	1.01	1	5
Regulatory factors	3.54	3.5	4	0.92	1	5
Pharmacological factors	3.30	3.20	3	0.83	1	5

The other variable of “Patients’ rights” is seen to show a mean of 3.62, median of 3.66, and a mode of 3, where as SD is 0.95 within the range of 1 to 5. “Advanced Features” as the other variable and safety index has a mean of 3.80, median and mode of 4, and the amount of SD is equal to 0.94 in the range of 1 to 5. One other effective index is “Hospital effective factors” with a mean of 44.37, mdian of 3.40, mode of 3, and SD of 0.80 in the range of 1 to 5. Also, the factors related to the welfare of patients has a mean of 3.43, median of 3.33, and mode of 3, with an SD amount of 0.75 in the range of 1 to 5. The welfare of caregiver is also effective in feeling safe of the patients with a mean of 3.16, median of 3.50, mode of 4, and SD of 1.13 in the range of 1-5. The positive effect of green space is also proved as an index in improving the safety of patients through the following values: mean=3.43, median=3.50, mode=3, SD=0.97 in the range of 1-5. The variable of “Sanitation and hygiene factors” is also documented to have a mean of 3.69, median and mode of 4, SD of 1.06 in the range of 1-5. The other variable of “Standard

hospital bed” has the mean and median of 3.66, mode of 4, and SD of 0.84 in the range of 1-5. As another effective index in the safety of patients, the psychological factors with a mean of 3.46, median of 3.50, mode of 4, and SD of 0.76 in the range of 1-5 play an important role in reducing the patients’ stress. As is seen in the table, “Economic Factors” also play a part as one of the safety indices through a mean amount of 3.47, median of 3.37, mode of 3, and SD of 1.01 in the range of 1-5. At the same time, the table shows the effectiveness of regulatory factors in improving the patients’ security through a mean of 3.54, median of 3.50, mode of 4, SD of 0.92 in the range of 1-5. And finally, the pharmacological factors with a mean of 3.30, median of 3.20, mode of 3, and an SD value of 0.83 in the range of 1-5 played a part in improving the safety of hospital patients in the target hospitals.

Table 2 shows the descriptive indicies of sence of security in terms of mean, median, mode, standard deviation, and the minimum and mximum values relaed to any of the indicies.

**Table 2. Descriptive study of quality of service**

Variables	Mean	Median	Mode	SD	Minimum	Maximum
Tangibles	3.93	4	4	0.43	2.83	5
Reliability	4.31	4.40	4.60	0.36	3.20	5
Accountability	3.89	3.75	3.5	0.46	3	5
Assurance	3.82	3.75	4.25	0.48	2.50	5
Empathy	3.97	4	4	0.34	2.67	5

As is see in the table, tangibles variable has a mean of 3.93, median of 4, mode of 4, SD of 0.43 in the range of 2.83 to 5. The other variable of “Reliability” is also shown to present a mean of 4.31, median of 4.40, mode of 4.60, SD of 0.36 in the range of 3.20-5. At the same time, the accountability factor with a mean of 3.89, median of 3.75, mode of 3.50 and SD of 0.46 in the range of 3-5 was among the indices of service quality. One other variable of “Assurance”as an efective factor in the quality of servicewas with the mean of 3.82, median of 3.75, mode of 4.25, SD of 0.48 and in the range of 2.50 to 5. Finally, empathy variable with a mean of 3.97, median and mode of 4, SD of 2.67, and in the range of 2.67 to 5, was also effective as the quality of service.

### The analysis of intermediaries

In this phase, to investigate the effect of sense of security created in the structural part on the quality of service, sense of security created in the staffing on the quality of service, sense of security created in the supportive part on service quality, and the mediating role of sense of security in the human support part,the Structural Equation Model (SEM) was used (28).

As is illustrated in the figure, the direct effect of a sense of security created in the human dimension on the quality of service is equal to 0.384 with  $P < 0.05$  in significant level. The direct effect of a sense of security in terms of support on the quality of services is 0.524 in a statistically significant result ( $P < 0.05$ ). On the other hand, the direct effect of a sense of security created in the structural dimension on the quality of service is equal to 0.168 with  $P < 0.05$  in significant level. At the same time, the Sobel test for examining the mediating role of

structural security, between the human dimension and service quality is equal to  $z_{sobel} = 3.92$  with  $P < 0.05$  in a significant level.

