

Empirical Investigation of Service Quality in Ghanaian Hospitals

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Abstract

Service quality within the health sector in Ghana has been of great concern to many. For years, the quality of health services in hospitals has come under intense scrutiny and this has become more worrying in recent times. This study was undertaken to assess perceived service quality in hospitals located in the Greater Accra Region of Ghana. The research was a cross-sectional survey which employed the use of a modified SERVQUAL questionnaire that was administered to 400 outpatients in the Greater Accra region of Ghana. Data obtained from the study was analyzed quantitatively using descriptive statistics, exploratory factor analysis and multiple regressions. Findings of the study revealed that, of the six dimensions used in the study, empathy, tangibility, reliability and affordability were the most significant predictors of service quality in Ghanaian hospitals. Although responsiveness and assurance are also considered in determining service quality, they were of less significance in this study. Furthermore, empathy emerged as the best predictor of service quality.

Key words: Perception, Service quality, Ghanaian hospitals

1. Introduction

1.1 Background of the Study

The service sector is a rapidly growing area of the world economy and health service organizations are playing a pivotal role in such development (Dagger et al., 2007). On the corporate level, the delivery of quality service is considered an essential strategy for success and survival in contemporary times (Parasuraman et al., 1985; Reichheld & Sasser, 1990; Zeithaml et al., 1990). This is underscored by the fact that, quality is difficult to replicate or copy; hence it has become a strategic differentiator for the attainment of distinctive advantage by service firms (Lim & Tang, 2000).

Services rendered in the health sector unlike other sectors must be executed with extraordinary professionalism since the level of competence displayed by service personnel can make a difference between life and death (Ministry of Health [MOH], 1997). Service quality is multi-faceted, and has become a highly crucial research topic owing to its significant relationship with cost saving (Crosby, 1979), profitability (Buzzell & Gale, 1987; Rust & Zahorik, 1993) and customer retention (Reichheld & Sasser, 1990).

According to Angelopoulou et al. (1998), patients crave not only for medical services but also “hotel” services (comfortable rooms, courteous and empathetic personnel) in whichever health facility they attend. There is the tendency to believe that, services rendered in private hospitals are better than public hospitals or the vice versa. Such a belief however could be elusive as studies by a numbers of researchers present a mixed perception regarding service quality in public and private hospitals respectively. While a number of studies maintain that, service quality in public hospitals is better compared to private hospitals (Jabnoun & Chaker, 2003; Angelopoulou et al., 1998), other studies reveal that, quality in private hospitals is better than in public health facilities (Ygeia, 1995; Camilleri & O’Callaghan, 1998). Nonetheless, a lot of grievances regarding health care delivery have been directed towards government hospitals.

Government health facilities have been harshly criticized for lack of responsiveness vis-à-vis their traditional hierarchical structures associated with service quality improvement (Camilleri & O’Callaghan, 1998; Anderson, 1995). Again, the perceived dismal professional output in many public facilities coupled with the high cost of health service has contributed to patient apathy and reluctance in seeking early health care culminating in avoidable health complications and fatalities (Ghana Health Service [GHS], 2001; The PPM Network, 1992).

One fact that stands out very clear however; is that, health care delivery is generally better in advanced countries compared to developing countries (United Nations International Children’s Emergency Fund [UNICEF], 2003). This is in view of the significant infrastructural and resource investment in the health sectors of those nations. Developing countries on the other hand continuously grapple with: inaccessible roads, limited health equipment, unavailability of drugs and lack of well-trained health personnel.

Several scholars opine that, improvement in the quality of hospital services increase patient satisfaction and

consolidate customer loyalty (Karassavidou et al., 2009; Arasli et al., 2008; Young et al., 1994). Furthermore, a good and sound health system has been touted as a major inseparable contributor to economic growth (Thirumurthy, et al., 2005; Jamison, 2006). An investment in basic nutrition during pregnancy and infancy for instance has a substantial positive effect on early childhood development, which, in turn, significantly contributes to educational attainment (Bloom et al., 2004; Jamison 2006).

Aside the impact of the health sector on other aspects of the economy, the average patient in recent times cannot be taken for granted as he/she has become more critical of the quality of health service they receive (Lim and Nelson, 2000); furthermore, the provision of good quality healthcare is an ethical obligation of all healthcare providers (Zineldin, 2006) and receiving good quality care is a right of all patients (Pickering, 1991).

