Service Quality and Patients Satisfaction with Healthcare Delivery: Empirical Evidence from Patients of the Out Patient Department of a Public University Hospital in Ghana

Joshua Ofori Essiam

University of Professional Studies, Accra, Faculty of Management, P. O. Box LG 149, Legon, Accra- Ghana

*E-mail of the corresponding author: joshuaoessiam@upsamail.edu.gh

Abstract

The objectives that guided the paper were to examine the quality dimensions and patient satisfaction with healthcare delivery. The study was a cross- sectional survey that adopted the convenience sampling technique to select 400 out – patients in a public university hospital in Ghana. The data gathered were used to examine the psychometric properties of the SERVQUAL dimensions. Findings revealed gaps across all the SERVQUAL dimensions with responsiveness (-. 762) having the widest gap, followed by reliability (-. 678), tangibility (-. 609), empathy (-.576) and assurance (-.537). The Pearson's correlational matrix further showed that perceived assurance ($r = .349$, $p < .05$), perceived tangibility ($r = .327$, $p < .05$), perceived empathy ($r = .384$, $p < .05$), perceived responsiveness ($r = .400$, $p < .05$) and perceived reliability ($r = -.018$, $p = $ n.s). The study indicated that patients' satisfaction was best explained by perceived responsiveness, followed by perceived empathy, perceived assurance, perceived tangibility, and perceived reliability. The study will be of interest to hospital administrators, stakeholders and academicians investigating the relationships between the SERVQUAL dimensions and patient satisfaction using the hierarchical regression model.

Keywords: Service quality, SERVQUAL, Patient satisfaction, Public University in Ghana

1.0 Introduction

For every healthcare delivery, patients are the main users and therefore, patient care is the primary function of every hospital. In Ghana, the Ghana Health Service Patient Charter (2002) insists on patients' rights. The Health service of Ghana requires collaboration between health workers, patients, and society. They must be sensitive to patients' socio-cultural and religious backgrounds as well as patients with disabilities. In summary the patient charter of the Ghana Health Service is person- centered, where the dignity and value of each person is respected. Therefore, it is entirely desirable and proper that the views of patients should be sought on their experiences and expectations of health care (Ramez, 2012; Yousapronipaiboon and Johnson, 2013). This has called the attention of most hospitals to modify their services to achieve patient satisfaction, in view of this, the hospital has to develop itself technologically (Naidu, 2009), as well as become more service-oriented (Laroche et al., 2004), to understand the fact that patients do not flock to a hospital just because its services are cheap, but because of its good customer service delivery. In this view, it is necessary for hospitals to become organizations permanently controlled by the patients' interest (Alrubaiee & Alkaa'ida 2011). Interestingly, today's clients are tougher, more informed and also sensitive to poor services, which makes them often walks away and never come back for repeated services. Therefore, the quality of service will remain a key success factor in the component of the healthcare delivery in hospitals, including the public university hospitals in Ghana.

1.1 Statement of Problem

In some instances, patients at public hospitals are misdiagnosed and sometimes doctors fail to diagnose disease conditions and when they complain, no one pays attention to them; in the long run they are often forced to resort to treatment at other hospitals usually the private clinics. It is often complained that the communication between healthcare workers and patients at public hospitals in is very poor this mostly makes it look like patients are totally at the mercy of the healthcare workers at these hospitals (Poon et al., 2004; Laroche et al., 2004; Furrer et al., 2000; Alrubaiee and Alkaa'ida 2011). Also, patients often complain of missing folders at the record unit and often have to make new folders, which hinder continuity of medical care. Long queues resulting in loss of man hours whereby at times patients wait for long hours only to be told that certain services such as, laboratory tests and scan are not available. Sometimes, patients often complain that they are given drug treatment by doctors without thorough investigations to confirm diagnosis. Additionally, lack of confidentiality and poor

communication between patients and the healthcare workers has acerbated the problems (Boshoff and Gray, 2004). Highlighting the above problems, the question at stake is; to what extent are patients at the public university hospitals in Ghana satisfied with the services rendered them?

1.1.2 Purpose of the Study

The purpose of the study was to examine the quality dimensions and patient satisfaction with healthcare delivery at a public university hospital in Ghana.