Also, the Sobel test for examining the mediating role of security in terms of supportive dimension, between the human dimension and service quality is equal to  $z_{sobel} = 3.97$  with  $P < 0.05$  in a significant level. It is also documented that the Sobel test for

examining the mediating role of structural security, between the structural dimension and service quality is equal to  $z_{sobel} = 4.95$  with  $P < 0.05$  in a significant level. In reviewing the adequacy of model and the value of

$NFI = 0.85, GFI = 0.81, CFI = 0.86, RMR = 0.089, RMSEA = 0.07, \chi^2 = 2042.50, DF = 438, \chi^2/DF = 4.66$  it represents the approximate validity of the model.

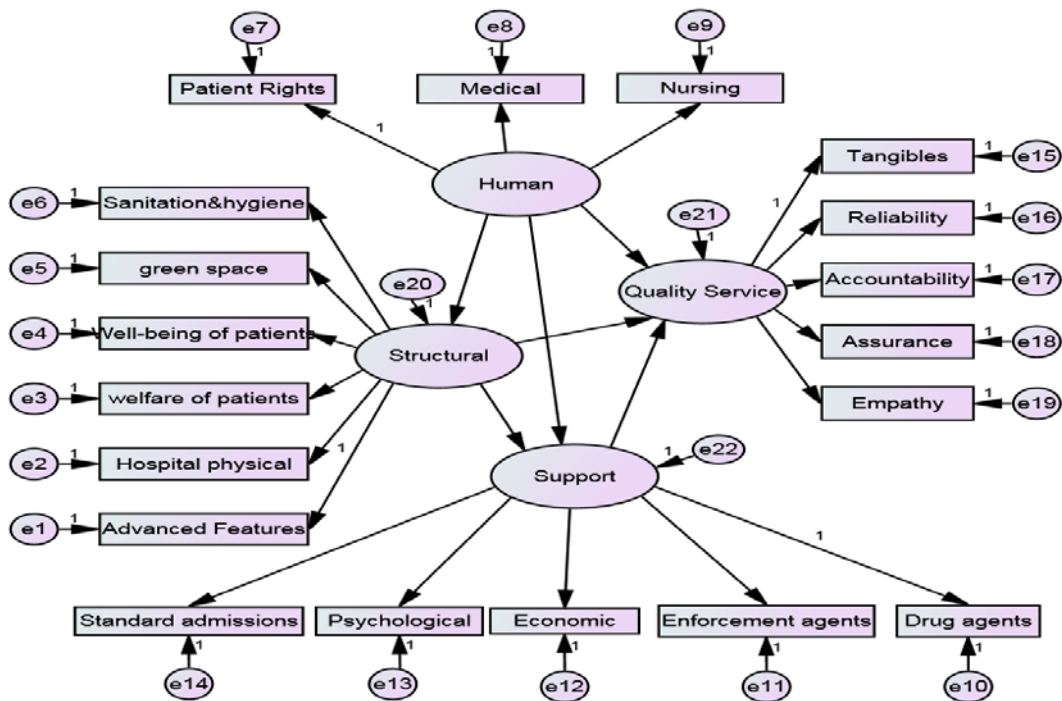


Figure 1. A conceptual model for the study of factors related to sense of security on quality of service

### Outpatient versus inpatient

In this phase, to investigate the effect of sense of security created in the structural part on the quality of service, sense of security created in the staffing on the quality of service, sense of security created in the supportive part on service quality, and the mediating role of sense of security in the human

support part, the multi-group analysis method was used. As is seen in Figure 3, the direct effect of sense of security created in human dimension on service quality equals 0.30 with a significance level of  $P < 0.05$ , and the direct effect of sense of security created in support dimension on service quality equals 0.67 with a significance level of  $P < 0.05$ . At the same time, the direct effect of sense of security created in structural dimension on service quality

equals 0.104 with a significance level of  $P < 0.05$ . Also, the Sobel test for examining the mediating role of structural security, between the structural dimension and service quality is equal to  $z_{\text{sobel}} = 2.34$  with  $P < 0.05$  in a significant level. On the other hand, the Sobel test for examining the mediating role of support security, between the human

dimension and service quality is equal to  $z_{\text{sobel}} = 3.66$  with  $P < 0.05$  in a significant level. It is also observed that the Sobel test for examining the mediating role of support security, between the structural dimension and service quality is equal to  $z_{\text{sobel}} = 1.99$  with  $P < 0.05$  in a significant level.

