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In-Text Citation: (Kamarunzaman, Shanthi, Nen, Zulkifli, & Shamsuri, 2020)
To Cite this Article: Al-Serhan, A. F., & Jawazneh, B. (2020). Examining the Impact of Service Quality on Patients' Satisfaction: A Study of Selected Private Hospitals in Amman City. *International Journal of Academic Research in Accounting, Finance and Management Sciences. 10(3),* 325-335.

Examining the impact of service quality on patients' satisfaction: a study of selected private hospitals in Amman City

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Abstract

The health care industry has recently experienced unprecedented challenges because of intensified competition. In order to create competitive advantage, health care providers stresses on the efficacy and effectiveness of health service outcomes by taking into account patients' concerns and interests. Service quality and patient satisfaction remain critical issues for health care providers. Patient satisfaction leads to favorable results, such as higher rates of patient retention, positive word of mouth and higher profits for health care providers. It also influences the rate of patient compliance with physician advice and requests. Thus, patient satisfaction assessment has become an integral part of health care organizations' strategic processes. This study attempts to identify the service quality factors that influence patient satisfaction in selected private hospitals with the help of field survey conducted in the year 2019. Non-probability judgment sampling method was used to obtain information regarding patients' perceptions towards service quality dimensions. Multiple linear regression was used to identify the service quality factors that influence patients' satisfaction. The results highlighted significant impact of service quality dimensions on patients' satisfaction in selected hospitals in Amman city

Keywords: Patient, Satisfaction, Service, Quality, Hospitals, Jordan

Introduction

Service quality has been perhaps the most explored topic in services marketing. The concept of service quality has aroused considerable interest and debate in the literature because of the difficulties in both defining it and measuring it (Andaleeb, 2001). Quality does not have exact meaning. Quality is particularly difficult to describe, explain, calculate and consequently manage in services. It means different things to different people as a producer's perception of quality might be different from a customer. Quality is resolute by inexact individual factors such as perceptions, expectations and experiences of customers (Khan, 2016). Service quality can be defined as the

extent to which a service meets customers' needs or expectations. Service quality is the delivery of excellent or superior service relative to customer expectation (Parasuraman, Zeitham and Berry, 1988).

Service quality is an assessment of how well a delivered service conforms to the client's expectations. Service business operators often assess the service quality provided to their customers in order to improve their service, to quickly identify problems, and to better assess client satisfaction. Continuous attempts have been made by all service organizations to deliver quality service to their customers and therefore they use considerable time in measuring service quality. Service organizations like other manufacturing organizations are also focusing to deliver the services that meet customer needs in order to make their customer happy. Therefore, understanding, measuring and improving quality is an alarming challenge for all organizations since they compete to great degree on the basis of service. The provision of high service quality enables a company to be competitive and, contributes to their productivity and profitability. It increases cash flow and shareholder value, gives businesses a competitive advantage, enhances customer satisfaction, and enhances customer loyalty.

Service Quality in Health Care
Health care services have a distinct position among other services due to highly involving and risky nature of services and the general lack of adequate knowledge possessed by consumers (Sharmila & Krishnan, 2013). The concern of people regarding their health has increased to a greater extent. The changing lifestyle of people has affected their health in a critical way. Stressful work environment, commitments, high expectations, etc. have resulted in health disorder (Rahman and Kutubi, 2013). Health care industry additionally turned into an extremely aggressive and rapidly developing industry around the globe. The greatest test looked by health care services markets is how to characterize and measure the service quality. It makes measuring customer satisfaction and service quality in health care industry more complex (Sangwan, 2012).
Patient perception of service quality is a key determinant of a health care organization's success due to its primary role in achieving patient satisfaction and hospital profitability. The provision of high service quality enables a hospital to be competitive and gets a competitive advantage, enhances patients' satisfaction, and enhances patients' loyalty (Badri, Attia, and Ustadi, 2009). Patient satisfaction leads to favorable results, such as higher rates of patient retention, positive word of mouth and higher profits for health care providers. It also influences the rate of patient compliance with physician advice and requests (Kumar, 2014). Thus, patient satisfaction assessment has become an integral part of health care organizations' strategic processes. The present research used twenty four statements (under four major heads) which were developed after a comprehensive literature review to measure the service quality attributes. A detailed discussion of all these variables is in the methodology part.

