

Review Article

ANALYSIS AND INVESTIGATION OF THE GAP BETWEEN ASSISTANCE'S EXPECTATIONS AND PERCEPTIONS FROM THE THE SERVICE'S QUALITY ACCORDING TO THE SERVQUAL MODEL (A CASE STUDY OF IMAM REZA HOSPITAL, KERMANSHAH PROVINCE)

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ABSTRACT

Determination of associated factor to the patient satisfaction is a very important issue for health care providers to understand what a value is for patient, for achieving the way of patient's understanding from service's quality and also the time, place and manner of changing and improvement of services, a Servqual model was used. It used to evaluate the quality of provided services to the patients by hospital and investigation of the level of patient's satisfaction from the received services. As a result, this research tries to examine and evaluate the provided service's quality in Imam Reza's hospital based on the Servqual model sections and evaluation of patient's satisfaction in this hospital, to determine the strength and weaknesses of various domains and the obtained result of this study can be used to improve the organizational system of hospital. For this purpose, some of the staffs in Imam Reza's hospital in Kermanshah Province considered as research population, including 500 people who were selected randomly by Morgan table and finally 348 people selected and examined. From the perspective of methodology this study is descriptive, correlational and from the goal perspective is applicable. For the gathering of information, survey was used and from the time views it is sectional – transversal. Data were collected through a standard questionnaire, the validity of the test was examined by two methods of content and construct validity, for assessing the reliability, the Cronbach alpha index (0/986) used. For analyzing collected data, the descriptive and inferential statistics with SPSS software were used. Analyzing of data and information has been done by Spearman correlation coefficient and factor analysis. The results demonstrated that the effect of the independent variables (Tangibility, reliability, responsiveness, assurance, empathy, patient's expectations and perceptions) on dependent variables (patient's satisfaction) has the effect of 24, 50, 26, 60, 23, and 31 percent on patient's satisfaction.

Keywords: *Quality of Care, Patient's Satisfaction, Expectations and Perceptions*

INTRODUCTION

Introduction and Research Problem

Hospitals are the most important element of the health care system which uses the special facilities to create a product called maintenance, restoring and improving of the physical and mental health of the society's population, and also in the performance of the medical research and training of the skilled working power in the health and cure section has a crucial role. Patient-oriented, high-quality care, the efficient use of the available resources and at the same time providing the services that meet the patient's expectation, is the greatest challenge of the health section. Generally the quality of provided systems is considered and judged by clients based on the advantage of systems according to their own perceptions of what they expect to receive, and what is actually provided by hospitals. Servqual model is used to measure the quality of provided services to the patients by hospital and assess the patient's satisfaction

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level from the services. In literature, the quality services have been attributed to two dimensions of technical quality and performance quality. Technical quality refers to the quality of the product (service), it means that the quality of what clients buy and if the product (service) has the technical characteristic and standard format or not.

The performance quality refers to the description of the method of proposing products and relationship between the company and customers. Servqual model is used to evaluate the quality of services and determination of the gaps. This model was presented by Parasuraman (1985), he named five aspects of quality: 1. Tangibility, 2. Reliability, 3. Responsiveness, 4. Assurance, 5. Empathy. This study attempts to investigate and evaluate the proposed quality of services in Imam Reza's hospital based on Servqual model and also evaluate the patient's satisfaction. Results of the study can be used to improve organizational excellence of hospitals.

Review of literature

Definition of Quality

According to the national association of productivity, quality is a set of features and characteristics of a product or service that provides the client's needs and satisfaction (Ang *et al.*, 2013). Among different definitions and perspectives about quality, customer-oriented features of products and services are the most useful definition (Dahan, 2008). In other words, a product has quality when it conforms to needs and customer's expectation. Quality should be defined as product's conformity to customer's needs (Brooks, 1999).

