

# Hospitalized Patients' Satisfaction with Health Services and Nursing Index at A Private General Hospital in Mashhad

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Received 2021 April 16; Accepted 2022 May 16.

## Abstract

**Background and Aims:** Numerous health service-providing organizations have recently focused on patient satisfaction as a health service quality index. The present study aimed to determine the hospitalized patients' satisfaction with health services and the nursing index at a hospital during the unfavorable conditions arising from the COVID-19 outbreak.

**Materials and Methods:** The statistical population included all patients and nurses working in a private hospital in Mashhad, Iran. In total, 180 nurses and 377 patients were selected, and data were collected using a questionnaire developed by Qiu et al. (2019) and a patient satisfaction survey. Data analysis was performed in SPSS software (version 24) and Smart PLS.

**Results:** Based on the results, efficient management had a significant positive effect on patients' satisfaction with the nursing index. Moreover, it positively affected patients' increased loyalty. Satisfaction with the nursing index exerted a significant positive effect on patients' increased loyalty and strengthens the relationship between efficient management and patients' increased loyalty.

**Conclusion:** Efficient management in hospitals had a significant positive effect on patients' satisfaction with the nursing index, the result of which could be patients' increased loyalty. Considering the current unstable economic conditions, this can increase revenue and prevent the closure of hospital wards.

**Keywords:** Efficient management, Satisfaction, Nursing index, Loyalty, Hospital

## Introduction

Health is one of the most important needs of human beings, and today's society is aware of its role, therefore, the health and treatment sector has been always active in order to satisfy this critical need. In progressive health systems, some of the determinants of the relationship between the client and service providers include patient-centeredness, quality of provided services, and satisfaction with the main treatment indexes, including the nursing index. In fact, satisfaction with the nursing index and clients' trust in the treatment process determine the ranking of the healthcare center and recurrent referrals.

In other words, an important part of the relationship between the patient and the hospital is the patient or client's perception of the services related to the functional dimensions of quality, such as desirable and high-quality nursing services, which seemingly perform a key role in patients' satisfaction. The efficient management of customer relations is a serious challenge in business competition. Organizations need some information to understand the needs and expectations of their customers. In addition, they learn how to satisfy these needs and use efficient management as a tool to increase revenue and profits

and improve performance (Rahmatnejad & Samadi, 2015).

In response to common misbehaviors of companies and governments in the early 21st century, many researchers and officials in the field of management demanded a new type of value-based management which could be used to return hope, trust, honesty, and dignity to business models of institutions. Considering ethical misconducts and the failure of industries worldwide, Copeland (2016) mentioned the critical need for efficient management in the current century. The increasing demand for a change in the leadership paradigm became aligned with scientists' keen interest in defining, constructing, and correcting the management theory (leadership). Walumbwa, Avolio, Gardner, Wernsing, and Peterson (2008) considered an efficient manager as a strong position which was defined as "a management behavior model that leads to the promotion of both psychological capacity and a positive moral climate" (Walumbwa et al., 2008: 94).

Since corruption and misconduct among managers and leaders of private and government institutions seriously threaten social and economic stability, as well as the prosperity of the country, there is always a need for efficient management (leadership) to renew the old

leadership paradigms. It is evident that staff's belief, trust, and coordination with efficient management of organizations will exert a tremendous impact on the performance of organizations. Consequently, we can correct the existing processes in the structure of private and government organizations (hospitals) and increase satisfaction with the performance of their workforce (e.g., nurses and physicians) by defining different aspects of efficient management. Moreover, we can improve clients' loyalty which greatly contributes to the efficiency of an organization and its human resources.

In light of the aforementioned issues, the present study aimed to assess the effect of efficient management on patients' satisfaction with the nursing index, clients' increased loyalty to the use of services provided in the hospital, as well as decreased economic, social, and treatment damages to clients, staff, and hospital during the unfavorable conditions arising due to the COVID-19 outbreak which have caused economic and social turmoil.

### Research Objectives

The current research aimed to assess the effect of efficient management on hospitalized patients' satisfaction with the nursing index and their increased loyalty to the use of healthcare services of hospitals in Mashhad, Iran, during the COVID-19 outbreak.

