

An assessment of service quality and patient satisfaction in healthcare services using SERVQUAL model

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ABSTRACT

Healthcare service quality and patient satisfaction are very fundamental concepts that need attention in healthcare services operations. Service quality is considered very beneficial because it leads to higher patient satisfaction, profitability, cost reduction, patient loyalty and retention. The present study attempts to investigate the concept of service quality in healthcare settings in Saudi Arabian context. This study considers the definition of service quality from healthcare services for a better insight on how expatriate patients rate the quality of healthcare. A structured questionnaire survey was done using the SERVQUAL instrument to identify improvement areas and factors that drive referral rates using appropriate statistical tools. The key findings enable to search out how patients weigh up service quality in healthcare services and find out the dimensions of service quality they are pleased with.

Keywords: SERVQUAL, Service Quality, Patient Satisfaction, Healthcare Services, Expectations, Perceptions.

1. INTRODUCTION

Health is a situation of physical, mental and social well-being. Good health allows people to enjoy life and have the chance to acquire their goals. To achieve and maintain good health, people should get proper and well-maintained healthcare services. Kingdom of Saudi Arabia is the largest among Middle East countries, with a population of nearly 28 million including 5.8 million expatriates. The population is projected to reach 37 million by the year 2025. The healthcare system in Saudi Arabia is presently being transformed from a publicly financed and managed welfare system to a market-oriented, insurance-driven system.

Organization of the paper: The paper is presented in six major sections. Section one offers a brief introduction to the study. Section two gives a statement of the problem and objectives. Section three presents a literature review on closely related research work of healthcare service quality and patient satisfaction. Section four and five provide the methodology, discussion and results. Section six outlines the conclusions. A summary of the findings, limitations and future research are mentioned in this section.

Statement of the problem and objectives: As the healthcare industry shifts towards managed competition and a modern era of healthcare, information for positioning an entire organization to meet patient requirements effectively will become growingly essential. These customers are mainly patients, but also include medical practitioners, staffs and other stakeholders in the managed care setting. In this new healthcare environment, positioning based on the areas such as financial performance, medical outcome and perceived service quality are critical.

Objectives of the study:

- To analyze the healthcare service quality in healthcare services in Saudi Arabian context, as reflected in patients' perceptions.
- To investigate the relationship between patients' perceptiveness of healthcare quality and satisfaction.
- To know the effectiveness of SERVQUAL in assessing the service quality in healthcare services.
- To make an assessment of the important service quality factors, how well the patients perceive them and the impact of them on the patients in the healthcare organizations.

Measurement of service quality and quality models: The fast development and challenges of healthcare quality, in both developed and developing countries, has made it vital for healthcare organizations to estimate and assess the quality of service management. Various conceptual models have been established by different researchers for evaluating healthcare quality. It is envisioned that conceptual models in service quality empower management to diagnose quality problems and thus help in proposing for the launch of a quality enhancement program, thereby increasing the efficiency, profitability and net performance. There are several models which try to represent and explain "service quality". They each have their strengths and weaknesses.

Different Service Quality Models are:

- **RATER:** What are the fundamental criteria that customers used to assess service quality?
- **GAP Model:** What are the corporate processes required in managing and altering the perception gap and what strategic transformations must an organization make to strengthen service quality?
- **Kano Model:** What do customers demand as a minimal standard, what really makes a difference if you do it finer?
- **Gronroos' Perceived Service Quality Model:** What indeed generates expectations and perceptions?
- **Macklin, Vepsalainen and Gale Model:** How do perceptions modify with time?
- **SERVQUAL Model:** How can an organization measure out service quality?

Patient Satisfaction: Patient satisfaction is an essential part of the quality of results of medical treatment in hospital; such satisfaction can be compared with the standardized multi-dimensional questionnaire which takes into account all applicable segments of a hospital. Reliable patient satisfaction measures are influential since they complement “objective” outcome measures and may focus on areas in need of analysis and improvement. Patient satisfaction magnifies hospital image, which in turn renders into increased service use and market share. Measuring the degree of patient satisfaction can help accelerate hospital service provision and management, as well as strengthen and maintain the quality of the service provision. According to Friesner, 2009, satisfaction measurement is important for three basic reasons:-

1. High levels of patient satisfaction with healthcare services cut down the cost associated with new client acquisition;
2. Satisfied patients are more smoothly retained and the value of an existing client usually increases with tenure. As a result, patient satisfaction is an exciting indicator of future financial performance;
3. The quality of customer care can only be enriched when care providers are familiar with how well they function on key patient criteria.