1.1.3 Objectives of the Study

1. To examine the gap between perceived and expected service quality among the Out Patient Department (OPD) patients.

2. To examine the relationship between patient satisfaction and service quality at the Out Patient Department (OPD).

1.1.4 Theoretical Literature

The SERVQUAL Model

The healthcare system is basically a service based industry and patient satisfaction of utmost importance just as in other service-oriented sectors (Laroche et al., 2004). The SERVQUAL model opines that customers evaluate the quality of a service on five distinct dimensions: reliability, assurance, tangibles, empathy, and responsiveness. Perceived service quality in hospitals result from comparisons by patients' expectations with their perceptions of service delivered by the hospital and its staff (Zeithaml et al. 1996). This reinforces the notion that quality healthcare delivery is perceived when patients' expectations are met. For this reason, the researcher adopted the gap model as the theoretical framework for the study. This perceived quality model with five dimensions is operationalized as the $Q = P - E$ framework. That is, perceived quality (Q) increases as perceptions of service (P) exceed expectation of service (E) for each dimension (Parasuraman et al., 1988; Lim and Tang, 2000).

1.1.5 Andersen's Behavioral Model of Health service use

Andersen's behavioral model of health service use has seen several refinements over the years (Anderson, 1968, Anderson and Newman, 1973, Aday and Anderson, 1981 and Andersen, 1995). This model has been used extensively in both social sciences and public health studies. The utilization of health services is influenced by three factors namely; predisposing characteristics, enabling resources and need factors (Andersen, 1995). Health belief are attitudes, values and knowledge that people have about health and health services that might influence their subsequent perception of need and use of health services (Anderson, 1968). This model further provides explanation on the influence of social structure on enabling resources, perceived need and subsequent utilization of health services. The process of care is manifested through the behavior of the health care workers interaction with the patients through consulting, counseling, prescribing, dispensing, test ordering and quality of communication (Andersen, 1995).

1.2 Empirical Literature

1.2.1 Service quality

Parasuraman et al., (1988) defined service quality as "a global judgment, or attitude, relating to the superiority of the service." The concept of service quality aligns to the concepts of perceptions and expectations as "Service quality is viewed as the degree and direction of discrepancy between clients' perceptions and expectations" and that customer perceptions of service quality are influenced by five gaps (Parasuraman et al., 1985). These servqual dimensions are described as follows: Tangibles refers to the appearance of physical facilities, equipment, appearance of health care workers, and communication materials such as patient folders, request forms, prescription forms. Reliability refers to the ability of the hospital to perform the promised service dependably and accurately. Responsiveness refers to the willingness of the health care workers to help patients and provide prompt service. Assurance refers to the knowledge, courtesy and competence of the health care workers and their ability to inspire trust and confidence in the patients towards the hospital services. Empathy refers to the caring, individualized attention provided to patients by the health care workers. Yousapronpaiboon & Johnson (2013) revealed that SERVQUAL's five latent dimensions had a significant influence on overall service quality

and that responsiveness had the most influence; followed by empathy, tangibles, assurance, and finally reliability. The results of this study further demonstrated that service quality can be assessed in diverse service settings such as hospital out-patient departments.

1.2.2 Service quality and patient satisfaction in medical services

Service quality and patient satisfaction have certain things in common, while satisfaction is viewed as a broader concept, service quality focuses on the dimensions of service (Zeithmal & Bitner, 2000). While Zineldin (2006) defined satisfaction as an emotional response, Burns and Neisner (2006) opined that satisfaction is not a simple concept and that it cannot be fully understood without recognizing the emotional aspect.   Badri et al. (2009) defined satisfaction as the summary psychological state of emotion surrounding the expectations and consumers prior feelings and experience. Dissatisfied patients tend to seek other providers (Keith, 1960). Findings from Alrubaiee & Alkaa'ida (2011) and Ramez (2012) indicated that patient perception of healthcare quality has a strong and positive relationship with patient satisfaction. Kilbourne et al. (2004) used perception scores of service quality as they proposed that these scores appear to have higher convergent and predictive validity. The results showed that SERVQUAL is capable of capturing even slight quality indicators in a multidimensional way, namely, tangibles, responsiveness, reliability, responsiveness, and empathy, as well as the overall service quality. Lim and Tang (2000) conducted a modified SERVQUAL with six dimensions, namely, tangibles, reliability, assurance, responsiveness, empathy, accessibility and affordability on 252 patients in Singapore hospitals. They concluded that hospitals needed improvements across all six dimensions. Youapropaiboon and Johnson (2013) reported that responsiveness had most influence on patient satisfaction, followed by empathy, tangibles, assurance and finally reliability. Early on, Zaim et al. (2010) had also confirmed that tangibility, reliability, courtesy, and empathy were significant for patient satisfaction while assurance and responsiveness were not significant.

1.2.3 Statement of Hypothesis

H1. There will be a significant positive relationship between patient satisfaction and perceived reliability.

H2. There will be a non-significant relationship positive between patient satisfaction and perceived assurance.

H3. There will be a significant positive relationship between patient satisfaction and perceived tangibility.

H4. There will be a significant positive relationship between patient satisfaction and perceived empathy.

H5. There will be a non-significant relationship between patient satisfaction and perceived responsiveness.