Review of Literature
Shabbir, Kaufmann, and Shehzad (2010) examined the impact of service quality provided in Pakistani hospitals (Public and Private) on patient satisfaction with the help of a field survey conducted in Islamabad. The sample size of the study was 245 patients. Correlation and regression analysis were

used to find out the impact of service quality, word of mouth and trust on patient's satisfaction. It was revealed that Pakistani patient's perceived public hospitals to be superior in the quality of their service. The findings highlighted that services quality, trust was positively and significantly correlated with patient satisfaction but word of mouth was not significantly correlated with patient satisfaction. Besides, trust had the second greatest impact on patient satisfaction and word of mouth has the least impact on patient satisfaction. Moreover, it was found that the patient satisfaction was higher among postgraduates and lower income respondents. Irfan, Ijaz, and Farooq (2012) investigated the quality of services delivered to patients by public hospitals in Pakistan. A questionnaire was developed based on modified 'SERVQUAL' on the sample of 369 patients who were availing services from the public hospitals in Lahore. Data was analyzed by structural equation modeling technique (SEM) and results highlighted that public hospitals were not making visible efforts to deliver quality of services to their patients and are not making any visible efforts to meet patient's needs and wants. Ramez (2012) examined patients' perception towards service quality provided in the hospitals of Bahrain on a sample of 235 patients. The author used SERVPERF scale instead of SERVQUAL scale. The results highlighted that SERVPERF dimensions explains 45.9% of the variation in the overall service quality. Positive and significant relationships were found between overall service quality (OSQ), patients' satisfaction (SAT), and their behavior intention (BI). Khalid, Ahmed, and Ahmad, (2013) conducted a study on a sample of 400 drawn from the University of Gujarat by using structured questionnaires. The relationships were then assessed by using Structural Equation Modeling (SEM).The result revealed that the social factors and personal factors have very important contribution in consumer decision-making. This study also concludes that as WoM is a very influential tool therefore, the healthcare practitioners should use it to enhance and promote their personal image. Akbulut (2016) make a comparative study of the factors affecting service quality on the Patient Satisfaction from patient's perspectives in Jordan. The sample consisted of 200 respondents divided between King Hussein Medical Centre Hospital and Al-Bashir Hospital. The results revealed that statistically significant differences at ($\alpha \leq 0.05$) level in patient's satisfaction towards service quality across gender, age, and educational level in the two hospitals. The study recommended that the two hospitals have to set up criteria for their quality provided for patients, and provide sufficient number of qualifies medical staff to deal with the increased number of patients.

Research Gap

The review of literature highlights that numerous studies have been carried out on service quality and patients' satisfaction. But, there exists a clear empirical gap with respect of the influences of service quality on patients' satisfaction in Jordan. This empirical gap becomes a problem to all private hospitals to know whether or not their services are successful among the patients and the changes that should be incorporated in their services. Indeed, there is a need to evaluate what extend the improvements in the services by hospitals should be made.

Objectives of the Study
1. To explicate the concept of service quality.
2. To examine the impact of service quality dimensions on patient's satisfaction.

Hypotheses of the Study

H_{01}: There is no significant impact of service quality on patient's satisfaction.
H_{a1}: There is a significant impact of service quality on patient's satisfaction.

Research Methodology

This study identified and obtained information on the patient (outpatient) satisfaction with the service quality dimensions of five private hospitals in the capital city of Jordan.

Population and Sampling Method

The population of the study includes all patients admitted in selected hospitals of Jordan. Non-probability judgment sampling plan was implemented in the study because some judgment on the part of the researcher was necessary in order to select the right respondents.

Data Collection Method

The study used both primary and secondary data. Secondary information was gathered from different sources such as books, magazines, journals, newspapers and online databases via internet etc. Moreover, a self-administered questionnaire was used for collecting primary data. It is considered as a superior mode for minimizing bias and improving response rates. The questionnaire consists of six variables wherein five variables were independent and one variable i.e. patient's satisfaction was dependent. Figure 1 highlights the framework of the present research. To measure the service quality attributes, the study used twenty four items. Treatment quality, behavioral aspects and financial aspects were measured by four statements and structural aspects by five statements. However, Patient satisfaction was measured through four items. The effects of independent variables on the dependable variable were assessed by the 5-point Likert attitude scale. The questionnaire was pre-tested two times.