### Materials and Methods

The current applied research was conducted based on a descriptive survey design regarding the data collection method since a specific group of people were asked to answer some questions. Correlational research is one type of quantitative research in the field of management studies, evaluating the presence or absence of a significant relationship among research variables and the type of relationship; therefore, this was a correlational study as well.

The statistical population included all hospitalized patients and all nurses working in a private general

hospital in Mashhad from October to March 2020. In total, 337 patients and 180 nurses were selected using the Cochran formula. However, 322 and 150 questionnaires were returned by patients and nurses, respectively. It is noteworthy that patients were selected from different wards based on the turnover capacity of each ward, and nurses were chosen among those working in different shifts using a classified sampling method.

Data were collected, and research hypotheses were assessed using a questionnaire developed by Qiu et al. (2019) and a patient satisfaction survey, containing two sections of demographic characteristics and items related to research variables. After several revisions and modifications, the validity of the mentioned instrument was approved by academic professors and experts in the field of medicine and nursing in the hospital. Moreover, the reliability of the tool was confirmed, rendering a Cronbach's alpha of 0.96. In this regard, Cronbach's alpha was estimated for each research variable separately and then for the entire questionnaire. The questionnaire encompassed four components of self-awareness ( $n=4$ ), relational transparency ( $n=4$ ), balanced processing ( $n=4$ ), and internalized moral perspective ( $n=4$ ), while the patient satisfaction survey comprises two components of the nursing index ( $n=13$ ) and loyalty ( $n=4$ ). The normality of each of the research variables was investigated using the Kolmogorov-Smirnov test and drawing normal diagrams. In this regard, parametric tests were applied for variables with a normal distribution, while non-parametric tests were employed for variables with an abnormal distribution.

Furthermore, the main indicators and demographic characteristics of the questionnaires were studied using descriptive statistical methods, including tables, frequency distribution, percentages, and diagrams. In addition, data analysis was performed in SPSS and PLS software using the correlational method and structural equation modeling.

### Path Diagram

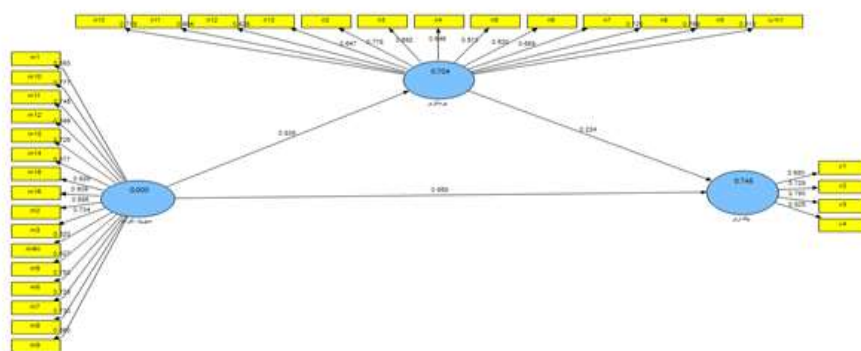
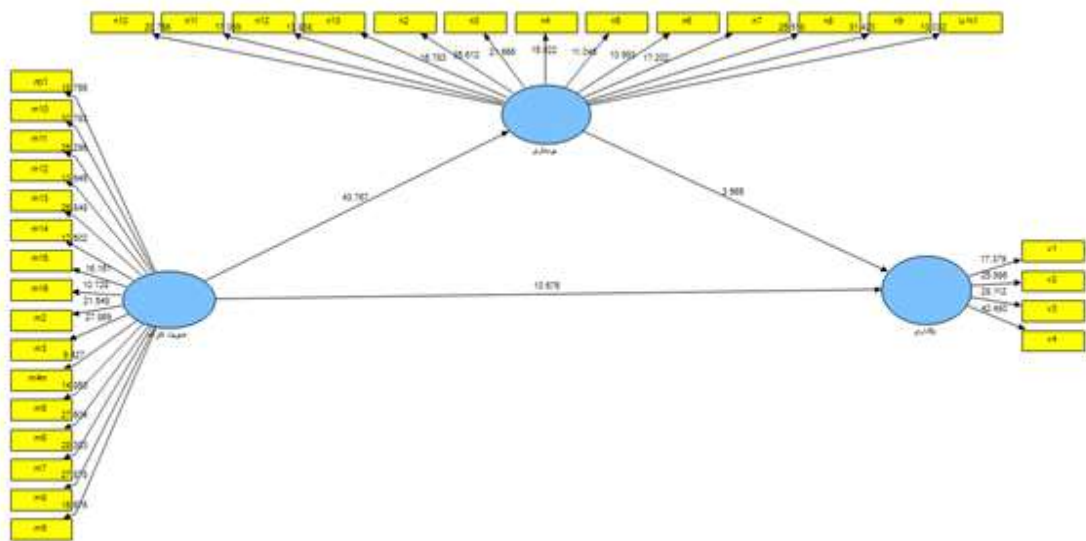


