

# Private Hospitals' Service Quality Dimensions: The impact of Service Quality Dimensions on patients' satisfaction

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## Abstract

*In today's world, most industries use service quality in a variety of fields. The five service quality characteristics are tangible, assurance, reliability, responsiveness, and empathy, and they are being implemented across all industries. The primary goal of this study is to look into the quality of service provided by hospitals in Erbil and how that affects patients satisfaction. Furthermore, to determine which service quality factor has a greater impact than the others. The association between each service quality factor and visitor satisfaction was measured using a quantitative research method by the researcher. Patients in Erbil's hospitals were given a questionnaire that had been developed and circulated. In Erbil, 111 questionnaires were completed and received from hospitals patients. The findings revealed that the highest value was assigned to responsiveness as a service dimension, while the lowest value was assigned to assurance as a service dimension.*

**Keywords—** *Quality, Service Quality dimensions, Hospitals Patients Satisfaction, Erbil.*

## I. INTRODUCTION

In today's competitive business world, the education sector is critical since it is viewed as a necessary source of economy and money for the country (Abdullah et al. 2021). As a result, the majority of countries are intending to attract local and international visitors to their destinations, allowing them to develop and improve their country's life. The hospitals's structure, patients' accommodations, patients' facilities, and activities all have a significant impact on guest satisfaction (Ahmed et al. 2021). In order for a hospitals to achieve and maintain a competitive edge, it is critical to apply service quality dimensions effectively and efficiently in order to improve present hospitals service, which ultimately leads to student happiness (Akoi et al. 2021). The goal of service quality in the healthcare industry is to provide patients with a high standard of accommodation atmosphere, and practically all hospitals are able to achieve this goal by delivering high-quality services (Ali & Anwar, 2021). Patients, in most circumstances, are more concerned with the quality of service than with the price (Ali et al. 2021). As a result, achieving a particular degree of quality that satisfies the

needs of the patients and demonstrating this quality in practice is critical. Patients have become more complicated and demanding in recent years, and it is critical to understand their location, such as where they came from and what their expectations are, in order to determine the best techniques for improving hospitals service quality (Anwar & Surarchith, 2015). In general, patients are in high demand; yet, when it comes to the healthcare industry, the most important factor to consider is the hospitals's service quality. Given that service quality affects guest happiness (Ali, 2014), it will be necessary to implement an effective service quality management system. Patients will be dissatisfied if the healthcare industry provides poor service quality (Anwar & Shukur, 2015). Many segments of the hospitals industry are looking for ways to improve the quality of their systems in order to gain and maintain competitive advantages. All of the services supplied by the healthcare industry give value to its patients, resulting in a rise in patients satisfaction. Currently, certain healthcare sectors have designated a department to assess and ensure the implementation of service quality in order to assure patients' pleasure and meet their needs and expectations.

Furthermore, the competitive market's key success is dependent on providing high-quality service, which leads to increased client pleasure (Andavar et al. 2020). As a result, in the hospitals industry, clients' feedback on service quality is critical to improving and expanding the business. To please their students and establish guest loyalty, the healthcare industry should give competitive services. The benefits of guest satisfaction are numerous, including the development of a strong relationship between hospitals personnel and patients, which leads to the development and retention of loyal patients (Anwar & Abd Zebari, 2015). The goal of this study was to use service quality characteristics as a factor in determining guest satisfaction in Erbil hospitals. Empathy, assurance, reliability, responsiveness, and tangibility are the five characteristics of service quality. These five dimensions have an important impact in how clients perceive service quality. The five