In striving for quality in service delivery, interpersonal relations cannot be overlooked as it serves as the bedrock for patient satisfaction and loyalty (Dagger et al., 2007; Padma et al., 2010). Health institutions can accentuate their commitment to proving high service quality through service quality evaluation. Measuring service quality helps healthcare providers identify specific and often unmet needs of patients (Wiggers et al., 1990).

Despite the immense relevance of health service quality to humanity, little research into this area has been conducted (Arasli et al., 2008; Berman-Brown & Bell, 1998). Studies carried out in Ghana on the quality of the health services have mainly focused on quality vis-à-vis patient satisfaction with the National Health Insurance Scheme (NHIS). Other studies have measured quality either in Greater Accra or outside the region using non-SERVQUAL instruments or independent service quality dimensions. This present study is the first to investigate perceived service quality using a modified SERVQUAL that also introduces an additional dimension of affordability. This study also examines the quality of health care delivery in the Greater Accra Region of Ghana. The Greater Accra Region was chosen in view of the fact that it consistently records the second highest number of outpatients in the country every year (GHS, 2010).

1.2 Problem Statement and the Research Gap

It appears that many less developed countries face severe health challenges that make quality health care an illusion. Factors such as: poverty, geographic location, age, unemployment, unavailability of services for the treatments of special problems (such as sexually transmitted diseases) and incompetent management of health services are visible phenomena in those countries (Cassels, 1995). Every year, about 500,000 women worldwide lose their lives as a result of child birth and more than 9 million infants under age five die from preventable and treatable diseases (WHO, 2003) and Africa accounts for the highest burden of mortality among women and children in the world (Udofia & Okonofua, 2008; Prata et al., 2008).

In Sub-Saharan Africa, the problem of finance has been a major setback in the delivery of basic health services (Mwabu & Vania, 1990). According to the WHO (2000), the poor who are mostly rural people are less respected and are offered poorer services than affluent patients who mostly reside in urban communities.

In pursuance of quality health services, one fact that bedevils stakeholders is ignorance on the part of both patients and health professionals. Majority of patients as well a good number of health care providers are ignorant of the existence and contents of the patient's charter-which stipulates the rights and responsibilities of patients and healthcare providers (Ducinskiene et al., 2006; Abekah-Nkrumah et al., 2010).

Other impediments such as: poor road networks and heavy traffic jam in metropolitan and district areas further exacerbates accessibility of emergency services. According to the GHS (2007), if the Ghanaian population grows consistently as it has in the past, the problem of inaccessibility will worsen. Although the Ghanaian health sector is touted as one of the most performing compared to neighbouring countries within the West African sub-region, there are still complaints in Ghana vis-à-vis the performance of the health sector. Aside criticism by Ghanaians about the lapses in delivery of health services, donor communities have also registered their concerns regarding the substandard professional output in the health sector despite huge investments of resources into the sector (Abekah-Nkrumah & Abor, 2007).

Another observation about the Ghanaian health sector is the lack of potable water and sanitary facilities for waste disposal management. Infectious, parasitic and respiratory diseases continue to be a menace causing disabilities and deaths. Simultaneously, a surge in cases of chronic and non-communicable diseases such as cancer and respiratory disorders especially among the urban population is highly visible.

The picture about Ghana portrays a country with the tendency of acquiring disease condition prevalent in affluent countries yet struggling to surmount diseases common in developing countries (Obuobi et al., 1999). There have been instances in Ghana where equipment in health institutions were in a state of disrepair due to lack of spare parts. Basic drugs (such as Nivaquine and Aspirin) and materials such as bandages, needles and syringes were in short supply and often unavailable in rural clinics (Bawumia, 1998).

A number of studies conducted in public hospitals over the years also provide convincing evidence that, the quality of health services in Ghana is abysmal both by objective measures (health experts) and subjective measures - the opinion of patients (GHS, 2003; MOH, 2007b). Patients on a regular basis have to grapple with worries of poor service quality, high price for extra services and limited number of health professionals (Fomba et al., 2010).