Figure 1. Model in standard coefficient estimation mode



**Figure 2. Model in significant coefficient estimation mode**

Regarding gender, the majority of patients (62%) were male. In terms of the cause of referral, 7.4%, 41.3%, and 51.3% of the subjects were referred for medical hospitalization, cardiovascular diseases, and surgery, respectively. Moreover, 43.5% of subjects were pilgrims, referring to the hospital from other cities and provinces, whereas 56.5% of cases were residing in Mashhad. About 60.9% of the patients were hospitalized for the first time, and the majority of them used outpatient and paraclinical services of

the hospital. On the other hand, 39.1% of the subjects had been hospitalized several times and used the hospitalization ward services. Among the participants, 24.5% and 75.5% referred to the hospital urgently and voluntarily, respectively, to use the healthcare services of the center. The majority of nurses (67%) were female. In addition, regarding marital status, 78% of the nurses were married. Furthermore, 88% of the nurses had a BSc, while 12% were students or hold an MSc.

**Table 1. Evaluation of convergence validity of model variables**

Model Variables	Cronbach's alpha
Efficient management	0.921
Nursing index	0.843
Loyalty	0.838
Total questionnaire	0.956

The Cronbach's alpha method was used to determine the reliability of research variables. According to Fornell and Larcker (1981), a Cronbach's alpha of above 0.7 is regarded as sufficient convergence or internal consistency. In the

present study, a Cronbach's alpha of above 0.7 was estimated for the research variables and the entire questionnaire, confirming the reliability of the tool.

**Table 1. Structural equation modeling results of research hypotheses**

Research hypotheses	Beta	T-statistic	Sig	Hypothesis status	Direction
Efficient management -> Satisfaction with nursing index	0.839	43.767	0.000	Confirmed	+
Efficient management -> Increased loyalty	0.658	10.675	0.000	Confirmed	+
Satisfaction with nursing index -> Increased loyalty	0.234	3.565	0.001	Confirmed	+

|t|>1.96 Significant at P<0.05, |t|>2.58 Significant at P<0.01

**H1:** Efficient management has a significant positive effect on hospitalized patients' satisfaction with the nursing index in the hospital.

According to the results of structural equation modeling (Table 2), the direct impact of efficient management on patients' satisfaction with the nursing index was estimated at 0.843, and the t-statistic value was significant at a 95% confidence interval ( $t=46.503$ ;  $P<0.01$ ). Therefore, efficient management had a significant effect on hospitalized patients' satisfaction with the nursing index. In addition, the positive beta value of 0.843 was indicative of a positive effect and a direct relationship between the two variables.

**H2:** Efficient management had a significant positive effect on hospitalized patients' increased loyalty to the use of healthcare services of the hospital.

Based on the results of structural equation modeling (Table 2), the direct impact of efficient management on patients' increased loyalty in the hospital was estimated at 0.658, and the t-statistic

value was significant at a 95% confidence interval ( $t=10.675$ ;  $P<0.01$ ). Therefore, efficient management had a significant effect on patients' increased loyalty in hospitals, confirming this hypothesis. In addition, the positive beta value of 0.658 was indicative of a positive effect and a direct relationship between the two variables.

**H3:** Patients' satisfaction with the nursing index has a significant positive effect on their increased loyalty to the use of healthcare services of the hospital.

According to the results of structural equation modeling (Table 2), the direct impact of efficient management on patients' increased loyalty in hospitals was estimated at 0.796, and the t-statistic value was significant at a 95% confidence interval ( $t=34.894$ ;  $P<0.01$ ). Therefore, efficient management had a significant effect on patients' increased loyalty to the use of healthcare services of the hospital, confirming this hypothesis. Moreover, the positive beta value of 0.796 was indicative of a positive effect and a direct relationship between the two variables.