**Conceptual Framework**

**Research model**

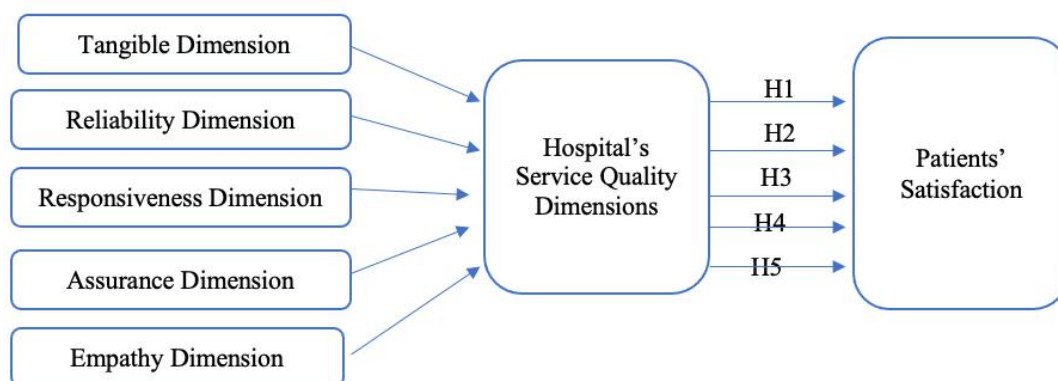


Fig.1: Research Model

**Research Hypotheses**

- H1:** There is a positive and significant relationship between tangible dimensions with patients' satisfaction.
- H2:** There is a positive and significant relationship between reliability dimensions with patients' satisfaction.
- H3:** There is a positive and significant relationship between responsiveness dimensions with patients' satisfaction.
- H4:** There is a positive and significant relationship between assurance dimensions with patients' satisfaction.
- H5:** There is a positive and significant relationship between empathy dimensions with patients' satisfaction.

**II. LITERATURE REVIEW**

**Patients Satisfaction**

The term satisfaction, according to (Anwar & Abdullah, 2021), is “a person's experience of enjoyment as a result of comparing certain services or products, or even transition

elements of service quality in this study are independent variables, while guest satisfaction is a dependent variable.

**Statement of the Problem**

Every day, and in almost every service they purchase, patients are confronted with service quality issues: on public transportation, when it is crowded and you don't feel comfortable getting to your destination; while shopping, you may be offended by the behavior of a salesperson; in a cafe/restaurant, you may not like how a waiter served you, and so on. We can continue to find unhappiness in a variety of service-oriented settings (Anwar, 2017). Unfortunately, the quality of service provided does not always fulfill the patients' demands, requirements, or expectations. The problem of insufficient levels of service quality will be studied based on the remarks of various hospitals patients, which is the major reason for the selected topic.

perceived outcome or performance in terms of the expectation.” It has been proved that when the service quality fulfills the expectations and needs of the patients, the patients will be satisfied with the level of service offered. However, in the healthcare industry, exceeding visitors' expectations is a difficult challenge. Speed has become the most valued and new competitive advantage in many sectors. The product life cycle is being shortened from years to weeks as a result of increased speed. Patients demand quickness in the hospitals industry to satisfy their expectations and wants. Those who can meet their obligations will win, while those who cannot will be passed over (Anwar, 2016). Many academics and researchers have been debating the question of contentment recently. At this time, the healthcare industry is paying close attention to the happiness of its patients. As a result of the visitors' displeasure, the hospitals's image may suffer, resulting in a lack of recommendations from previous and present patients to others, and they may choose to stay somewhere else. If clients leave the hospitals without being satisfied, all

of the hospitals's efforts to improve service quality will be for naught. Fulfilling patients' demands is still the most difficult task nowadays (Abdullah et al. 2017).

### **Service Quality**

One of the most important aspects of service quality is the quality-control procedure. As a result, organizations that supply services do not have products, but they do have interactive processes. Because services are intangible, evaluating and measuring them can be difficult for organizations (Anwar & Balcioglu,2016). Various academic experts have created a number of major service quality definitions. Service quality, according to (Hameed & Anwar, 2018), is the difference between patients' expectations of the service provider and their judgment of the services. Service quality, according to (Park, 2019), is defined as a disparity between patients' expectations for service execution before to the service encounter and their observations of the rendered services. Service quality is described by Anwar & Ghafoor, (2017) as a specific assessment and consideration made by visitors between expected service quality and actually given services. Because of the numerous definitions developed by many researchers, quality is a little more difficult to identify than visitors' happiness and enjoyment. Because quality is determined by the patients's observation and judgement, quality is defined as anything the patients considers to be of high quality (Aziz et al. 2021). Expectations and quality standards, according to (Said et al. 2018), are two major elements that influence patients' perceptions. The term "expectations" refers to what the pupils should expect from the service provider. Because providing services in the healthcare industry frequently puts people at risk, it should place a premium on administrative personnel, particularly collaboration among administrators, visitors, and service providers (Hameed & Anwar, 2018).