The frustration in the health sector is not peculiar to only patients as there are also high levels of dissatisfaction with working conditions among physicians and paramedics in health facilities of developing countries. Such professionals will at any time quit their jobs for more favourable work environments (Fomba et al., 2010). Over the years, African countries have been greatly affected by the exodus of health professionals to developed countries ignoring the glaring health threats in the continent (Naicker et al., 2009).

In recognition of the aforementioned observations, a number of studies on perceived service quality have been conducted in countries like Spain (Bigné et al., 2003); India (Duggirala et al., 2008), and Northern Ireland (Evason & Whittington, 1997). Some studies conducted in the Ghanaian health sector (Abor et al., 2008; Sakyi et al., 2012) have focused on areas other than service quality. Although Atinga et al., (2011) examined patient satisfaction in hospitals, their study was limited to two hospitals in Northern Ghana. Again, Atinga (2012) examined perceived quality in Ghanaian hospitals, but this study focused on only health facilities that subscribed to the NHIS. His study furthermore did not use the SERVQUAL model although it employed four independent variables to measure service quality. This current study therefore investigates service quality in hospitals located in the Greater Accra Region using an adapted SERVQUAL model.

1.3 Research Objectives

This research work examines the quality of health care delivery in Ghanaian hospitals. Specifically, the study is positioned to:

1. Identify significant predictors of service quality in Ghanaian hospitals.
2. Determine the quality of health care delivery in Ghana.

1.4 Significance of Study

This research is of immense importance in the following ways:

Firstly, this study offers a basis for drawing some inference on the progress Ghana is making towards the attainment of the health related goals (goals 4, 5 and 6) in the Millennium Development Goals (MDGs) by the United Nations [UN] declaration of 2000. Ghana is among 189 UN countries that made a resolution to achieve eight goals by 2015. These eight goals are : (1) to eradicate extreme poverty and hunger, (2) achieve universal primary education, (3) promote gender equality and empower women, (4) reduce child mortality (5) improve maternal health, (6) combat HIV/AIDS, malaria and other diseases, (7) ensure environmental sustainability, and (8) develop global partnerships for development (Government of Ghana & United Nations Development Program [UNDP], 2010).

This study also brings to the fore some lapses in the delivery of health services. Such insights will enable policy makers, health administrators, doctors, nurses and paramedics to invest extra resources in the health sector for significant gains. Additionally, this study serves as a reliable feedback especially for health administrators with respect to the perception of patients. Such feedback can adequately position a health facility to achieve competitive advantage over other health facilities.

Finally, findings of this research immensely contribute to literature on service quality in hospitals from the Ghanaian perspective. This is underscored by the limited literature on service quality in the Ghanaian health sector.

2. Literature Review

2.1 Service Quality Defined

It is vital to note that, a service bears intrinsic attributes such as: perishability (Zeithaml & Bitner, 2000), intangibility, heterogeneity and inseparability and these distinguishes it from goods (Parasuraman et al., 1988). According to Zeithaml and Bitner (2000) service quality refers to deeds, processes and performances. Berry et al. (1988) also defines it as meeting customer specifications. In defining service quality, Park et al. (2005) argue that, it is a consumer's overall mental picture of the relative inferiority or superiority of the organization and its services. Pui-Mun Lee (2006) defined it with special attention on expectation by arguing that, it deals with meeting or exceeding customer expectation. Zineldin (2006) suggest that, the delivery of quality hovers around the service provider; he argues that, it relates to doing the right thing at the right time, in the right way for the right person.

Whiles the definition of quality by some researchers accentuate the satisfaction of customer needs (Bergman & Klefsjo, 1994; Evans & Lindsay, 1996), Bojanic (1991) expands the definition beyond satisfaction of customer needs by comparing satisfaction derived from one service provider with an another service provider. Gronroos (1984) defines service quality as a subjective concept from the view of the customer by describing it as the result of what customers received and how they receive it. Essentially, a number of researchers have defined service quality in relation to gaps between customer expectation and perception of a service (Lewis & Booms, 1983; Parasuraman et al., 1985; Webster, 1989).