Fig.1: Research Model

Treatment Quality
Behavioural Aspects
Structural Aspects
Financial Aspects
→ Patient's Satisfaction
→ Variables of Service Quality
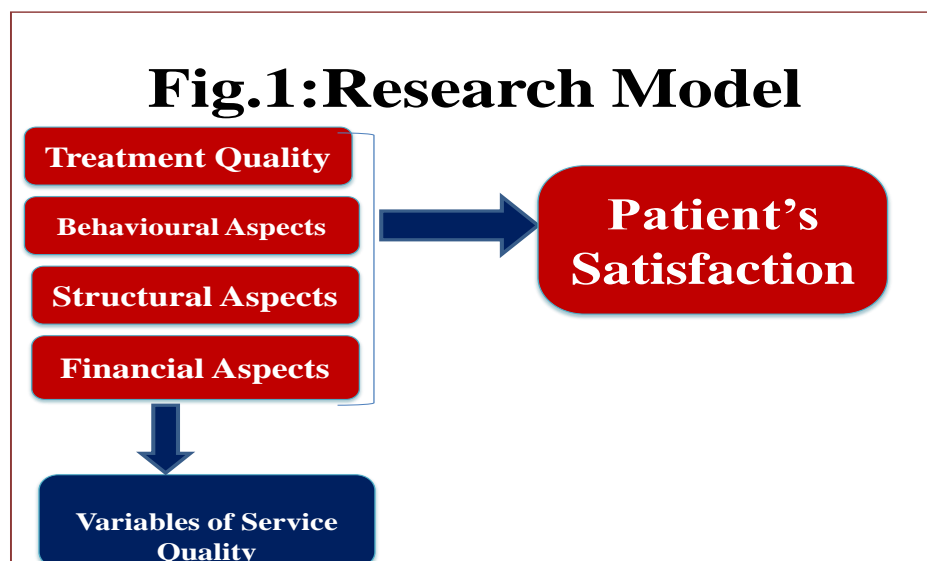
*Source: Researcher's Own Compilation*

Distribution of Questionnaires and Duration of field survey

A total of 500 questionnaires after judgement sampling were distributed to the patients admitted in five different hospitals, who met the sampling requirements. A total of 375 questionnaires were returned wherein 364 questionnaires were considered valid for data analysis. Table 1 shows the questionnaires distributed, rejected, and accepted. The data collection period was four months from September,2019 to December,2019.

Table 1: Sample Size

No.	Selected Hospitals of Amman City	Questionnaires		
		Distributed	Rejected	Accepted
1	Ash-Shaami Hospital	100	27	73
2	Al Khalidi Medical Center	100	21	79
3	Al-Essra Hospital	100	37	63
4	Arab Medical Center	100	32	68
5	Ibn-Alhaytham Hospital	100	19	81
	Total	**500**	**113**	**364**

Source: Field Survey, 2019

Fig 2.: Questionnaires Distributed, Rejected and Accepted
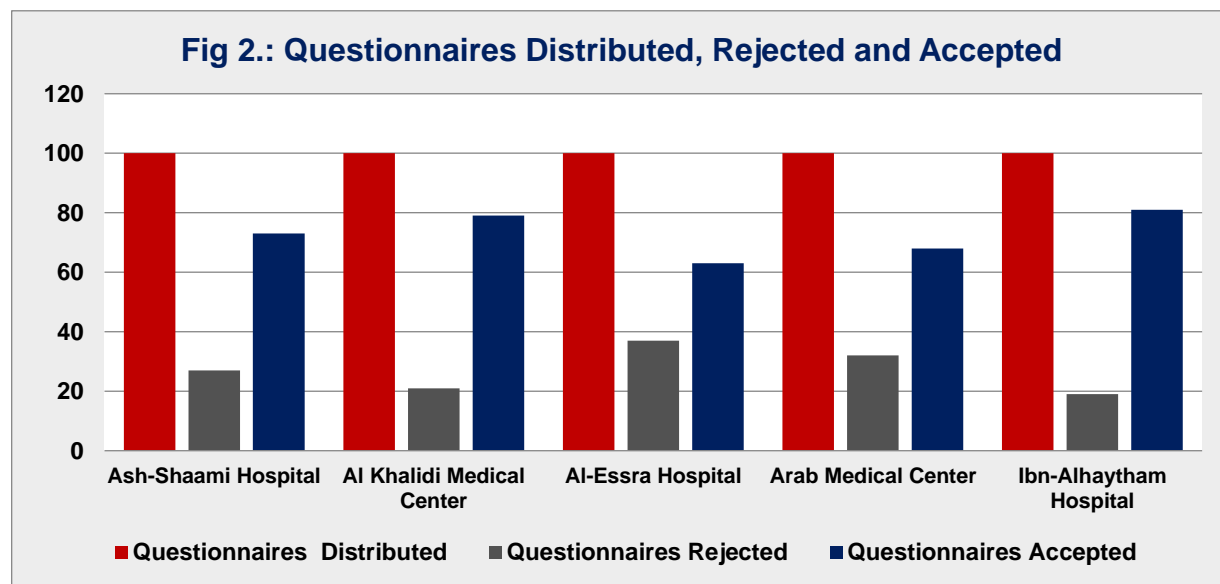
Source: Table 1