### **Service Quality Dimensions**

Currently, practically all service providers consider service quality to be an important factor to consider; through the explanation of numerous definitions of service quality, it can be seen that there is a positive and significant relationship between service providers and visitor satisfaction (Anwar & Balcioglu,2016). Many previous studies have been conducted in order to uncover aspects of service quality that are most essentially involved in fundamental quality appraisals in the service environment. Because it will help to analyze, monitor, and then enhance the service quality of patients, service quality is essential (Abdullah et al. 2017). According to Parasuraman et al., (1985), eight service quality dimensions were devised, all of which were determined by). These dimensions correspond to a service quality field from which these

SERVQUAL model components were obtained (Anwar, 2016). After further refinement, the above-mentioned dimensions were revised, and five dimensions (three original and two combined) were developed by Parasuraman, et al., (1988) to evaluate service quality (Anwar, 2017): (1) Tangibles, (2) Reliability, (3) Responsiveness, (4) Assurance, and (5) Empathy:

**Tangible dimension** is defined “as the physical appearance, equipment, personnel, and communication materials” Physical appearance is the appearance of the personnel, exterior of the equipment, the look of building and renovation (Kangogo, et al., 2013). Tangibles dimensions refer to physical version of image of the services that students, will utilize to evaluate the quality.

**Reliability dimension** depicts whether education sectors follow confirmed promises and how precious it is in the implementation process. Reliability dimension reflects the education sectors’ capability to execute service accurately and dependably”. It compromises “doing it right the first time” and as for the students it is one of the most significant dimension Berry and Parasuraman, (1991) as cited in (Top & Ali, 2021). Furthermore, reliability demonstrates that the education sectors convey on its guarantees regarding the attendance, examinations, pricing policies, and provided service. Students prefer to join a university that keep their guarantees concerning the service outcomes (Anwar & Shukur, 2015).

**Responsiveness dimension** –“being willing to help” -refers to the university’s readiness of prompt service. It is significant to respond to all patients needs and expectation, otherwise the patients demand and needs will become a complaint towards the university’s service quality. University’s ability to confirm that they are providing with a service on time is a basic part of service quality for major students.

**Assurance dimension** is conveyed to students by the duration of time they require to wait for the response of their inquiries. Standards for promptness that indicates requirements in the university’s internal policy might be dissimilar to what the students require or expect. Assurance refers “the knowledge and courtesy of employees and their ability to inspire trust and confidence”. This dimension is especially critical for services that patients see as high hazard or for the services where the outcome seems uncertain for the students. Assurance and empathy comprise originally developed seven dimensions, which are communication, security, credibility, competence, understanding/knowing students, courtesy, and access (Lim et al. 2018).

The healthcare industry faces with different difficulties than organizations which produce products due to the dissimilar

nature of service in comparison with a product. In service industry there is a greater probability to fail, rather than in product sales. For instance, if a guest purchases a demolished mobile phone, it can be replaced, but if an employee of the hospitals didn't provide with a proper service, the consequences might be definitive. Therefore, services don't have replaceable factor, in the same way as the majority of the items that don't fulfill patients' needs. According to (Sorguli et al. 2021), there are following key characteristics of services "intangibility, inseparability, variability or heterogeneity and perishability".

### **Intangibility**

Opposite to tangible goods, patients can't actually see or test the service before they consume it. The purchaser is not able to see the features of the service product; he or she consumes it (Anwar & Abd Zebari, 2015). This is one of the biggest problems to the healthcare industry, in light of the fact that they should prove that the service they are offering is worth to be purchased. Accommodation in a hospitals can't assess ahead of time, but a guest already has some programmed desires on which the gratification level is actually based on (Talim, et al. 2021).

### **Inseparability**

Inseparability occurs when production and consumption of the service is happening at the same time, while tangible products following already tasted road from manufacture, through storage to the final purchase. For example in hospitals, a buyer ought to be available during the actual service, he should be in the room in order to get his or her service; it is impossible to pack a room and other hospitals facilities and send to the patients, in service industries, the patients have to be present in the place, in order to receive a service (Anwar & Surarchith, 2015).