2.2 Perceived Service Quality

The importance of service quality to organizations cannot be overemphasized as scholars generally agree that, a company's economic success depends on establishing a strong perception of high quality service in the minds of

customers (Parasuraman et al., 1988; Brady & Cronin, 2001; Gilbert & Veloutsou, 2006). Service quality is particularly important in today's highly competitive market as companies seek differentiation and the establishment of customer loyalty (Parasuraman et al., 1988; Hutton & Richardson, 1995; Brady & Cronin, 2001; Gilbert & Veloutsou, 2006). Perceived service quality is the consumer's judgment about excellence of overall health services including every dimension of service such as: technical, functional, environmental and administrative aspects based on perceptions of what is received and what is given (Zeithaml, 1988). A positive perception of service quality occurs when a consumer's expectation of what should happen in a more general sense is met (Laroche et al., 2004; Park et al., 2005). A consumer satisfied with specific service encounter will overtime, establish a positive perception of the overall quality of service (Parasuraman et al., 1988; Hutton & Richardson, 1995). In a highly competitive market environment, firms must not only meet their customers' expectations but often must exceed them; striving to provide consumers with total satisfaction (Pritchard & Howard 1997; Schneider & Bowen, 1999; Le Bel, 2005).

2.3 Service Quality in the Health Sector

A number of studies on service quality have been carried out in the health sector; however there is no single definition that can properly delineates what health is all about (Al-hawary et al., 2011). The Constitution of World Health Organization defines health as a complete physical, mental, social well being and not merely the absence of disease or infirmity (Syed Amin, 1996). Donabedian (1980) also defined health care quality as the kind of care which is anticipated to maximize an inclusive measure of patient welfare, after one has taken account of the process of care in all its parts. The 1984 definition by the American Medical Association, defines health care quality by underscoring the importance of life; stating that, it is that which consistently contributes to the betterment or maintenance of the quality or duration of life. The association further highlights the relevance of issues such as: disease prevention, health promotion, informed participation of patients and efficient use of resources as key variables in healthcare quality.

The definition of health quality postulated by the Institute of Medicine (1990) highlights desired outcome consistent with professional knowledge. According to the Institute, it is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge (Blumenthal, 1996). Ovetveit (1992) in defining quality considered the needs of patients and the financial resources of a facility; and argued that, it is fully meeting the needs of those who need the service most, at the lowest cost to the organization within bounds and directive of higher authorities and purchasers.

According to Gronroos (2000), even though there are several definitions on quality of healthcare service in literature, it is still a complicated and an indistinct concept. Fuentes (1999) concurs to Gronroos' (2000) opinion by stating that, the quality of healthcare service is a multidimensional concept which reflects a judgment about whether services provided for patients were appropriate and whether the relationship between doctors and patients was proper.

One of the traditional medical approaches to the definition of quality of healthcare focuses on the outcome of healthcare services from the point of view of the service provider while another approach emphasizes the process of healthcare from the patient's perspective (Newcome, 1997).

In general, researchers define quality of healthcare services along two dimensions; technical service and interpersonal care of service (Goldstein & Schweikhart, 2002; Cleary & McNeil, 1988; Kane, et al., 1997; O'Connor & Shewchuk, 1989; Li & Collier, 2000). These two dimensions have been expatiated below.

2.3.1 Technical Quality

The Institute of Medicine (USA) defines quality of healthcare in technical terms as the degree to which health services for individuals and population increase the probability of desired health outcomes which are consistent with current professional knowledge (McGlynn, 1995). However, Brook, et al. (1975) place more emphasis on the attainment of high health standards as they argue that, technical quality relates to the ability of hospitals to achieve high standards of patients health through medical diagnosis, procedures and treatment geared at creating physical or physiological effects on patients. This definition has been expounded by Tomes and Ng (1995) who maintain that, it includes the competence and clinical skills of doctors, nurses, laboratory technicians (with expertise in running test) etc. However, Donabedian (1982) conceptualizes the salient aspects of clinical quality as the qualifications of the provider; using the proper diagnostic equipment and selection, timing and sequencing of the medical diagnosis and treatment.

The elements of technical quality are usually quantitative and somewhat straightforward to measure. Examples include: mortality and morbidity rates, treatment errors, average length of stay, readmission rates, and infection rates (Anderson & Zwelling, 1996; Fitzsimmons & Fitzsimmons, 2000).