Services

One of the main trends in recent years is the significant growth of the services. In developed country, 79 percent of jobs are service jobs and 74 percent of Gross Domestic Products (GDP) is related to services (Lim and Tang, 2012). Totally services have special features that creates problem in the "quality" subject, some of them are as follow: Services are the result of human works and most of the time they are intangible and non-visible. It is not possible to save the services, so creation and consume of them happens in specific time and place. The measurement of output quality of services is very difficult. The following items lead to the operational and structural concept of quality and its measurement in the services section faced with many problems (Aghaee, 2006).

The Concept of Customer Satisfaction

In line with the advent of third millennium, many of the concepts in the leading organizations find a new concept, and as a result a new role creates in the society.

The term "customer" is also change during these processes (Kennedy, 1999). Today's the sentence "customers are our head's crown" is not just a slogan but, a customer becomes the most important capitals of the companies. Products come and go, but what creates a value for organizations is the continuous relationship with the customers, so successful organizations are those ones that are able to create (customer for life) for themselves (Lim and Tang, 2012).

Servqual Model

In the service domain, Parasuraman in 1985 provided a mean for measuring the client's understanding from the service's quality, this tool considered as Servqual model (Dahan, 2008). In his research, he concluded that clients compare the service's performance with what they think it should be, and by this way they evaluate the quality of services.

If the level of performance is lower than the level of customer's expectation a big gap will occur. The base of Servqual model is measurement of customer's satisfaction that is gained from the assessment of gap between customer's expectation and perceptions; it produces level of satisfaction (Tayebi *et al.*, 2005).

The intention of customer's perception is mental evaluation of service's real performance and customer's waiting refers to the mental standards and acceptable situations that should be exist (Davis *et al.*, 2005).

Parasuraman defined five dimensions of services in the Servqual model frame work and by its help they measure the quality of services in the organizations. These five dimensions are Tangibility, Reliability, Responsiveness, Assurance and Empathy (Parasuraman *et al.*, 2010).

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Five Quality Dimensions of Servqual model is Mentioned Below

Tangibility: This index refers to the all of the facilities, equipments, general atmosphere of organizations and also the employee's appearance.

Reliability: The ability of providing service to the customer in the exact time and it should be correct and trustable and continuous. For example, customers that go to the emergency section of the hospital, have some expectations like fast performance of the action, special care and attention from the medical personnel and etc... Reliability is a criterion of the emergency section to meet and follow this expectation. Another meaning of reliability is following the primary commitment. It means that if the service organization, give some promises to the customers they must follow their own commitment.

Responsiveness: Willingness to help customers and provide prompt service. This dimension of service quality focuses on the sensitivity of the employees to perform their services, being alert to the customer's application. In fact the criterion of responsiveness definition refers to "duration of time that is necessary for customers to wait".

It is clear that the shorter the time, more satisfaction creates in customers.

Assurance: This index reflects the level of ability and competence of organization's personnel in the delivery of customer's trust and confidence to the service's performance.

Empathy: Special attention to the customers. This indicator means that every contact with customers should be in line with their manner and attitudes and generally refers to their moods and personality traits. So that customers have come to this understanding that for the service organization it is important to understand their needs and problems (Parasuraman, 2010).

Research Background

Results	Researcher
Most of the patient's dissatisfaction in the studied hospital refers to the responsiveness and empathy and the dimension of employee's attention to the patient's needs, parking facilities for visitors, waiting time and the temperature of food were common aspects that were considered important for patients.	Zeynedin <i>et al.</i> , 2011)
The most patient's satisfaction is from the tangibles dimension. In compare to three hospitals, hospital C has a higher quality than average and has the most patient's satisfaction, quality in hospital A and B is under average and most of the patients are not satisfied from the hospital's services. Also hospital B in compare to hospital A has higher quality.	(Zeynedin <i>et al.</i> , 2008)
In all five dimensions of Servqual model there is a negative gap of quality. There was an inverse correlation between patient's age and negative gap of quality and there is a significant and positive relation between quality gap and gender and patient's education.	(Tarahi <i>et al.</i> , 2011)
In the entire Servqual model indexes there are negative gaps of quality, in a way that after a survey it has the highest level of dissatisfaction and reliability dimension has the lowest gap between other indexes.	(Mohamadnia <i>et al.</i> , 2010)