### **Variability or heterogeneity**

This means is that there cannot be two different hospitals, providing similar services. The quality of service can be a differently provided by the same employee, working in a different company. It is obvious, that even identical products can be different from each other. The variability is very common among services (Anwar & Shukur, 2015).

### **Perishability**

Perishability means that "services cannot be saved, stored, resold or returned" (Anwar, 2017). It is a big disadvantage, that when the demand is high, hospitals cannot sell more rooms, than they have in their inventory. And same they cannot keep rooms to sell them tomorrow, because tomorrow is another day and another let's say 200 rooms according to the budget should be sold. Service quality has been the point of impressive concern via specialists lately. By taking a look at different meanings of service quality it

can be seen that it is an aftereffect of the correlation which clients makes between their desires and what they really get from the related service supplier (Anwar, 2016).

Various studies have been carried out in order to reveal dimensions of service quality that most essentially contribute to fundamental quality appraisals in the service encirclement. Distinguishing proof of the determinants of service quality is crucial in light of the fact that it will help to measure, to control and afterward enhance client's apparent service quality. There are ten service quality dimensions, which were determined by Parasuraman et al. (1985). These dimensions fit as a service quality field from which these items were obtain for the SERVQUAL model (Parasuraman, et al., 1985). The dimensions are as follow:

Reliability is a companies' ability to perform assured service and honor its promises. It signifies that the service supplier provides service right the first time;

Responsiveness refer to willingness of employees to assist patients and provide prompt service;

Competence involve employees' knowledge and measure of required skills;

Access is a scope to which employees are approachable;

Courtesy includes employees' relation towards the patients (notably, respect, politeness, friendliness);

Communication means proper delivery of the information to the patients;

Credibility involves honesty and trust of the service supplier;

Security means providing freedom from danger or doubt;

Understanding/Knowledge means to apply an effort to understand the guest's needs (for example to learn guest's specific requirements);

Tangible includes physical appearance.

Later, after refinement, above mentioned dimensions were revised and five dimensions (three original and two combined) (Parasuraman, et al., 1988) were developed in order to evaluate service quality:

- Tangibles
- Reliability
- Responsiveness
- Assurance
- Empathy

*Tangibles* are defined "as the appearance of physical facilities, equipment, personnel, and communication materials" (Sabir et al. 2021), Physical appearance is the

appearance of the equipment, appearance of the personnel, the look of building and renovation. Tangibility refers to the cleanness of the rooms, restaurants and other areas, the clean and proper uniform, used by the employees, usage of disposable gloves and etc. (Parasuraman, et al., 1988). Tangibles, amongst all other five dimensions, think over the most significant element for the guest. It give physical representation of pictures of the services that clients, especially new clients, will use to assess the quality. In spite of the fact that tangibles are frequently utilized by service providers to reinforce their reputation, give congruity, and sign quality to client, most organizations unite together tangibles with other in order to establish a service quality technique for the company (Abdullah et al. 2017).

*Reliability* depicts whether a service supplier follows assured promises and how precious it is in the actions. The significant importance lies in fulfilling promptly the patients's requests (Anwar & Balcioglu,2016). According to (Parasuraman, et al., 1988) reliability "reflects the service provider's ability to perform service dependably and accurately". It includes "doing it right the first time" and as for the patients it is one of the most significant dimension (Berry and Parasuraman, 1991 as cited in (Hameed & Anwar, 2018). In detail, reliability implies that the organization conveys on its guarantees - guarantees about conveyance, service supply, issue determination and pricing policy.

*Responsiveness* – "being willing to help" - refers to the organization's readiness to settle happened issues and availability to provide fast service (Parasuraman, et al., 1988). It is important to respond to all patients requests, otherwise the request can turn into a complaint. Service suppliers' capability to ensure that they are providing with a service on time is a basic part of service quality for major patients. This dimension underscores mindfulness and immediacy in managing patients's' appeals, questions, complaints and other issues (Anwar & Ghafoor, 2017). Responsiveness is conveyed to clients by the length of time they need to wait for the reply for inquiries. Responsiveness likewise catches the idea of adaptability and capability to redo the service to client needs. Standards for promptness that indicates requirements in the internal policy of the company might be dissimilar to what the patients require or expect. Front-line staffs, in hospitals they are receptions, waitress, hostess, guest relation, have to be very well trained as well as should be responsive towards patients (Anwar & Balcioglu,2016).