2.3.2 Client Quality

Client quality generally deals with the functional or interpersonal processes and skill exhibited by health professionals in the discharge of their duties. Brook et al. (1975) define client quality as "how" a service is delivered and the interactive relationship existing between the service provider and the patient. This definition is

re-echoed by Ovretveit (1992) who states that, client quality deals with a patient's perception of the service-friendliness of the service provider, timely delivery and information given by the service provider.

Although in broad terms, technical and client quality has gained immense prominence in health literature, a number of researchers such as Zeithaml and Bitner (2000) and Weitzman (1995) have suggested that besides the technical and interpersonal aspects of healthcare services, elements such as amenities in health facilities must not be ignored in measuring healthcare services. However in the opinion of Harrington and Pigman (2008), healthcare quality comes under three elements namely; structure, process and outcome and this three-element-model serves as an authentic standard for evaluation since it adequately encapsulates all aspects of technical and client quality elements.

Structure deals with elements of the healthcare setting; it includes: its design, management and procedures (Campbell, et al., 2000). Physical and staff characteristics are the two domains defined under structure. The physical characteristics capture elements such as: personnel, equipment and building, organization of resources and management - opening hours and existence of booking systems for appointment. Staffs characteristic on the other hand are made up of education, certification and experience of health professionals (Campbell et al., 2000). The process element examines the appropriateness of an action taken and determines how they were executed. The process of care is significantly intertwined with the technical and interpersonal aspects of care (Donabedian, 1988; Blumenthal, 1996; Stefen, 1988).

The last element which is outcome borders on the consequences of healthcare delivery. This is based on health status of patients as well as an assessment of care. It is worth noting that, structure as well as process of care has an influence on the outcome of healthcare. For instance, a patient with breast cancer might have died because a screening test (structure) was unavailable or the test was misread (process) (Campbell et al., 2000).

2.4 The Servqual Model

SERVQUAL stands for service quality and is the discrepancy between a customer's expectations of a service offering and his perception of the service received. The model requires respondents to answer questions about both their expectations and perception about a service (Parasuraman et al., 1988).

The SERVQUAL model was first developed by Parasuraman et al. (1985) after they conducted an exploratory investigation in a bid to gain a sound conceptual foundation of service quality. Focus group interviews with consumers and in-depth interviews with business executives were undertaken to develop a conceptual model of service quality. The in-depth interview of executives focused on four services namely: retail banking, credit card, securities brokerage and product repair and maintenance. These executives were selected from marketing, operations, senior management and customer relations since it was perceived that, the duties or functions performed by such individuals had an impact on quality in service firms. Twelve focus group interviews were conducted; three for each of the four selected services. This investigation led to the development of the original 10 dimension of service quality (SERVQUAL) namely: reliability, responsiveness, tangibles, communication, competence, credibility, courtesy, security, access and understanding.

But in subsequent years, Parasuraman et al. (1988) found close correlation among some of these dimensions leading to the collapse of the 10 dimension into 5 dimensions of: reliability, responsiveness, tangibles, assurance (communication, competence, credibility, courtesy and security) and empathy (access and understanding or knowing customers). The first four of the modified dimensions are concerned with how the service is provided. The fifth dimension (tangibles) deals with the physical facility, equipment and the appearance of employees. Both instruments (10 and 5 dimension model) had 22 pairs of items measuring expectation and perception. Later, the SERVQUAL model was revised in 1991 by replacing the word "should" in the questionnaire instrument with the word "would" and in 1994, the total number items were reduced to 21 pairs of items.

The purpose of SERVQUAL model is to serve as a diagnostic methodology for uncovering wide areas of an organizations service quality weaknesses and strengths. The SERVQUAL instrument is designed for use in any kind of service business and provides a basic skeleton through its expectations and expectations components encompassing statements for each of the five dimensions (Parasuraman et al., 1988). It is also an instrument for assessing customer perception and expectation of service quality in service organizations. It is probably the most widely tested and evaluated instrument for the generic measurement of perceived quality (Davies et al., 1999). Additionally, the instrument is highly transferable and appropriate for the measurement of quality in healthcare facilities (Taylor & Cronin, 1994; Youssef, 1996; Curry & Sinclair, 2002). However considering the different socio-economic circumstances of patients, the adoption of the instrument for universal applicability in the assessment of quality may be challenging, hence, the need for health service managers to adapt the SERVQUAL model in accordance with their environment rather than automatically adopting it (Taylor & Cronin, 1994).

