

THE INFLUENCE OF SERVICE QUALITY ON CUSTOMER SATISFACTION: EVIDENCE FROM PUBLIC HOSPITALS

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ABSTRACT

This paper sought to assess and analyze customer satisfaction with service quality (Tangible, Reliability, Responsiveness, Assurance and Empathy), in the public hospitals in Jordan. Specifically, it examined the determinants of satisfaction and the effects of customer satisfaction in Jordan's public hospitals. The study was a cross-sectional survey that used self-administered structured questionnaire to the target population of customers of universities (Yarmouk University and Jordan University of Science and Technology, JUST) employees who they visit the two public hospitals (King Abdullah Hospital and Princess Basma Hospital) in Jordan. Out of the two hundred and forty- two questionnaire administered, 242 usable questionnaires were obtained constituting 93% for analysis. SPSS software package version 19.0 to test the descriptive analysis and reliability, and Structural Equation Modeling (SEM) which is Analysis

of Moment Structures (AMOS) version 19.0 to test the hypothesis. The study found that a total of the main hypotheses and five sub hypotheses were formulated and the results showed that all hypotheses are supported. Moreover, Service Quality, were found to have significant and positive impact on Customer Satisfaction. The implications of the study to management and theory are discussed and recommendations for future research have been made. The limitations of the study are also noted.

Keyword: Customer Satisfaction, Service Quality.

INTRODUCTION

An increasing interest in hospital services has been observed in recent years; the standards of living have changed, and a demand for better medical care should be addressed to improve lifestyles (Barry, Chacko, Lee, Steiner & Kutner, 2006). Improving the quality of medical care services has become a primary concern for patients, and service quality has become increasingly important for hospitals to satisfy and retain their patients and provide them with better service (Arasli, Ekiz, Haktan & Salih 2008). Meehan, Bergen, and Stedman (2002) highlighted the improvement of the existing health care system and the enhancement of service quality from understanding patient evaluation of the performance of hospital service quality that will subsequently increase the number of patients who continue to visit their hospitals (Arasli et al., 2008; Badri, Attia & Ustadi, 2008). In addition, patients who value the hospital food services are more likely to be loyal to the hospital (Kessler & Mylod, 2011). However, hospitals that fail to understand the importance of delivering quality service and patient satisfaction may be inviting a possible decline in patients (Thom, Hall & Pawlson, 2004).

Patient satisfaction regarding health care is a multidimensional concept that is currently becoming a crucial health care issue (Huckle, 2000).

Customer Satisfaction

Cardozo (1965) is the first scholar to use the term customer satisfaction and it has been a research focus for a number of years, especially in the area of consumer behavior and service marketing since it is considered one of the most important issues that affect the success of business organizations (Szymanski & Henard, (2001).

Customer satisfaction has been explained in a number of ways by authors and researchers. Many researchers termed customer satisfaction as a feedback to an evaluation process based on the disconfirmation of an expectations paradigm in which three deviations were identified: 1) positive disconfirmation, here the performance of service is more than customer expectation, 2) confirmation, where performance of service matches with customer expectation, and 3) negative disconfirmation, where the performance of service falls short of customer expectation. (Abu Musa, Rasmyieh & Amin, 2000).

definition of satisfaction would be the degree to which desired goals have been achieved (Knemeyer & Murphy, 2005). Satisfaction can be said as a positive response of individuals to a specific focus (consumer experience) that is determined at a particular time (Phillips & Baumgartner, 2002). Customer satisfaction reveals how well a company's offerings meet customer expectations. These expectations are measured by some criteria of the products or services offered by companies, and the global operating environment of the company.

Patients' satisfaction has been defined in literature in several ways. Gerelmaa, (2009) define a patient satisfaction as a different type of consumer attitude reflecting how much patients are satisfied with the health care service after experiencing it. Hall and Dornan, (1990) stated that satisfaction results when service meets consumer expectation. The researcher showed that the patient satisfaction is the main influencer of quality of care and a vital criterion of pay-for-performance metrics. Patient satisfaction is an attitude of all the emotional aspects, cognitive, previous experiences and expectations (Lim & Nelson, 2000).

Patient satisfaction is the substantial indicator in the health care delivery system. Patient satisfaction is used as performance of measurement by different hospitals, principally on the grounds such as adhering to treatment, recommendations and maintaining continuity of care. Different professionals influence patient satisfaction in hospitals. Health care practices are considered as the key factor in patient assessment of their satisfaction (Al-Adham, Majd, 2004).