*Assurance* indicates "the knowledge and courtesy of employees and their ability to inspire trust and confidence" (Anwar, 2016). It is important for the hospitals to prove that it's trustable and worth the money, the patients is paying.

The guest should feel safe when he or she consumes different services from a hospitals and would like to feel secure during his stay (Anwar, 2017). Also based on the study of (Anwar & Shukur, 2015), patients should feel safe in all financial transactions, therefore employees should be trustworthy. This dimension is especially critical for services that patients see as high hazard or for the services where the outcome seems uncertain for the patients.

*Empathy* depicts proper communication skills and job knowledge while offering related services. It is ability to good communication, patients understanding and individualized attention given to a guest by the employee, as has been discussed in the study of (Anwar & Surarchith, 2015). The entity of empathy is imparting through customized service that shows that clients are unique and uncommon and that their need are caught on. It is very important to the hospitals's guest to feel that their needs are understood by the hospitals. They appreciate when a front-line staff calls them by name, this in turn build up relationship between patients and an employee.

Assurance and empathy comprise originally developed seven dimensions, which are communication, security, credibility, competence, understanding/knowing patients, courtesy, and access (Anwar & Abd Zebari, 2015).

Above mentioned dimensions depict how patients sort out data about service quality in their opinions. Sometimes clients will utilize each of the five dimensions to focus on service quality recognitions, but sometimes they will use just part of them.

### **GAP Analysis**

Service quality is the differences between expected and perceived performance. It is easier to measure the quality of goods, due to their tangibility, notably defects can be seen on the product. But service quality is intangible and evasive; hence it is difficult to measure it (Parasuraman, et al., 1985). Ten service quality dimensions were developed by Parasuraman (1985), and based on these discoveries they have created a service quality model which eventually focused around GAP dissection. The model is illustrated in Figure-2- The GAP has been recognized in the quality literature for some time. "GAP refers to the differences between desired levels of performance and actual levels of performance" (Anwar & Ghafoor, 2017). "In services this is the difference between the expected and the actual level of service provided" (Juan, et al., 2017). Gaps are significant in the following aspects; once a gap is distinguished, corrective actions and process improvement should take place. The process in identifying and correcting these gaps is called gap analysis.

*GAP 1:* The Knowledge of GAP is the dissimilarity between guest's expectation and perceptions of

management of these expectations (Lack of knowledge of patients' expectations).

When this GAP is large, service providers are likely producing excellent service that nobody wants (Hameed & Anwar, 2018).



Fig.2: GAP 1- Adopted from (Parasuraman, et al., 1985).

In order to truly improve patients service the clear understanding of patients wants should be identified. The SERVQUAL instrument can be used in order to help in this understanding.

**GAP 2:** The Standards GAP is the dissimilarity among what company's management perceives and service quality specifications (Improper standards of service quality) (Anwar & Balcioglu, 2016).

GAP model is one of the most useful contributions to service literature. Gaps in communication and understanding between workers and patients have an earnest negative effect on the impression of service quality, due to service being intangible (Hamza et al. 2021). All above mentioned GAPS demonstrate dissimilarity between perceptions that can have a harmful consequence on service quality. GAP 1, GAP 2, GAP 3, GAP 4 operates as a path in which service will be provided, while GAP 5 belongs to the guest. Later, The GAP 5 is the GAP that the SERVQUAL instrument influence.

### SERVQUAL and SERVPERF Models

There have been several endeavors, which were made by different researchers, to identify variables that measure service quality, amid which the most used is SERVQUAL and SERVPERF (Ismael et al. 2021). An important SERVQUAL tool was developed by Zeithaml, Parasuraman and Berry in the mid-1980s, in order to evaluate quality in the service industry and developed from the GAP model. These researchers developed this survey instrument for accessing quality along the five service quality dimensions.