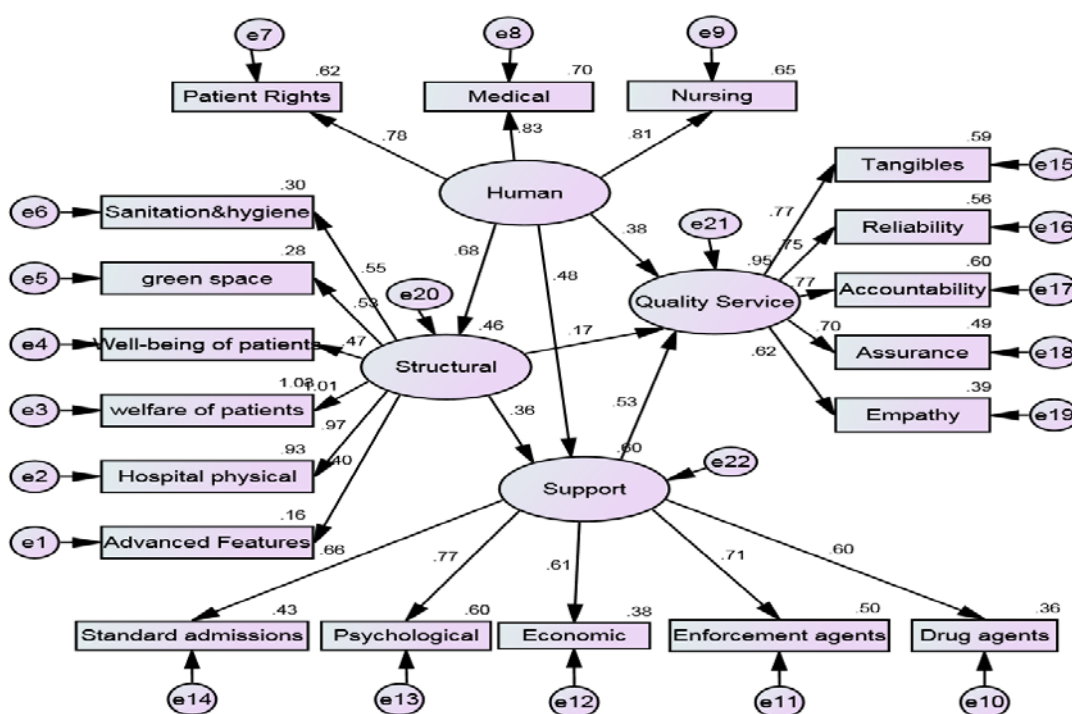


Figure 2. Standard maximum probability coefficients for structural equation modeling of the impacts of a sense of security and service quality

As is seen in Figure 4, the direct effect of sense of security created in human dimension on service quality provided for outpatients equals 0.435 with a significance level of  $P < 0.05$ , and the direct effect of sense of security created in support dimension on service quality equals 0.421 with a significance level of  $P < 0.05$ . At the same time, the direct effect of sense of security created in structural dimension on service quality equals 0.22 with a significance level of  $P < 0.05$ . On the other hand, the Sobel test for

examining the mediating role of structural security, between the human dimension and service quality equals  $z_{\text{sobel}} = 3.33$  with  $P < 0.05$  in a significant level. It is also observed that the Sobel test for examining the mediating role of support security, between the human dimension and service quality is equal to  $z_{\text{sobel}} = 4.44$  with  $P < 0.05$  in a significant level. The Sobel test for examining the mediating role of support security, between the structural dimension and service quality is equal to  $z_{\text{sobel}} = 3.20$  with  $P$

<0.05 in a significant level. On the other hand, given the multi-group analysis of the two models in inpatients and outpatients, for examining the moderating role of patient groups (inpatients and outpatients), it is concluded that all direct relationships between the factors or dimensions of sense of security in patients and the service quality did not show any significant relationship, and only

the relationship between support dimension and patient satisfaction was significant with  $z=-3.128$  and P value of less than 0.05.