**Table 3. Sobel test and bootstrap results of the effect of the mediator**

Research hypotheses	Sobel statistic	Level of significance	Status
Efficient management -> satisfaction with nursing -> loyalty	3.553	0.001	Confirmed

$|t|>1.96$  Significant at  $P<0.05$ ,  $|t|>2.58$  Significant at  $P<0.01$

**H4:** Satisfaction with nursing index strengthens the relationship between efficient management and patients' loyalty to the use of healthcare services of the hospital.

According to the results of the Sobel test, the indirect effect of efficient management on patients' increased loyalty due to their satisfaction with the nursing index in hospital wards was estimated at 0.150, and the Sobel statistic value was significant at a 95% confidence interval (Sobel=2.296;  $P=0.022<0.05$ ). Therefore, efficient management had a significant positive effect on

patients' increased loyalty to the use of healthcare services with the mediating role of satisfaction with nursing index in hospital wards, confirming the research hypothesis.

## Discussion and Conclusion

Efficient management had a significant positive effect on patients' satisfaction with the nursing index in the hospital.

Efficient management is one of the most resources required for the development of nations. In fact, it plays a peculiar role in organizational success. Nevertheless, efficient management needs technical, human, perceptual, design, and problem-solving capabilities, and certain innate and acquired abilities are crucial in this regard. Efficient management seeks to assess a set

of achievements and practical results of services and products of the last decade in the field of management services and strategic planning. Efficient management can be used as the axis of strategic thinking of entrepreneurship, strategic financial management, marketing, innovation, creativity, and empowerment of human resources to provide high-quality services to stakeholders and increase their satisfaction with an organization. These in turn can increase organizational success, revenue generation, and profitability and overcome several economic and social problems. Since efficient management strives to provide organizational staff (nurses) with favorable conditions for offering high-quality services to customers as their main objective, their performance can be assessed based on customers' demands and expectations. Therefore, efficient management had a significant positive effect on patients' satisfaction with the nursing index in the hospital.

Efficient management has a significant positive effect on the increased loyalty of patients to the use of healthcare services of the hospital.

Proper performance and management of an organization by the manager and leader, as well as valuing the position of employees and customers, can simultaneously increase the efficiency and productivity of employees' performance. This leads to the proper provision of services that could exceed customers'

expectations and increase customers' sense of belonging to an organization, resulting in their stronger loyalty to the products and services of the center. Consequently, it could be concluded that efficient management had a significant positive effect on patients' increased loyalty to the use of healthcare services of the hospital.

Satisfaction with the nursing index has a significant positive effect on patients' increased loyalty to the use of healthcare services of the hospital.

Service quality is a critical issue in the survival and productivity of an organization. In fact, customer satisfaction and service quality are vital parts of most service industries. The employees of customer-oriented organizations continuously identify and anticipate the demands and needs of customers and provide high-quality and desirable services, all of which increase customer satisfaction with the products and services provided by employees. This leads to a positive mental image of an organization, creating a sense of loyalty to the organization regarding the use of its services and products. Therefore, satisfaction with nurses' performance had a significant positive effect on patients' increased loyalty to the use of healthcare services of the hospital during the unfavorable conditions arising due to the COVID-19 outbreak.

Satisfaction with the nursing index strengthens the relationship between efficient management and patients' loyalty to the use of healthcare services of the hospital.

Satisfaction with service delivery is recognized as an important and effective factor for loyalty to the use of the services provided by an organization. The efficient provision of desired services by employees (nurses) increases customer satisfaction (patients), thereby creating or enhancing a sense of trust and loyalty in the re-use of services and products and even introducing the organization to others. Therefore, satisfaction with the nursing index strengthens the relationship between efficient management and patients' loyalty to the use of healthcare services of hospitals during the unfavorable conditions arising due to the COVID-19 outbreak.

## Acknowledgments

We hereby extend our deepest gratitude to the office manager, technical assistant, manager of the quality improvement office, the supervisor, as well as all nurses and head nurses of different wards of the hospital for assisting us in performing this research project.

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