The SERVQUAL questionnaires have been used by different companies and it is a ready-made approach that is appropriate to be used in various service situations. SERVQUAL signify service quality as dissimilarity between the expected services by a patients and guest's perception of the received services (Abdullah et al. 2017). This model evaluates the GAP between guest's expectations

and what the patients got in the reality. The SERVQUAL tool reside the most entire endeavor to hypothesize and evaluate service quality. Anwar & Ghafoor, (2017) has stated that this model is more applicable while it's utilized with other related services quality models.

The SERVQUAL scale is a primary tool in service marketing literature for accessing quality. This tool has been extensively utilized by researchers and industry leaders in order to access guest appreciation of service quality for a discrepancy of services (Anwar, 2017). According to Parasuraman et al., (1988) firstly developed SERVQUAL model included two parts that aimed to evaluate:

- Patients' expectations for different characteristics of service quality;
- Patients' perceptions of the rendered services (Jamal et al. 2021). In brief, the SERVQUAL tool is based on GAP theory which has been unfolded by Parasuraman et al. (1985).

Talking about SERVPERF according to Anwar & Abd Zebari, (2015), it is the performance element of the service quality scale, which is measures in the same way as SERVQUAL, using five service quality dimensions: "Tangibles, Reliability, Responsiveness, Assurance and Empathy" (Parasuraman, et al., 1988). They were among the scientists who leveled maximum attack on SERVQUAL model (Anwar & Surarchith, 2015). It has been mentioned that to measure service quality the evaluation of perceived performance was enough and no need to evaluate the expectations. Cronin & Taylor (1992) assert that SERVPERF has greater hypothesis power and it measures exhibit convergent and distinct lawfulness. Questions that make up the SERVPERF scale could cover most of the wide domain of service quality (Anwar & Shukur, 2015).

Nowadays a competitive advantage can be earned by the organization by enhancing the service quality. Conceptual

models in service quality empower management to identify problems related to quality. The prevention of occurred problems empowers the probability of improving company's profit, efficiency and general performance (Demir et al. 2020).

### III. METHODOLOGY

The purpose of this research is to determine service quality perceptions of patients and investigate the impact of service quality on service patients' satisfaction in hospitals in Erbil. A quantitative method used in order to analyse data gathered by the researcher. The survey has been distributed to and collected from hospitals patients by the reception Manager.

#### Design of the Study

The researcher used questionnaire in order to be able to analyse the current study. The questionnaire was divided into two sections, the first section consisted of demographic questions; starting with respondent's gender, marital status, level of education, visit per year and the travel purpose. The second part of questionnaire was regarding five service quality dimensions as independent factors and guest satisfaction as dependent factor

#### Instrumentation

As it has been mentioned earlier that there are several methods to measure service quality, but there are two which are considered as a main and which were used the most: SERVQUAL and SERVSERF. Both of the models measure five dimensions, namely: tangibles, reliability, responsiveness, empathy, and assurance. However, the former model helps to measure patients' expectation and service quality perception, whereas the latter, measure service quality perception only. Different researchers proposing various ideas regarding both methods, as there are many uncertainty in using both expectation and perception measurements, and a continued support enhanced by Cronin & Taylor (1992), SERVPERF method has been chosen for the present study. The questionnaire structured in the form of multiple choice questions were designed by the researcher. The participants were asked to mark each item on five point scales ranging from definitely agree to do not agree at all. This research instruments were validated by earlier researchers to be appropriate for measuring perceived performance of the hospitals that patients stayed in (Mey Pei, et al., 2006).

#### Sample Size

The sampling technique will be random sampling method, where almost all patients in hospitals in Erbil

will have equal chances of being selected for the sample. The researcher gathered 125 questionnaires but 14 questionnaires were invalid and 111 questionnaires were properly completed.

### IV. FINDINGS

Data were collected with a questionnaire and has been analyzed. According to the respondents' profile, descriptive statistics of frequencies and percentages were calculated and analyzed. Besides that, mean and standard deviation for each question has been calculated. Additionally regression and correlation analysis were carried out.