It means that being inpatient or outpatient plays a moderator role in the relationship between a sense of security in support dimension and the service quality with a stronger relationship in inpatients

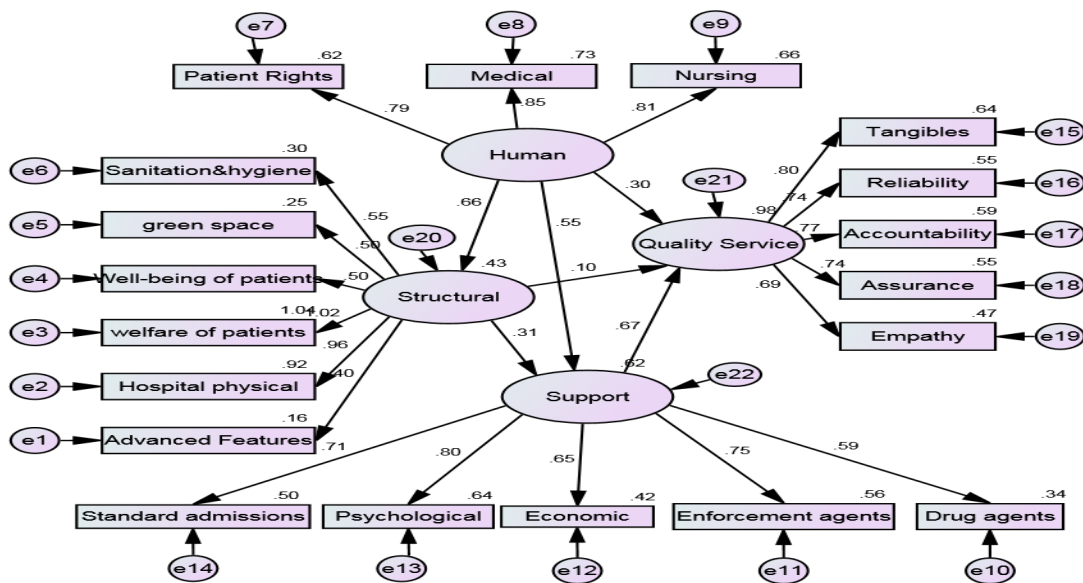


Figure 3. Standard maximum probability coefficients for structural equation modeling of the impacts of a sense of security and service quality in inpatients.

## DISCUSSION

The present study was conducted to determine the service quality for inpatients and outpatients in Imam Khomeini, Shafa, and Vali-Asr Hospitals considering the mediating role of sense of security patient safety. It is now concluded that improving service processes and promoting quality in hospitals without considering the views, needs and expectations, and satisfaction of patients is impossible. Hence, this study was an attempt to

examine the mediating role of safety in structural, human, and support dimensions and its effect on service quality for inpatients and outpatients. In the present study, the prioritization of satisfaction indicies was performed through Serqual questionnaire sequentially in the following order; reliability variable, empathy, tangibles, accountability, and assurance. This result is consistent with the study of Min Li et al., in 2015 where 9 hospitals in China were examined, and the results showed that empathy and accountability have been the top priority<sup>29</sup>.



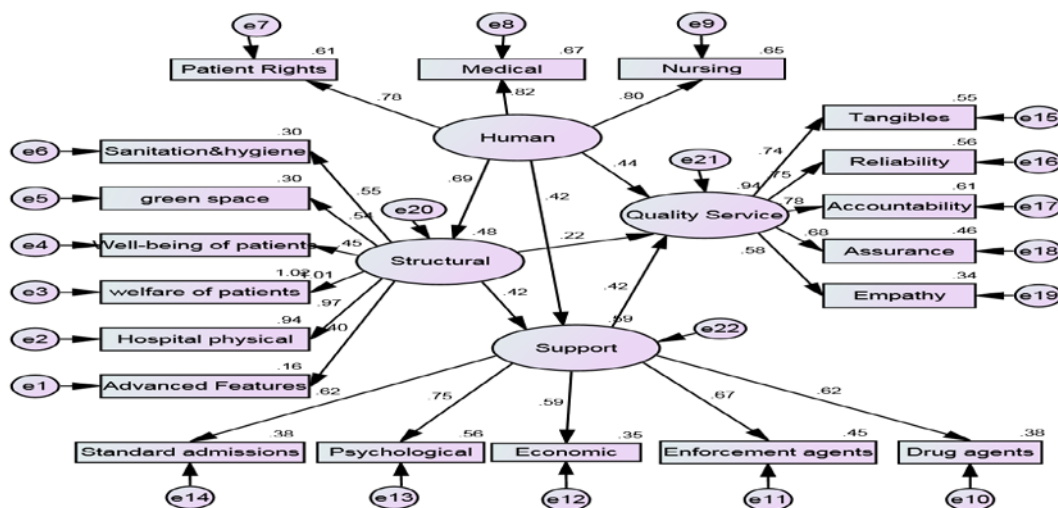


Figure 4. Standard maximum probability coefficients for structural equation modeling of the impacts of a sense of security and service quality in inpatients.