Analysis of Data

Data collected from primary as well as secondary sources was analysed and interpreted and on the basis of which conclusions were drawn. For analyzing the data, multiple linear regression analysis was been used and hypotheses were tested at confidence level of 95%. This technique was widely used in prior empirical studies namely Irfan, Ijaz, and Farooq (2012); Khan, (2016); Khalid, Ahmed, and Ahmad, (2013); Kumar, (2014); Sangwan, (2012).

Demographic Profile of Respondents

Table 2 highlights the demographic profile like age, gender, education and family income of the respondents. A total of 500 questionnaires were distributed to the patients admitted in the five private hospitals namely Ash-Shaami Hospital, Al Khalidi Medical Center, Al-Essra Hospital, Arab Medical Center, and Ibn-Alhaytham Hospital. Table 2 shows that out of 364 patients, 229 (63%) were males and 135 (37%) were females. Moreover, 76 (21%) were below the age of 35 years, 132 (36%) were the age group of 36–50 years, and 146 (43%) were in the age group of more than 50 years. So far education of respondents is concerned, 149 (41%) respondents were graduates, and 127 (35%) having Masters' degree and 24% were holds other degrees. Nevertheless, 39% reported that they have monthly income under 1000JD, 30% and 21% reported that they have income under 2000JD and 3000JD respectively. The table further shows that 10% respondents earned more than 3000JD.

Table 2: Shows the Demographic Profile of the Respondents

Gender (N=364)	Total	Frequency
Male	229	63
Female	135	37
Age (N=364)		
20-35 Years	76	21
36-50 Years	132	36
Above 50 Years	156	43
Education (N=364)		
Upto Graduation	149	41
Post Graduation	127	35
Others	87	24
Monthly Income in JD (N=364)		
Under 1000	142	39
1001-2000	109	30
2000-3000	77	21
Above 3000	36	10

Source: Survey, 2019

Reliability Analysis

Cronbach alpha which is the most used test of reliability was applied to examine the reliability of the data. Cronbach alpha of all study variables is ranging from 0.7 to 0.9 and hence the data is reliable. Table 7 in Appendix highlights the reliability of all statements of the study.

Table 3: Reliability Statistics

No. of items	Cronbach alpha
24	0.785

Hypothesis Testing

H_{01}: There is no significant impact of service quality dimensions on patients' satisfaction.

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H_{a1}: There is a significant impact of service quality dimensions on patients' satisfaction.

Table 4: Model Summary

Model	R	R^2	Adjusted R^2	Std Error	Durbin Watson
1	0.866	0.706	0.686	0.4847	1.847

Dependent Variable: Patients' Satisfaction
Source: Output of SPSS_18

Multiple linear regression has been applied to examine the impact of service quality dimensions on patients' satisfaction. Table 4 highlights the values of Pearson correlation, R square, adjusted R square, standard error, and Durbin Watson. The value of adjusted R square is 0.686 which means 68.6 percent variation in patients' satisfaction is explained by service quality dimensions and rest of the variation $(1-R^2)$ is an unexplained variation in patients' satisfaction due to variables that has not been considered in this model.

Table 5: ANOVA-Model Fitness

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	204.800	1	204.800	871.489	0.000
Residual	85.158	362	.235		
Total	289.958	363			

Dependent Variable: Patients' Satisfaction
Source: Output of SPSS_18

Table 5 shows the results of ANOVA. It shows the model significance. The overall model is significant because the p value is 0.000 (P<0.05). Hence, the model construct is validated.