The SERVQUAL is associated with a number of advantages including the following:

- It is accepted as a standard for assessing different service dimensions of service
- It has been shown to be valid for a number of service situations
- It has been known to be reliable
- The instrument is parsimonious in that it has a limited number of items. This suggests that, customers

can fill it out quickly.

- It has a standard analysis to aid interpretation of results.

SERVQUAL model has been extensively used to evaluate quality in numerous service industries including: hotels, travel agencies, higher education, real estates, accountancy, architecture, construction services, hospitals, dentistry and call centres (Foster, 2001). Other sectors include: universities (Galloway, 1998), police services (Donnelly et al., 2006), banking (Kangis & Passa, 1997), travel agencies (Luk, 1997) and public utilities (Babakus & Boller, 1992). Although no definitive method of defining and quantifying service quality has been developed, scholars agree that, the SERVQUAL dimensions are valid and important components for any study of service quality (Brady & Cronin, 2001).

2.5 Various Dimensions of Service Quality

Although the SERVQUAL model has been widely used in evaluating service quality, a number of scholars have conceptualized it along various dimensions.

Baker et al., (2008) used a two-way approach to comprehend the dimensions of service quality in healthcare. According to them, clinical quality refers to the activities of healthcare processes such as: surgical skills, sufficient drugs, logistics and other factors that translate into better outcome. Service quality denotes multifactor indicators of patients experience such as: hospital comfort, support for providers, waiting time, appointment and visitors and the physical environment of the facility. Gronroos (1984) and Lin, et al. (2004) identified two main dimensions of service quality namely technical and functional quality.

Technical quality focuses on the accuracy of medical diagnoses and procedures whereas functional quality refers to the way in which health care services are delivered to patients. The interpersonal relationships are one of the most important factors in the perception of service quality (Zarei et al., 2012; Padma et al., 2010; Choi et al., 2005; Duggirala et al., 2008). Lehtinen and Lehtinen (1992) proposed a three-tier approach to service quality. These are physical quality (it describes the conditions related to the buildings and the environment), corporate quality (profile and competitive image of the organization) and interactive quality (friendliness of staff vis-à-vis customer interaction and inter-customer communication).

Kotler and Keller (2009), Summer (2009) and Foster (2009) identified eight service quality dimensions namely: reliability, availability, assurance, empathy, responsiveness, efficacy, tangible and communication. However, careful evaluation of these dimensions shows significant correlation in the reliability and availability dimension. Again communication as a dimension arguably has strong correlation with empathy (understanding the needs and feelings of the patients). As a matter of fact, the modification by Parasuraman et al. (1988) is underpinned by this observation.

Rust and Oliver (1994) propounded a three- component model namely: service product, service delivery and service environment in the measurement of service quality. Service product relates to the technical quality of the service; service delivery deals with the functional quality of the service while the service environment comprises of the internal and external environment. This model has not tested by the proponents although support has been found for related models in retail banking (McDougall & Levesque, 1994) and health care samples (McAlexander et al., 1994). Nonetheless, it could be difficult to apply the three-component model in the determination of service quality from the patients perspective as patients lack the expertise to evaluate the product component of the model due to the technical attributes of health services (Newcome, 1997; Bopp, 1990).

Donabedian (1980) also postulated three criteria for the assessment of quality in the healthcare setting. They are: structure, process and health outcome. Structure refers to a patient's rating of the physical environment and physical facilities in which the service place. Process refers to the patients rating of interactions with service personnel. Process indicators include: responsiveness, friendliness, empathy, courtesy, competence and availability. The healthcare outcome deals with improvement in a patient's health. These criteria to a large extent can be employed as tools in assessing quality however, the use of outcome as a basis for quality determination could be contestable as some health conditions are terminal (cancer) and cannot be cured despite the quality of care rendered.

In an attempt to adequately conceptualize perceived service quality in healthcare settings, Yogesh and Satyanarayana (2012) identified 10 dimensions namely: physical environment and infrastructure, personnel quality, image, trustworthiness, support, process of clinical care, communication, relationship, personalization and administrative procedures. Although these dimensions emanated from extensive review of literature on the SERVQUAL dimensions, patients may encounter difficulties in evaluating the competence of health service professionals and this will thereby affect assessment of personnel quality. Again, dimensions such as relationship and personalization arguably appear to have some correlations and therefore these dimensions could have been integrated into a single dimension.