The current study was also in line with the research of Khalid, Jobnoun, and Chaker in that empathy had the highest priority<sup>30,31</sup>. While in the study of Molayi and Zareyee, the dimension of empathy was the last priority<sup>32,33</sup>. Also, in another study by Anbari and Khanchitpol, the accountability factor was introduced as the most significant quality dimension, and the reliability aspect was at the lowest rank<sup>34,35</sup>. In the descriptive analysis of the variable of sense of security with 14 variables, medical factors was in the first rank, followed by advanced facilities in the second rank, and nursing in third priority, health factors, the variable of hospital beds, patient rights, security factors, economic factors, psychological factors, patient welfare, green spaces, physical factors of hospitals, pharmacological factors, and well-being of patients and caregivers, respectively. The presence of Human factors to identify and meet the needs of the patients immediately is considered as one of the most discussed problems for the doctors and nurses at the bedside of the patient. Patients have considered the permanent presence and constant accessibility of doctors and nurses at their bedside as an effective

factor in meeting their caring needs and as their rights, and they have frequently referred to this issue<sup>36</sup>. Lack of access to nurses is one of the negative indices of quality of care that leads to significant vulnerability, suffering and insecurity in patients<sup>37</sup>. Being satisfied with the performance of physicians and paramedics is a phenomenon that plays an important role in the prevention and treatment of diseases, so that more satisfaction results in better and faster physical and mental cure<sup>38</sup>. In the study of Jonsdottir and Baldursdottir, competence was reported as the most significant caring behavior of nurse by patients<sup>39</sup>.

In another study by Alex study, the patients, the nurses felt factor for mental relaxation and peace of mind to interpret and Molazem et al., the patients interpreted the presence of nurses as a factor for mental relaxation and peace of mind. Most of the patients stated that they would feel safe with the permanent presence of clinical nurses, and this important issue is considered as among the scientific and ethical duties of nurses<sup>36</sup>. In addition, the study of Hawley showed that the positive dialogue and debate among emergency nurses and patients leads

to reassurance and empathy of patients, as well as their trust and less fear of unknowingly being put in disease condition. It is also observed that the most significant finding was about providing comfort and safety of patients in the emergency department, timely notification to doctors and nurses, and the technical competence of nurse performance<sup>40</sup>. Harris et al. found that to identify the effective environmental sources of satisfaction in 380 patients discharged from the hospital, patient satisfaction with interior designing, architecture, hotelling and privacy, and the subsequent nursing and clinical care was considered as a general source of patient satisfaction<sup>41</sup>. The friendly attitude of the nurses and their responsible behavior was among the most striking characteristic of them expressed by patients which could be considered as the source of comfort.

Whenever patients found the nurses as dutiful and committed individuals, they felt relaxed<sup>10</sup>. Civil study results showed that most patients were satisfied with the appearance and clothes for doctors and the least satisfaction was with the way of answering their questions by staff<sup>42</sup>. From the perspective of patients, a secure and convenient hospital bed and environment has a significant role in maintaining health, recovery, resilience, and their sense of relief, and if for any reason this is not possible, they will be experiencing unrest. In fact, patients linked their being in comfortable and relaxing environment to the creation of modern equipment, noise control, safety and clean room, and health services. In fact, for some patients, the existence of security and surveillance equipment and modern appliances caused confidence and acceptance of the practice, and had a strong influence on the alleviation of concerns and fears of the action<sup>10</sup>.