Table 6: Multiple Regression Analysis

Model:1	Unstandardized coefficients		Standardized coefficients	t	Sig.	Collinearity statistics	
	B	Std Error	Beta			Tolerance	VIF
Constant	.411	.148		2.784	.006		
X_1	.525	.048	.589	10.887	.000	.504	1.985
X_2	.315	.098	.422	8.331	.001	.556	1.789
X_3	.469	.031	.617	15.006	.002	.871	1.148
X_4	.308	.030	.427	10.132	.000	.831	1.204
X1:Treatment quality; X2: Behavioral aspects; X3:Structural Aspects; X4:Financial Aspects							

Dependent Variable: Patients' Satisfaction
Source: Output of SPSS_18

Table 6 shows the results of regression coefficients, t value, significant value, and collinearity statistics. An unstandardized beta coefficient gives a measure of contribution of each variable to the model. A larger value indicates that a unit change in the predictor variable has a larger impact

on the criterion variable. Firstly, the value of unstandardized beta coefficient on X_1 is 0.525 which is an indication of positive impact of Treatment quality on patients' satisfaction. It shows that one unit change in it will bring 0.525 unit change in patients' satisfaction. The significant value corresponding to it is 0.000 which is less than 0.05. It shows that there is a significant impact of treatment quality on patients' satisfaction. Secondly, the values of unstandardized beta coefficients on X_2, X_3, and X_4, are positive and statistically significant at 95% confidence level (P<0.05). Therefore, the null hypothesis is rejected and it can be said that there is a significant impact of service quality dimensions on patients' satisfaction in selected hospitals in Amman city. The findings are in line with the previous studies Akbulut (2016); Andaleeb (2001); Andaleeb (2000); Irfan, Ijaz, and Farooq (2012); Khan, (2016); Khalid, Ahmed, and Ahmad, (2013); Kumar, (2014); Sangwan, (2012); Shabbir, Kaufmann, and Shehzad, (2010).

The Regression equation of this Model is:
Y (Patients' satisfaction) = α(Intercept)+$β_1X_1$+$β_2X_2$+$β_3X_3$+$β_4X_4$+e
Y= 0.411+0.525X₁+0.315X₂+0.469X₃+0.308X₄+e

Conclusion
Health care services have a distinct position among other services due to highly risky nature of services. The concern of people regarding their health has increased to a greater extent due to changing lifestyle of people stressful work environment; commitments, high expectations. Health care is rapidly developing industry around the globe. The greatest test looked by health care services markets is how to characterize and measure the service quality. It makes measuring customer satisfaction and service quality in health care industry more complex. Taking this into cognizance, this research has been conducted to examine the impact of service quality dimensions on patient's satisfaction in five private hospitals in the capital city of Jordan. A self-administered questionnaire was used for collecting primary data. The questionnaire consists of twenty four statements under six variables wherein five variables were independent and one variable i.e. patient's satisfaction was dependent. A total of 500 questionnaires were distributed to the patients admitted in five different hospitals, who met the sampling requirements. A total of 375 questionnaires were returned wherein 364 questionnaires were considered valid for data analysis. The data collection period was four months from September, 2019 to December,2019.
For analyzing the data, multiple linear regression analysis was used and hypotheses were tested at confidence level of 95%. Cronbach alpha was applied before testing hypotheses to examine the data reliability and data was proved reliable. Thereafter, regression was run in SPSS at confidence level of 95%. The results highlighted that the value of adjusted R square was 0.686 which means 68.6 percent variation in patients' satisfaction was explained by service quality dimensions and rest of the variation (1-R^2) was an unexplained variation. Furthermore, the regression coefficients on all variables under study treatment quality, behavioral aspects, structural aspects, and financial aspect were positive and statistically significant at 95%confidence level. Therefore, the null hypothesis is rejected and it can be said that there is a significant impact of service quality dimensions on patients' satisfaction in selected hospitals in Amman city.

Limitations of this Study and Directions for Future Research

The present study includes only limited dimensions of service quality like Treatment quality, behavioral aspects, structural aspects, and financial aspects. It is conducted on sample size of 364 patients taken from Amman city of Jordan. Therefore, the results cannot be generalized to other cities of Jordan. Hence, in future a research might be conducted by taking more cities and more private hospitals in Jordan. A comparative study between public and private hospitals of Jordan might be conducted to examine the differences in patients' satisfaction towards service quality. It is quantitative research that only testifies the relationships between selected variables.

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