Healthcare service quality and SERVQUAL Scale: Evaluating healthcare quality is necessary for consumers, healthcare providers and society. An extensive service quality measurement scale (SERVQUAL) is experimentally estimated for its potential usefulness in a hospital service context. During the past two decades, service quality has become a notable area of observation to practitioners, managers and researchers because of its powerful impact on business performance, diminished costs and a return of investment, customer satisfaction, customer loyalty and acquiring higher profit. SERVQUAL highlights the major quality demands of delivered service in five proportions namely RATER.

They are: **Reliability, Assurance, Tangibles,**

Empathy and Responsiveness: The SERVQUAL approach contains a questionnaire that computes service quality by calculating the difference (gap) between customer expectations and perceptions; $SERVQUAL = P - E$; where P denotes perceptions and E denotes expectations of the service. $Weighted\ SERVQUAL = importance \times (Perceptions - Expectations)$.

Functioning of the SERVQUAL: SERVQUAL illustrates service quality as the discrepancy between customers' expectations for a service offering and the customers' perceptions of the service obtained, involving respondents to respond to questions about both their expectations and perceptions (Parasuraman, 1988). The expectations of customers are wide open to external factors which are under the influence of the service provider. The gap indicates the difference between customers' expectations and their perceptions which are described as the perceived service quality (Kumar, 2009).

Interdependence of service quality and patient satisfaction: According to Suresh Chander, 2002, consumer satisfaction should be seen as a multidimensional construct just as service quality meaning it can exist at multi levels in an organization and that it should be operationalized along the same elements on which service quality is operationalized. The customer's total recognition of a service is based on his/her awareness of the outcome and the process; the outcome is either value added or quality and the process is the role undertaken by the customer (Edvardsson, 1998). Parasuraman, 1985 conveyed that when perceived service quality is high, then it will lead to intensifying in customer satisfaction. According to Negi, 2009, the concept of thinking service quality and customer satisfaction has prevailed for a long time. Fen & Lian, 2005 found that both service quality and customer satisfaction have an affirmative effect on customer's re-patronage intents showing that both service quality and customer satisfaction have a crucial role to play in the success and survival of any business in the aggressive market. Also, they pointed out that service quality is more synopsized than customer satisfaction because consumer satisfaction reflects the customer's feelings about many encounters and experiences with service firm while service quality may be governed by perceptions of value or by the experiences of others that may not be as dependable. A key to the implementation of total quality management in healthcare will be the ability to correlate patient satisfaction to clinical outcomes and monetary functions. As the healthcare industry proceeds toward managed competition and a new structure of healthcare, information for aligning an entire organization combining awareness of financial performance with perceived service quality and clinical outcomes develops the wisdom needed to become a world-class quality, low-cost healthcare provider (Furse, 1994).

2. METHOD AND STUDY DESIGN

The study was conducted as a descriptive research. The SERVQUAL model was used as the principal guide for our structured questionnaire where data was collected precisely on the patients' expectations and perceptions of service quality. This guide contributed enlightenment on the following research purposes; to test the applicability of the SERVQUAL model in the healthcare setting and also to know how patients perceive service quality in healthcare sectors in Saudi Arabia and recognize which features bring satisfaction. In the questionnaire, SERVQUAL 5 dimensions (Tangibles, Reliability, Responsiveness, Assurance and Empathy) which are categorized into 16

statements to measure healthcare quality in healthcare centers of central Saudi Arabia. The rating was based on a 5-point Likert's scale, patients were ought to rate these items according to their individual meaning and the 16 statements in the questionnaire were weighted and the net weighted average is calculated. The scale ranged from strongly disagree to strongly agree. Simple statistical tools were employed for analysis.

Consolidated Survey results are shown in Tables.

Table.1.Demographic characteristics of respondents

Characteristics	Count	Percentage (%)	
Gender	Male	14	28
	Female	36	72
Level of education	Masters	9	18
	Bachelors	29	58
	Others	12	24
Healthcare spending (Monthly)	0-200	34	68
	200 - 500	4	8
	500 - 1000	12	24
	> 1000	0	0

Table.2.Expectations on Service Quality. (Strongly disagree. Strongly agree)