Service Quality

Before discussing the concept of service quality, it is essential to understand the service idea and its characteristics. Over the years, researchers have defined service in various ways. In early times, the American Marketing Association (1960) defined service as "activities, benefits, or satisfactions which are offered for sale, or are provided for connection with the sale of goods". In addition, to make the definition more clearly, Arasli, Smadi and Katircioglu, (2005), offered a list of organizations and businesses that considered providing "service," such as hotel service, beauty shop service, amusements, hospitals, and transportation (Heskett, 2002).

Zeithaml and Bitner (2000) termed services as deeds, processes, and performances. The assumption behind this definition implies that services are not real objects that customers can touch, see, or smell (Pollack, 2008). Further, Qin and Prybutok, (2008) proposed that service possesses three important characteristics, which are intangibility, heterogeneity, and inseparability, and Zeithaml and Bitner (2000) added one more characteristic; perishability. These four service characteristics are considered to be an important factors which distinguish service from goods (Wang, Loi & Hui, 2003).

Various studies focused on the subject of quality of service "SERVQUAL" because of its importance in all institutions of society to measure customer satisfaction with the services delivered to them through the basic dimensions of service quality "SERVQUAL", such as, (reliability, responsiveness, assurance, empathy and tangibles).

Tangible

Tangibility means the physical environment in which the provider offer the service and the way and manner such services are delivered (Lee et al., 2000). Tangibles are the appearance of the physical entities, equipment and appearance of staff.

Reliability

Reliability is the skill to provide the promised service reliably and perfectly (Baltussen, Haddad & Sauerborn, 2002). The perception of quality in the context of patients' own experience becomes patient's reliability criteria (Choi et al, 2005), and enumerated the difference between perceived quality and actual quality and concluded that the actual makes it reliable rather the perceived.

Responsiveness

The concept of responsiveness relates to interpersonal relationship between the client and the service provider (Scotti, Harmon & Behson, 2007). Although no monetary value is attached is presence in a transaction in providing long term experience.

Assurance

In SERVQUAL model assurance has been defined as the knowledge and courtesy of workforce in relation to the interaction with client and their capacity to inspire trust and confidence (Parasuraman et al., 1988).

Empathy

Empathy means the "art of nursing" (Carter, 2007). While the science of nursing is vivid in modern health care arrangements in terms concern shown by the providers to the client's needs.

Research Hypotheses

H₁: There is a positive *significant* relationship between service quality and customer satisfaction in Jordanian public hospitals.

H_{1a} There is a positive significant relationship between Tangible and Customer Satisfaction in Jordanian public hospital.

H_{1b} There is a positive significant relationship between Reliability and Customer Satisfaction in Jordanian public hospital.

H_{1c} There is a positive significant relationship between Responsiveness and Customer Satisfaction in Jordanian public hospital.

H_{1d} There is a positive significant relationship between Assurance and Customer Satisfaction in Jordanian public hospital.

H_{1e} There is a positive significant relationship between Empathy and Customer Satisfaction in Jordanian public hospital.

Research Finding

Descriptive Analysis on the variables

260 sets of questionnaires were distributed and 242 questionnaires were received in usable form.

All variables were measure on a five (5) internal scale. As reflected in table:

Table 1.1 Descriptive Analysis

Variables	Mean	SD
Service Quality	3.5634	.71546
<i>Tangible</i>	3.6129	.71785
<i>Reliability</i>	3.5983	.80455
<i>Responsiveness</i>	3.5876	.76479
<i>Assurance</i>	3.4855	.75554
<i>Empathy</i>	3.5324	.73019

Correlation Analysis

Correlation analysis was carried to determine the relationship among variables studied. In correlation analysis, correlation coefficient (r) illustrates the level of association between variables. The Pearson correlation values represent the correlation coefficient.

Table 1.2 Relationship between Variable

	CS	SQ	Tang	Reliab	Respons	Assurance	Empathy
Customer Satisfaction	1						
Service Quality	.626**	1					

<i>Tangible</i>	.511**	.808**	1				
<i>Reliability</i>	.472**	.654**	.394**	1			
<i>Responsiveness</i>	.498**	.774**	.591**	.478**	1		
<i>Assurance</i>	.542**	.710**	.409**	.415**	.423**	1	
<i>Empathy</i>	.335**	.735**	.552**	.250**	.341**	.474**	1

There were also significant relationship between customer satisfaction and all service quality dimensions as follows:

Tangibility ($r=0.511$, $p<0.01$), reliability ($r=0.472$, $p<0.01$); responsiveness ($r=0.498$, $P<0.01$); assurance ($r=0.542$, $p<0.01$) and empathy ($r=0.335$, $p<0.01$).