Research Hypothesis

1. There is a significant relationship between Imam Reza's hospital services from the tangibility aspects and level of patient's satisfaction.
2. There is a significant relationship between Imam Reza's hospital services from the reliability aspect and level of patient's satisfaction.
3. There is a significant relationship between Imam Reza's hospital services from responsiveness quality and level of patient's satisfaction.

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4. There is a significant relationship between Imam Reza’s hospital services from the empathy aspect and level of patient’s satisfaction.
5. There is a significant relationship between patient’s satisfactions with service’s quality.
6. There is a significant relationship between patient’s satisfactions with their expectations.
7. There is a significant relationship between patient’s satisfactions and their perceptions.

Methodology

Research Findings

The present study is descriptive and for describing data, statistic descriptive parameters such as mean, standard deviation is used. In this study to investigate research questions Spear man correlation test and Kolmogorov were used, for investigating normal distribution of data Smirnov was applied and exploratory factor analysis, structural equation model and Kmo-Burtlet test were used; for collecting primary data questionnaire was applied.

The population of this study included all patients of Imam Reza’s hospital in Kermanshah Province, 384 people were selected by Morgan table and it was a random selection. The questionnaire of this study is standard and it was taken from Servqual model, it has five items: tangibility, reliability, responsiveness, assurance and empathy which consist of 40 items. The standard questionnaire of expectation and perceptions were translated by Moghimi which has 10 items. In this research for determining validity, content validity and face validity were used and for evaluating reliability, alpha Cronbach (0.987) was gained which indicate high reliability and validity.

a. Descriptive Results

From the total 319 participants of the study, 127 people (40%) were men and 192 people (60%) were women, the percentage of women is more than men.

The total number of subjects are 319 in this study, 317 people answered these questions, 215 samples (8.67%) had B. A degree, 79 equal to (9.24%) had M.A degree and 23 equal to (3.7%) of total samples had Ph. D students.

From the total number of participants, 88 people (5.24%) is between 20-30, 125 people (8.37%) is between 30-40, 80 people (3.22%) is between 40-50, 66 people (?4.18%) is between 50-60. Also it is observed that the average age of the participants is 70.36.

b. Deductive Results

To test the hypothesis at first normal distribution of samples and then Spearman correlation coefficient were used; results were recorded in the following tables:

Table 1: Result of Kolmogorov-Smirnov test for investigating normal distribution of data

Level of sig	Statistic quantity z	SD	mean	number	variable
0.057	1.334	0.621	3.37	384	Satisfaction
0.000	2.309	0.807	3.20	384	Tangibility
0.000	2.620	0.660	3.36	384	Reliability
0.000	2.050	0.786	3.33	384	Responsiveness
0.000	2.841	0.760	3.73	384	Assurance
0.002	1.856	0.809	3.24	384	Empathy
0.034	1.430	0.584	4.02	384	Service’s quality
0.001	2.027	0.620	3.95	384	Patient’s perception
0.000	2.043	0.526	3.95	384	Patient’s expectation

The obtained results of data analysis determined that except satisfaction index none of the research items follow normal distribution.