Table 1-Demographic Analysis

Items	Scales	Frequency	Percent
Gender	Male	71	64.0
	Female	40	36.0
Age	20–25	2	1.8
	26–30	3	2.7
	31–35	6	5.4
	36–40	24	21.6
	41–45	42	37.8
	46 and above	34	30.6
Marital status	Married	52	46.8
	Single	47	42.3
	Divorced	12	10.8
Educational background	High School	12	10.8
	Diploma	2	1.8
	Bachelor	18	16.2
	Master	47	42.3
	PhD	23	20.7
	Other	15	13.5

Table 1 illustrates participants' gender in this study. According to statistical results 71 participants were male and 40 participants were female. This indicates that majority of the responders from the hospitals patients were male. As for participants' age which have been involved in this study: 2 participants fall under group of age 20-25 years old, 3 participants fall under group of 26-30 years old, 6 participants fall under group of 31-35 years old, 24 participants fall under group of 36-40 years

old, 42 participants fall under group of 41-45 years old and 34 participants fall under group of 46 years old and above. This indicates that majority of participants fall under group of 41-45 years old which means that most of participants were mature and reliable to fulfill the questionnaire. As for participants' marital status: 52 participants were married, 47 participants were single and 12 participants were divorced. As for participants' level of education: 2 participants had obtained high school, 18 participants had obtained diploma, 47 participants had obtain bachelor degree, 23 participants had obtained master degree, 15 participants had obtained PhD degree and 6 participants responded as other level of education. As for the rate of visitors to hospitals per year: 14 participants rated as 1-2 times per year, 16 participants rated as 3-4 times per year, 40 participants rated as 5-6 times per year, 34 participants rated as 7-8 times per year and 7 participants rated as more than 8 times per year. This indicates that the hospitals has approximately 81 regular patients per year. As for the purpose of hospitals patients: 95 participants' purpose were business travel and 16 participants' purpose were leisure reason. This means that the majority of participants (patients) purpose was business travel.

Table 2-Reliability analysis

Variables	Cronbach's Alpha	N of items
Tangible	.747	8
Reliability	.839	7
Responsiveness	.807	9
Assurance	.730	8
Empathy	.799	8

As seen in table 2, the reliability analysis for five independent factors and a dependent factor; however it was found that the value of Alpha for tangible as service quality dimension = .747 which is more than .6, the result revealed that tangible dimension is reliable to measure guest satisfaction in Hospitals, the value of Alpha for reliability as service quality dimension = .839 which is more than .6, the result revealed that reliability dimension is reliable to measure guest satisfaction in Hospitals, the value of Alpha for responsiveness as service quality dimension = .807 which is more than .6, the result revealed that responsiveness dimension is reliable to measure guest satisfaction in Hospitals, the value of Alpha for assurance as service quality dimension = .730 which is more than .6, the result revealed that assurance dimension is reliable to measure guest satisfaction in Hospitals and the value of Alpha for empathy as service quality dimension = .799 which is more than .6, the result revealed that empathy dimension is reliable to measure guest satisfaction in Hospitals.

Table 3-Correlations Analysis

Variables	Pearson correlation	Tangible	Reliability	Responsiveness	Assurance	Empathy	satisfaction
Tangible	Pearson correlation	1					
	Sig. (2- tailed)						
	N	111					
Reliability	Pearson correlation	.662**	1				
	Sig. (2- tailed)	.000					
	N	111	111				
Responsiveness	Pearson correlation	.954**	.613**	1			
	Sig. (2- tailed)	.000	.000				
	N	111	111	111			



<b>Assurance</b>	Pearson correlation	.965**	.670**	.890**	1		
	Sig. (2- tailed)	.000	.000	.000			
	N	111	111	111			
<b>Empathy</b>	Pearson correlation	.563**	.918**	.590**	.527**	1	
	Sig. (2- tailed)	.000	.000	.000	.000		
	N	111	111	111	111	111	
<b>Patients' satisfaction</b>	Pearson correlation	.915**	.769**	.938**	.885**	.764**	1
	Sig. (2- tailed)	.000	.000	.000	.000	.000	
	N	111	111	111	111	111	111

\*\* . Correlation is significant at the 0.01 level (2-tailed).