Healthcare quality dimensions	1	2	3	4	5	Total	Total score	Weighted average
Their physical facilities should be visually appealing.(TA1)	6	14	25	3	2	50	131	2.62
The physical environment of the healthcare sector should be clean.(TA2)	0	0	12	18	20	50	208	4.16
Hospitals should have modern equipment.(TA3)	16	12	11	6	5	50	122	2.44
Seating facilities and other amenities should be good in appearance.(TA4)	12	15	10	5	8	50	132	2.64
Hospital medical records system should keep records safely.(RL1)	0	5	28	12	5	50	167	3.34
They should keep an eye on the quality and accuracy of the reports delivered.(RL2)	0	7	5	21	17	50	198	3.96
Medical and paramedical diagnosis should be of great standard and affordable.(RL3)	0	12	11	15	12	50	177	3.54
The attitude of the front office should be friendly and service-oriented.(RS1)	0	7	23	14	6	50	169	3.38
Time management and waiting time should be manageable.(RS2)	0	5	7	21	17	50	200	4
Hospital grievance redress system should work promptly.RS3)	11	17	14	6	2	50	121	2.42
Staffs should make use of safety and security precautions cautiously.(RS4)	18	12	13	4	3	50	112	2.24
Staff attitude to patients should instill confidence in them.(AS1)	0	3	17	19	11	50	188	3.76
Staffs should have the knowledge to provide health information.(AS2)	0	6	21	11	12	50	179	3.58
Staffs' behavior to the patients should be polite and kind.(AS3)	7	12	21	6	4	50	138	2.76
Staffs should give individual attention to each patient.(EM1)	2	11	12	17	8	50	168	3.36
Staffs should involve and answer your queries related to health.(EM2)	7	8	10	16	9	50	162	3.24

Table.3.Perception on service quality

Healthcare quality dimensions	1	2	3	4	5	Total	Total score	Weighted average
Physical facilities are visually appealing.	1	6	26	10	7	50	166	3.32
Employees and the physical environment appear neat.	13	15	15	5	2	50	118	2.36
Hospitals have up-to-date equipment.	3	5	17	15	10	50	174	3.48
Hospitals provide good seating facilities and other amenities.	1	4	20	13	12	50	181	3.62
Hospital medical records system works efficiently.	2	7	14	19	8	50	174	3.48
They offer good quality and accuracy of the reports delivered.	5	17	22	4	2	50	131	2.62
Medical and paramedical diagnosis are always of a good standard and affordable.	10	24	7	5	4	50	119	2.38
The attitude of the front office is friendly and offer good service.	10	9	11	11	9	50	150	3
They maintain good time management and waiting time.	11	17	16	4	2	50	119	2.38
Hospital grievance redress system works so efficiently.	4	10	16	13	7	50	159	3.18
Staffs are always conscious of making use of safety and security precautions.	2	3	17	18	10	50	181	3.62
Staffs instill confidence in patients.	17	11	17	3	2	50	112	2.24
Staffs have the good knowledge to provide health information.	22	16	10	1	1	50	93	1.86
The behavior of the staffs to all patients are polite and kind.	18	19	10	1	2	50	100	2
Staffs give individual care and to each patient.	16	21	9	3	1	50	102	2.04
Staffs are involved and answer your queries related to health.	14	24	8	2	2	50	104	2.08

Table.4.Summary of patients' expectations, perceptions as well as gap scores

Dimensions	Statement	Expectations score	Perceptions score	Gap score	Average
Tangibles	TA 1	2.62	3.32	0.7	0.23
	TA 2	4.16	2.36	-1.8	
	TA 3	2.44	3.48	1.04	
	TA 4	2.64	3.62	0.98	
Reliability	RL 1	3.34	3.48	0.14	-0.79
	RL 2	3.96	2.62	-1.34	
	RL 3	3.54	2.38	-1.16	
Responsiveness	RS 1	3.38	3.00	-0.38	0.04
	RS 2	4.00	2.38	-1.62	
	RS 3	2.42	3.18	0.76	
	RS 4	2.24	3.62	1.38	
Assurance	AS 1	3.76	2.24	-1.52	-1.33
	AS 2	3.58	1.86	-1.72	
	AS 3	2.76	2.00	-0.76	
Empathy	EM 1	3.36	2.04	-1.32	-1.24
	EM 2	3.24	2.08	-1.16	

Net average gap score for 5 dimensions = -0.486

3. FINDINGS AND SUGGESTIONS

Expectations and perceptions were both evaluated using 5-point Likert's scale whereby the higher numbers reveal a higher level of expectation or perception. As a whole, patient expectation overreached the perceived level of service shown by the perception scores. This resulted in a negative gap score. According to Parasuraman, 1998, it is, however habitual for consumer's expectation to exceed the actual service perceived and this proclaims that there is always want for improvement. The gap scores measure healthcare service quality and consequently patient satisfaction. The better perceptions are close to expectations, the higher is the perceived level of quality.

4. CONCLUSIONS

To sum up, from results achieved it is seen that patients' perceived healthcare quality offered by two dimensions (Tangibles & Responsiveness) met their expectations (positive mean gaps), but the other three dimensions (Reliability, Assurance & Empathy) reported negative mean gaps which show that the perception of services is less than the expected level of service quality, which means healthcare sectors need to improve in these dimensions in order to close gaps that could induce to enhanced patient satisfaction.

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