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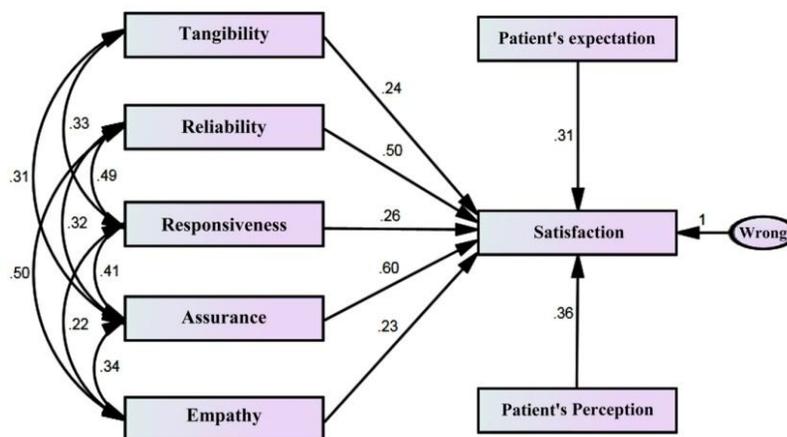
Table 2: Testing research hypothesis by Spearman correlation coefficient

Hypothesis results	Level of sig	Effect	Research hypothesis
confirm	0/000	0/24	There is a significant relationship between tangibility and patient's satisfaction
confirm	0/000	0/50	There is a significant relationship between reliability and patient's satisfaction
confirm	0/000	0/26	There is a significant relationship between responsiveness and patient's satisfaction.
confirm	0/000	0/60	There is a significant relationship between assurance and patient's satisfaction
confirm	0/000	0/23	There is a significant relationship between empathy and patient's satisfaction.
confirm	0/000	0/31	There is a significant relationship between expectations and patient's satisfaction.
confirm	0/000	0/36	There is a significant relationship between perceptions and patient's satisfaction.

Standardization of instruments for measuring research's concepts

Table 3: Indices for structural equation model

indicator	quantity	Desired range	result	
$\frac{\chi^2}{df}$	1/975	$0 < \frac{\chi^2}{df} < 5$	Model verification	Chi-square
RMSEA	0/052	RMSEA < 0.05	confirm	Root of error square approximation
RMR	0/012	RMR ≥ 0	confirm	Root of residual mean square
GFI	0/994	GFI > 0.9	confirm	fit
AGFI	0/957	AGFI > 0.85	confirm	Adjusted of goodness of fit index
NFI	0/994	NFI > 0.90	confirm	Normalized fit index (Bentley Bonet)
CFI	0/997	CFI > 0.90	confirm	Comparative fit index
IFI	0/997	IFI > 0.90	confirm	Incremental fit index



Figure

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CONCLUSION

Although satisfaction and service's quality have similarities but generally satisfaction has higher concept than quality, because service focuses on the services dimension. From this perspective, quality is taken into as a part of satisfaction. Service's quality is a sign of customer's perception, while satisfaction is wider and includes service's quality, product's quality, price and situational and personal factors. Perceptions, expectations and customer's preferences are from customer's satisfaction determiner in a way that, satisfaction or dissatisfaction from differences between expectations and customer's perception formed from reality. Today's companies, for creating satisfaction in customers, should omit the reason of dissatisfactions and complaints and also provide products with high and excellent quality in order to make their customers happy. Results of the study demonstrated that from 359 patients that were investigated in this study, hospital is one of the most important parts of the health care system. The main mission of hospitals is to provide high quality care for patients and to understand their needs and expectations, these important issues needs to establish and fix hospital's quality. Most of the organizations think about improving their customer's satisfaction and this leads to their life and survival, as a result they interested in evaluating their qualities strategies for the services. So they consider customer as a key indicator in this evaluation, and competition between health's organizations depend on patient's satisfaction. By responding to the views and patient's needs, continuous improvement of health services and generally the overall improvement of physician-patients relation will achieved. In reviewing all the questionnaires' questions in five dimensions, results determined that the first hypothesis of research is confirmed, it means that reliability influenced on customer's satisfaction of service's quality. In other words, Imam Reza's hospital promises a service to their patients when it is done certainly and accurately. The fulfillment of these promises from the hospital makes a confidence feeling for patients and also creates a trustable atmosphere between patients and physicians. The second hypothesis of the study confirmed, it means that hospital's responsibility has effect on customer's satisfaction. As a result it can be concluded that providing on time service to patients and also responsibility to answer patient's needs and the hospital's sensitivity to service's quality can make patients satisfied.