As it was found the correlation analysis between each independent factor and dependent factor ( as seen in table 3). The results revealed that the Pearson correlation between guest satisfaction and tangible dimension of service quality = .915\*\* , as it can be concluded that there is a positive and strong relationship between guest satisfaction as dependent factor and tangible dimension as independent factor, since the value = .915\*\* is higher than 0.01, the Pearson correlation between guest satisfaction and reliability dimension of service quality = .769\*\* , as it can be concluded that there is a positive and strong relationship between guest satisfaction as dependent factor and reliability dimension as independent factor, since the value = .769\*\* is higher than 0.01, the Pearson correlation between guest satisfaction and responsiveness dimension of service quality = .938\*\* , as it can be concluded that there

is a positive and strong relationship between guest satisfaction as dependent factor and responsiveness dimension as independent factor, since the value = .938\*\* is higher than 0.01, the Pearson correlation between guest satisfaction and assurance dimension of service quality = .885\*\* , as it can be concluded that there is a positive and strong relationship between guest satisfaction as dependent factor and assurance dimension as independent factor, since the value = .885\*\* is higher than 0.01, and the Pearson correlation between guest satisfaction and empathy dimension of service quality = .764\*\* , as it can be concluded that there is a positive and strong relationship between guest satisfaction as dependent factor and empathy dimension as independent factor, since the value = .764\*\* is higher than 0.01.

Table 4-Multiple Regression Analysis

		<b>Coefficients</b>				
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.380	.110		3.458	.000
	Tangible	.529	.056	.502	9.455	.000
	Reliability	.426	.052	.370	8.208	.000
	Responsiveness	.548	.034	.573	6.028	.000
	Assurance	.375	.029	.475	2.922	.000
	Empathy	.385	.023	.468	6.449	.000
R Square						.964
F						2728.138

a. Dependent Variable: Guest Satisfaction

The researcher implemented multiple regression analysis to measure patients' satisfaction based on each service quality dimensions. According to the conceptual framework and five research hypotheses which developed by the author, the multiple regression analysis was applied to measure each research hypothesis. The findings revealed that; as for tangible dimension it was found that there is a positive and significant relationship between tangible as service quality dimension and patients' satisfaction, as it can be seen that the value of B for tangible dimension is .529 which is higher than .005 with P-value =.000 this indicates that the first research hypothesis is supported, as for reliability dimension it was found that there is a positive and significant relationship between reliability as service quality dimension and patients' satisfaction, as it can be seen that the value of B for reliability dimension is .426 which is higher than .005 with P-value =.000 this indicates that the second research hypothesis is supported, as for responsiveness dimension it was found that there is a positive and significant relationship between responsiveness as service quality dimension and patients' satisfaction, as it can be seen that the value of B for responsiveness dimension is .548 which is higher than .005 with P-value =.000 this indicates that the third research hypothesis is supported, as for assurance dimension it was found that there is a positive and significant relationship between assurance as service quality dimension and patients' satisfaction, as it can be seen that the value of B for assurance dimension is .375 which is higher than .005 with P-value =.000 this indicates that the fourth research hypothesis is supported and as for empathy dimension it was found that there is a positive and significant relationship between empathy as service quality dimension and patients' satisfaction, as it can be seen that the value of B for empathy dimension is .385 which is higher than .005 with P-value =.000 this indicates that the fifth research hypothesis is supported. The value of R square = .802 this indicates that 80% of total variance has been explained, moreover, the F value for independent variables =90.296, since (90.296>1) this indicates there is a significant relation with service quality dimensions and patients satisfaction.

## V. CONCLUSION

In today's competitive environment, service sectors have been developing rapidly, at the same time as patients' high quality service demand service is increasing. In order to hospitals be able to compete in such competitive business environment, it requires to assess patients' perception and expectations towards provided service. The research

objective was to investigate the relationship between service quality dimensions with patients satisfaction in hospitals in Erbil. In this study, the researcher adopted the SERVQUAL instrument (Parasuraman, 1985), to prepare a survey by utilizing five service dimensions. The survey designed to find out the level of patients' perception and expectation towards the hospitals' service quality. The findings showed that the responsive as service dimension had the highest value; on the other hand assurance as service dimension had the lowest value.

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