Overall Model of Customer Satisfaction

The structural equation model shown in Figure 4.7 has been developed for exploring the relationships between service quality and customer satisfaction. The structural equation model added one exogenous variable (Customer Satisfaction), and endogenous variables (service quality with the dimensions). The model fit findings of first-order SEM model for Service Quality showed a sound model fit to the sample data. The criteria necessary for model fit have been adequately met with their comparative suggested thresholds. It was not mandatory to modify the model, as first-order confirmatory factor analysis model for Service Quality sufficiently met model fit criteria which were higher than satisfactory. Table 1.3 demonstrates the goodness of-fit findings of the structural equation model.

Table 1.3: Goodness-of-Fit Results of SEM Model for Customer Satisfaction

Goodness-of-Fit Indices	Value
Chi-square	585.079
Degree of Freedom ((df)	142
Normed Chi Square (X^2/df)	4.120
Goodness-of-Fit Index (GFI)	0.911
Comparative Fit Index (CFI)	0.911
Normed Fit Index (NFI)	0.894
Root Mean Square Error of Approximation (RMSEA)	0.070
Sig. (p)	0.001

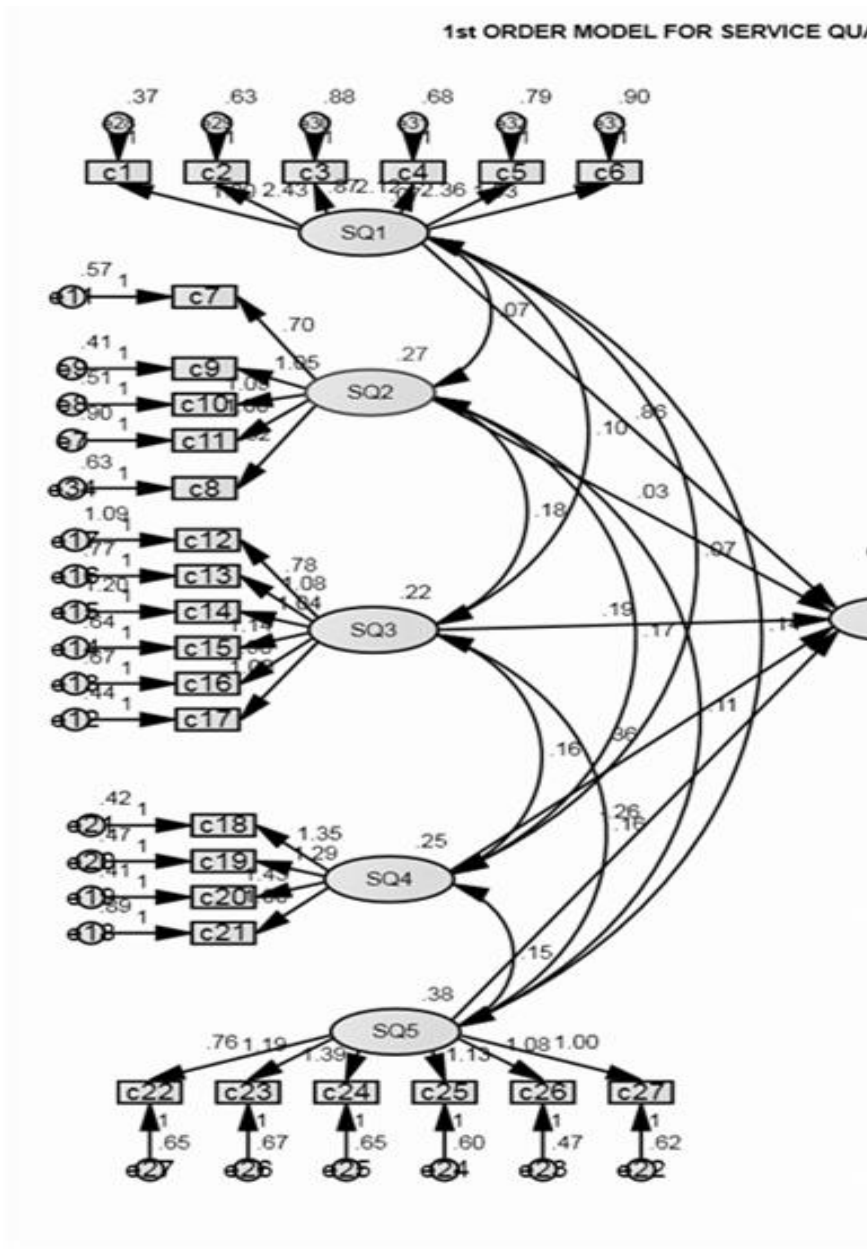


Table 1.4: Maximum Likelihood Estimate of the Variable

Hypothesis	Estimate	S.E.	C.R.	P	Assessment
Tangible (SQ1) ↔ CS	.863	.792	1.090	.006	Supported
Reliability (SQ2) ↔ CS	.031	.129	.238	.012	Supported
Responsiveness (SQ3) ↔ CS	.187	.379	.493	.022	Supported
Assurance (SQ4) ↔ CS	.364	.179	2.028	.043	Supported
Empathy (SQ5) ↔ CS	.264	.214	-1.237	.016	Supported