1.3 Methodology

1.3.1 Research design

The study is a quantitative research that adopted the survey strategy through convenience sampling techniques. Surveys allow the collection of a large amount of data from a sizeable population in a highly economical way (Sauders et al., 2007); often obtained by using a questionnaire administered to a sample, these data are standardized, allowing easy comparison.

1.3.2 Inclusion criteria

The study included OPD patients of the general OPD aged 18 years and above, willing to provide answers to the study instrument, and who have made at least one visit.

1.3.3 Exclusion criteria

Patients who; cannot speak or listen (deaf), are in serious condition, have a mental health condition, are minors, and in-patients (on admission).

1.3.4 Sample size and sampling techniques

The study was confined to patients at the OPD of the hospital. The sample size was determined using the equation:

$$N = \frac{z^2 \, p \, (1-p)}{E^2}$$

N= Sample size

z = 1.96 (Alrubaiee & Alkaa'ida, 2011)

Confidence level 95% when the error margin is 5%

E= Margin of error = 5%

By computation

$$N = \frac{(1.96)^2 \, (.5) \, (1-.5)}{(.05)^2} = 384 \text{ patients} \approx 400 \text{ patients}$$

The sample size of 400 was chosen because other researches have also drawn similar sample size (Yousapronpaiboon & Johnson, 2013; Arasli et al. 2008; Rohini & Mahadevappa, 2006).

The Demographic characteristics of Respondents

Demographic variables	Numbers (Percent)
Sex	
Male	182 (45.5%)
Female	218 (54.5%)
Age	
18 – 27	201 (50.3%)
28 – 37	163 (40.8%)
38 and Above	36 (9.0%)
Marital status	
Single	278 (69.5%)
Married	122 (30.5%)
Educational status	
Junior secondary	21 (5.3%)
Senior secondary	114 (28.5%)
University	190 (47.5%)
Postgraduate	75 (18.8%)
Total Respondents (N = 400)	

1.3.5 Instruments/Measures

McMillan & Schumacher (2001) suggested that once a questionnaire is ready, it is pretested through a pilot survey involving the respondents in the proposed frame. The pilot study was conducted using 15 patients at another Public University Hospital through convenience sampling. For the internal consistency of the instrument, the Cronbach's Alpha ($\propto$) was used for the reliability analysis of each part of the instrument as follows: patients' expectation (22 items; $\propto = .74$), patients' perception (22 items; $\propto = .78$) and satisfaction of patients (12 items; $\propto = .81$). According to Nunnally (1978) reliability coefficients greater than or equal to .5 are considered sufficient for survey studies.

1.3.6 Data Collection Procedure

In line with the principles governing research ethics, permission was officially obtained from the Administration department of the hospital. Questionnaires were administered by hand and picked directly from the respondents at the hospital (Delle, 2013).

1.4 Results

1.4.1 Gaps of the Study

Data analysis was facilitated with the Statistical Product and Services Solution (SPSS) version 20.0 for windows. Descriptive statistics such as means scores, standard deviations, skewness, and kurtosis were used to compute

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the independent and dependent variables. The findings in Table 1, indicated that there were quality gaps in all the SERVQUAL dimensions (RATER) with Responsiveness (-.762) having the highest gap followed by Reliability (-.678), Tangibility (-.609), Empathy (-.576) and the least gap was Assurance (-.537). Measures of skewness and kurtosis were also analyzed to examine normality of the SERVQUAL dimensions among the OPD patients. Balanda and MacGillivary (1988) opined that skewness and kurtosis values of zero are suggestive of normal distribution and that values between -2 and +2 is indicative of no problematic deviations. Great skewness may encourage the researcher to assess outliers.

Table1. Descriptive statistics and gaps between Perceptions and Expectations (P-E) for the OPD patients

Quality Dimension	Perceptions			Expectations			Gap (P-E)
	Mean (SD)	Skewness	Kurtosis	Mean (SD)	Skewness	Kurtosis	Mean
Reliability	3.452 (.697)	.071	-.088	4.130 (.688)	-.933	1.018	-.678
Assurance	3.672 (.747)	-1.301	1.300	4.209 (.730)	-1.193	1.515	-.537
Tangibility	3.621 (.725)	-.913	.364	4.230 (.751)	-1.209	1.052	-.609
Empathy	3.623 (.644)	-.132	.582	4.199 (.642)	-.493	.459	-.576
Responsiveness	3.484 (.650)	-.511	.056	4.246 (.728)	-1.309	1.437	-.762

Table2. Pearson Correlation matrix between Patient Satisfaction and SERVQUAL dimensions

(N= 400)