In a study by Swan et al., it was found that even doctors' appraisal by patients in the beautiful room as compared to patients in an ordinary room in the same hospital was more positive<sup>43</sup>. Hagerman et al. also showed that those patients who spent recovering in the room with good acoustics claim to be treated much better in comparison to patients treated in rooms with poor acoustics<sup>44</sup>. Tutton and Seers have explained in their study that low compliance of privacy, lack of comfortable pillows, and lack of access to the container of urine, and vomiting are among the discomfort factors in elderly patients, and in addition to odor, noise is also mentioned as a discomfort factors in elderly

patients<sup>45</sup>. Caring about the patients' rights and showing respect to them is one of the most important factors is healing of hospitalized patient in hospitals. Hence, despite the non-standard hospitals, lack of resources, lack of adequate personnel, and undesirable physical space, it is difficult to expect the patients' rights to be followed<sup>46</sup>. In the study of Godlieb, the most significant factor of satisfaction with healthcare nursing belongs to the daily changing bed by nurses at 87.3 percent. And in mental healthcare, the most significant factor of satisfaction with 91.3 percent is related to dealing respectfully with patients<sup>47</sup>.

In the study of Igarashi on cancer patients conducted in 2012, a sense of security of patients in palliative care was highly emphasized. In this study, it was documented that gender, age and cancer record have a direct relationship with the patients' feelings of security. Studies have shown that the sense of security in the provision of palliative care and recovery of patients is very effective. For example, the patients who find the personnel competent and suitable for providing services experience a faster recovery period<sup>48</sup>. Also, in a research conducted by McKenzie, it was found that the regular presence of nurses has a direct relationship with a strong sense of security in emergency situations for patients with cancer who are cared for at home<sup>49</sup>. According to the study of Milberg et al. regarding feeling secure of the patients and their caregivers, demographic characteristics (such as gender and age), type of diagnosis (such as cancer), health-related quality of life, perceived social support from family and friends, self-efficacy, stress, severity of disease symptoms, and coping with the disease have a significant correlation with patients' sense of security<sup>50</sup>. It was also found that the factors effective on patient satisfaction can create comfort, relaxation, and a feeling of safety in patients. Demir et al., have shown that the four factors of doctor services, nurse services, medical equipment, and nutrition were among the effective factors in increasing the patients' satisfaction<sup>51</sup>.

Being in a hospital for hospitalization or outpatient is very different experiences. Outpatients are theoretically in a better health condition, and are less dependent on medical and nursing care. They also spend much less time in the healthcare system, and have less contact with doctors, nurses and administrative staff in comparison with inpatients. In turn, the inpatient stay at least for one night at

hospital, and in more sensitive, and need more and are more dependent on nursing services<sup>7</sup>. In a study conducted by Fornara, the inpatient and outpatient satisfaction were explored, and it was found that calm physical space and relationships of staff with patients are considered as predictors of employee satisfaction in inpatients. While in outpatient satisfaction, satisfaction was predictable only in peaceful physical space. The results showed that all objective processes of environmental quality, caused by consent, may vary between inpatients and outpatients<sup>52</sup>.

The results also showed that by increasing the number of hospitalized days, the satisfaction of patients with doctors and nurses has decreased. And it is interesting to note in this case that following the increase in the number of days of hospitalization, patients complain more about nursing care than medical services. It seems that with the increase in the number of hospitalization days and patients' knowledge, there is a subsequent increase in patient expectations for care and treatment. Where as, nurses are unable to meet the needs and expectations of patients<sup>53</sup>. In this study, the conceptual model was used to examine the effects of sense of security on the satisfaction with the quality services, and for this purpose, structural equation modeling was used. The direct effect of sense of security was evident in all three human, structural, and support dimensions. The multiple-group analysis of the two models, also, showed a significant relationship between the inpatients and outpatients in terms of the mediating role of patient safety. Given that the main goal of group therapy activities is to obtain the patient satisfaction with the quality of provided services, and patient satisfaction is an indicator of the quality of services in interpersonal, organizational and technical areas, so it is essential to evaluate the patient safety to determine the current status of hospital patient satisfaction and quality of services. Patients usually expect to have easy access to medical and nursing services, and all matters relating to their treatment be done quickly and accurately. They also tend to deal with knowledgeable, skilled and reliable persons, and experience a secure procedure and place of service provision. According to the documents that show the satisfaction of Iranian in a desirable level, as compared to other countries, and based on the research on the overall satisfaction with the hospital services, measures were taken in order to find different ways to improve the quality of service,

make hospitals more customer-oriented, client tribute as effective means<sup>54</sup>.

Given the clear relationship between the mediating role of satisfaction resulting from the variable quality of service and security, and because patient satisfaction is a major challenge for service provider organizations, the researcher should conduct gap analysis through which to create opportunities to improve service quality by providing targeted strategies to reduce gaps in quality of services to patients, and take effective steps to improve the sense of security.

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