*Significant Regression co-efficient (p<0.01 and 0.05)

Maximum likelihood estimate to examine the relationship between the variable is shown in Table 4.10 It was found that all of the sub-variables of service quality were significantly estimate customer satisfaction. However, in some previous studies such as Hair et al., 2006; Patrick, 1997) hypotheses can be accepted and significant where $p < 0.01$ or $p < 0.05$. So on the basis of literature evidence, the hypothesized relationship between Tangible and customer satisfaction (SQ1) showed the highest significant estimate (0.863, $p < 0.01$), followed by assurance (0.364, $p < 0.05$), empathy (0.264, $p < 0.05$), responsiveness (0.187, $p < 0.05$) and reliability (0.031, $p < 0.05$). These results supported all the sub hypotheses for service quality.

Hypotheses Testing Result

Hypotheses were tested with the completely standardized parameter assessments and their accompanying t-values. Two- tailed test of significance has been applied to observe the significance of each path coefficient.

Hypothesized Relationship between Tangible and Customer Satisfaction (Hypothesis 1a)

The findings indicated a significant positive relationship between tangible and customer satisfaction (Estimate.863, $t = 1.090$, $p = .006 < 0.01$) and hypothesis 1a is supported. Consistent

with study by Watek and Ramez, (2012) that tangible is positively and significantly related to customer satisfaction. This finding agrees with other studies of tangibility (Jabnoun & Chaker, 2003). Previously, numerous studies have found tangibility to be a significant antecedent to their customer to increase the level of satisfaction. Thus, this result complemented past research and was supported.

Hypothesized Relationship between Reliability and Customer Satisfaction (Hypothesis 1b)

The findings indicated a significant positive relationship between Reliability and Customer Satisfaction (Estimate .031, $t = .238$, $p = .012 < 0.05$) and hypothesis 1b supported. This finding agrees with other studies of reliability (Wisniewski & Wisniewski, 2005). Previous studies found that reliability as a significant to the customer to increase the level of satisfaction (e.g., Mostafa, 2005). Thus, this result complemented past research and was supported.

Hypothesized Relationship between Responsiveness and Customer Satisfaction (Hypothesis 1c)

The findings indicated a significant positive relationship between Responsiveness and Customer Satisfaction (Estimate .187, $t = .493$, $p = .022 < 0.05$) thus hypothesis 1c supported. There exists significantly positive relationship between responsiveness and customer satisfaction (Hypothesis 3 asserted). This result is similar to previous studies (Baltussen, Haddad & Sauerborn, 2002) wherein a strategic role was found for responsiveness to be positively related to customer satisfaction.

Hypothesized Relationship between Assurance and Customer Satisfaction (Hypothesis 1d)

The findings indicated a significant positive relationship between Assurance and Customer satisfaction (Estimate .364, $t = .028$, $p = .043 < 0.05$). This finding agrees with other studies of assurance (Ramsaran-Fowdar, 2008). In fact, previous findings also found that assurance has a

significant relationship towards customer satisfaction (Bansal, 2004). Thus, this result complemented past research and was supported.

Hypothesized Relationship between Empathy and Customer Satisfaction (Hypothesis 1e)

It was clear in the findings that empathy significantly and positively influences customer satisfaction (Estimate.264, $t = -1.237$, $p = .016 < 0.05$). This finding supported with previous studies on empathy by Boshoff & Gray, (2004). This also in tandem with previous that found that empathy is one of the important factors that affect customer satisfaction (Sanjay & Gupta, 2004). Thus, this result complemented past research and was supportive.

Limitation and Recommendation

This study focused only on two public hospitals for data collection and the sampling of the study only consists of employees of the public universities. Thus, the study only managed to evaluate customers' satisfaction from the public universities employees' point of view only. Thus, it limits the generalizability of the findings. Next, the survey instruments of the study only consists of closed end questions, thus only a limited amount of information can be gathered from the respondents of the study. Finally, this study was using a self-reported questionnaire and that might lead towards respondents not taking answering the questionnaires seriously.

Further study can be held to investigate the effect of the service quality on employee's job satisfaction in health care sector. Further study could be carried out to test service quality by using other method of data collection i.e. interviews, archival research and experimental research to see which of them will be more effective. Also, future study could test the same variables in other service sector.

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