	Variable	1	2	3	4	5	6
1.	Patient Satisfaction	-					
2.	Perceived Reliability	-.018	-				
3.	Perceived Assurance	.349[**]	.572[**]	-			
4.	Perceived Tangibility	.327[**]	.417[**]	.842[**]	-		
5.	Perceived Empathy	.384[**]	.715[**]	.702[**]	.661[**]	-	
6.	Perceived Responsiveness	.400[**]	.343[**]	.657[**]	.654[**]	.616[**]	-

[**] Correlation is significant at the 0.01 level (2- tailed)

Positive significant but moderate /medium relationships were found between patient satisfaction and four of the SERVQUAL dimensions (Cohen, 1998). These correlations were for Perceived Assurance (r = .349, p < .05), Perceived Tangibility (r = .327, p < .05), Perceived Empathy (r = .384, p < .05), Perceived Responsiveness (r = .400, p < .05) and that 12.2% of Perceived Assurance, 10.7% of Perceived Tangibility, 14.7% of Perceived Empathy and 16.0% of Perceived Responsiveness contributed to patient satisfaction respectively. Findings also revealed that all the correlations were positive with the exception of Perceived Reliability (r = -.018, p = n.s). The correlation was negative and non-significant (Cohen, 1998).

1.4.2 Discussion

The importance of quality in services cannot be underestimated. Quality of a healthcare service is whatever the patient perceives it to be. Service quality as perceived by the patient may differ from the quality of the service actually delivered, in that few patients possess the technical knowledge required to judge the healthcare workers on their diagnostic skills or technical abilities .The findings of this study indicated that there were quality gaps in all the SERVQUAL dimensions (RATER) with Responsiveness having the highest gap followed by Reliability Tangibility, Empathy, and the least gap was Assurance. This finding was similar to that of Lim and Tang 2000. According to these results, the patients perceived the healthcare workers as not willing to help and provide them with prompt services. This could be explained as because the public university hospital basically serves the university community, which includes the senior members (lectures and senior administrators), senior and junior staff, dependents of the university workers, and the public around the university environs. There may be high propensity to serve patients based on their status in the university. This implies that a Professor in the university

may be given prompt services ahead of a patient who is a junior staff or a member of the general public. The study revealed that H1, H2, and H5 were not supported by the findings while H3 and H4 were accepted. Also with the exception of perceived reliability, a positive significant relationship exists between patient satisfaction and the other four perception variables of the SERVQUAL dimensions. Curiously, the results agreed with observations made by scholars (Yousapronpaiboon & Johnson 2013; Alrubaiee & Alkaa'ida, 2011; and Ramez, 2012). Therefore, it justifies that patients rely on aspects of their visits to understand quality dimensions such as reliability, assurance, tangibility, empathy, and responsiveness as well as patient services and staff interactions that leads to their satisfaction and quality of care in the hospital.

1.4.3 Limitations

Regardless of the contribution to the topic of service quality, the convenience sampling technique adopted for the study restricts the representation of all patients of the University Hospital, and thus will affect the generalization of the study findings. Last, a significant Pearson correlation matrix between patient satisfaction and SERVQUAL dimension does not suggest a causal relationship.

1.4.4 Contributions of the present study

Regardless of the above limitations, the study has contributed to existing literature by filling the service quality and patient satisfaction literature gaps in Ghana. The present study provides relationship between patient satisfaction and the composite of the SERVQUAL dimension in Ghanaian milieu.

1.4.5 Managerial implications

Findings showed that 12.2% of Perceived Assurance, 10.7% of Perceived Tangibility, 14.7% of Perceived Empathy and 16.0% of Perceived Responsiveness explained patients' satisfaction respectively and that healthcare managers can use these findings to develop strategies that improve on these dimensions to enhance patient satisfaction.

1.4.6 Recommendations for Future Research

The study assessed the quality of health services from the outpatient department patients' expectations and perceptions toward the service quality of a public university hospital in Ghana, while providers' attitudes were not undertaken. To get a complete and accurate vision of health services in public University Hospitals in Ghana, a further empirical research is needed to cover both patients and providers view.

1.4.7 Conclusions

Health care delivery is a service based industry and patient satisfaction is a critical success factor in measuring the hospitals performance just as in other service based organizations. Understanding how patients perceive the service and the ability to analyze service quality can benefit the hospital managers in making both quantitative and qualitative decisions. Specific data obtained from analysis of service quality can be used in quality management hence managers of the hospital would be able to monitor and maintain the quality of service provided by the facility.

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About the Author

Joshua Ofori Essiam (BSc., Mphil, Commonwealth Executive Masters in Business Administration, Ghana) is an Assistant Lecturer at the University of Professional Studies, Accra – Ghana. He has diverse background and experience in research. His research interest is in the area of total quality management, service quality, operations management, risk management and insurance, human resource development, organizational development and biomedical/health care delivery.

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