The third hypothesis of the research confirmed. In this sense that empathy between hospital's staff and patients have influence on their satisfaction from the service's quality. In fact, hospital's personnel had contact with patients according to their personality traits and temperament and mutually patients were satisfied with them. The fourth research hypothesis was also confirmed; it means that assurance and guarantee of patient's health is one of the influential factors on patient's satisfaction in Imam Reza's hospital. In other words, personnel's abilities and competent, especially nurses and physicians that have direct contact with patients creates a sense of confidence and trust for them. The fifth research hypothesis is confirmed, it means that service's quality had an effective influence on patient's satisfaction. So it can be noted that all the equipments, facilities, public space, personnel's appearance and finally the communications channel which provides services, had influential effect on patient's satisfaction. This study was in line with the result of Ranjbar (2), Tarahi (5), Gorji (6), Jebreili (12), Janatabadi (13), Hekmatpoo (14), Kebriaee (16), and also some other studies which is similar to this study in other cities and universities in our country. So "Having qualified and professional physician and personnel" that can provide patient's satisfaction by empathy leads to their satisfaction. Evaluation in other dimensions of this study determined that: Tangibility and clean and appropriate atmosphere of hospital" has the effect of (.0611) on patient's satisfaction that can be improved by optimal management actions. Responsiveness dimension with effect of (.0760) is influential on patient's satisfaction that can be reduce the existence gap by revising the patient's acceptance process and do some unnecessary activities after hospitalization.

Suggestions

1. To be successful in responding to patient's management and effective implementing its process, it is suggested that the integrated database management system should be created in the hospital to help staff to gain information and knowledge in appropriate time for patient's satisfaction.
2. Enhancing information management system
3. The existence of a claiming center for solving the patient's problem

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4. Recognition of hidden needs and patient's expectation and also expanding the scope of the service.
 5. Teach and encourage hospital's personnel to deal with appropriate contact with patients and solve their problems.
 6. As a result it is necessary that hospital's management attempts to convey related information with knowledge and physician and nurses' ability to patients, by this way the patient's trust to personnel's ability increase.
 7. Perhaps planning for more teaching and appropriate to personnel in the areas of specific knowledge can remove some gaps, and on the other hand in the empathy dimension by giving a special training and having a contact with patients, a better feeling creates because of association between personnel and patients.
 8. According to the recent changes and important role of the hospitals in providing the society's health and development of country's health, measuring hospital's performance in order to enrich the quality of provided services by them and prevention of disease is essential.
 9. Due to the mutation in service organization's evaluation, Process oriented and output based evaluation changed to the outcome based and customer based evaluation. Using new techniques of measuring quality can help to increase their service's quality.
 10. Servqual can be considered as the newest technique for evaluating service's quality, it can provide areas of challenging existing problems and issues in medical center and help them make quality function deployment. As a result it is recommended that hospitals by using mentioned tools evaluate the quality of their services and improve the general quality.
 11. In order to have empathy with patience and understanding their mental situation it is proposed that training program, seminars, conferences and workshops designed and implemented.
 12. Suggested that comprehensive management system designed and implemented and by holding virtual forum or creating conferences for exchanging experiences between staffs or allocating personnel code to protect intellectual property right, establishment and continuous electronic suggestion system based on management for creating patient's satisfaction achieved.
- In order to strengthen empathy with patients can be offered to educate personnel and ethics and customer's feedback rules developed and by practical commitment to these training and customer based behavior, provides development and growth of the medical organization of the country. In order to improve the implementation it is necessary to pay attention to the information, knowledge and job's skill and creating opportunities to develop job's skill in organization and providing effective and efficient fields of education help managers to exploit human resources capacities.

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