2.6 Empirical Studies

Chimed-Ochir (2010) investigated perceived quality of healthcare services and patient satisfaction in district hospitals in Mongolia. This study examined service quality through the determination of disparities in patients' expectation and perception. One hundred and fifty-seven (157) patients were interviewed using a SERVQUAL

questionnaire. Findings of the research indicate a high patient perception of service delivery; though there was the need for improvement in all 7 dimensions of service quality.

Atinga et al. (2011) investigated patients' satisfaction regarding the quality of healthcare in two hospitals in the northern region of Ghana. Questionnaires based on the five service quality dimensions-communication, provider courtesy, environment, support/care and waiting time- were administered to 324 patients (respondents). Findings of the study revealed that, support/care, environment of the facility and waiting time were significant determiners of patients' satisfaction with quality of healthcare delivery.

Atinga (2012) studied perception of premium holders of Ghana's National Health Insurance Scheme (NHIS) regarding the quality of healthcare delivery in Ghana. The study utilized questionnaires administered to NHIS insured patients receiving care in selected hospitals accredited by the NHIS. Four service quality dimensions namely: patient interaction with service providers, demeanour of service provider, physical infrastructure and facility and time spent for care received were used. It came to light that, the human dimensions of service quality (interaction with service provider and attitude of healthcare providers) were perceived by patients to be good and significantly determined service quality however; waiting time was generally perceived to be long.

Abu-Kharmeh (2012) evaluated the quality of healthcare services in Jordan. A SERVQUAL questionnaire based on the five dimensions with 31 items were administered to 556 patients in three hospitals in Jordan. Findings of the study revealed that, the quality of services offered were moderate; furthermore, the most significant predictors of quality were responsiveness and assurance. Reliability emerged as the lowest among the predictors of service quality.

Turkson (2009) did an assessment of perceived quality of healthcare delivery in Komenda-Edina-Eguafo-Abrem (a rural district in Ghana). The study was based on four service quality dimensions namely: waiting time and interaction with service providers, cleanliness of facility, satisfaction with visit and availability of prescribed drugs. Questionnaires were administered to 803 patients who were purposively sampled and interviewed after visits to health facilities. Focus group discussions were also held in 13 communities. Findings of the study revealed that, majority of patients were satisfied with the care received in the health facilities, nonetheless, issues such as: poor attitude of some healthcare workers, long waiting time, high cost of services, inadequate staff, payment policy for health services, frequent referrals and lack of ambulance at facilities were perceived by patients as flaws and lapses in the quality of care received.

Al-hawary et al. (2011) evaluated the quality of healthcare services provided by King Abdullah Educational Hospital from the perspective of patients. The study used a questionnaire that covered service quality dimensions such as: healthcare, communication, personal caring, equipment and facilities, location and accessibility. 285 questionnaires were administered, collected and analysed using SPSS version 11. The study revealed that, quality in the hospital was high. Furthermore, perception about the hospital was high in view of the high pedigree of professional staff in the hospital. Again, the hospital's superb tangible features coupled with the caring attitude of professional staff significantly boosted patient satisfaction with service quality, however, complaints of insufficient number of pharmaceutical outlets, long waiting time (to see doctors) and very expensive hospital services were grievances expressed by patients.

2.7 Conceptual Framework

This study is premised on a modified SERVQUAL model. The study employed the five generic SERVQUAL dimensions postulated by Parasuraman et al., (1988) plus an additional dimension of affordability. However, the study ignored the expectation component of the model and concentrated on only the perception component as proposed by Cronin and Taylor (1992). The examination of only the perception component for the study is underscored by the fact that, the simultaneous determination of expectation and perception scores makes the SERVQUAL instrument weak in reliability and validity (Brown et al., 1993).

Figure 1 illustrates the conceptual framework in the study in which overall service quality is derived from six service quality dimensions. The independent variables in this study are the five service quality dimensions (tangibles, reliability, assurance, responsiveness and assurance) as postulated by Parasuraman et al., (1988), plus an additional dimension of affordability (Lim and Tang, 2000). The dependent variable in this study is the overall service quality.

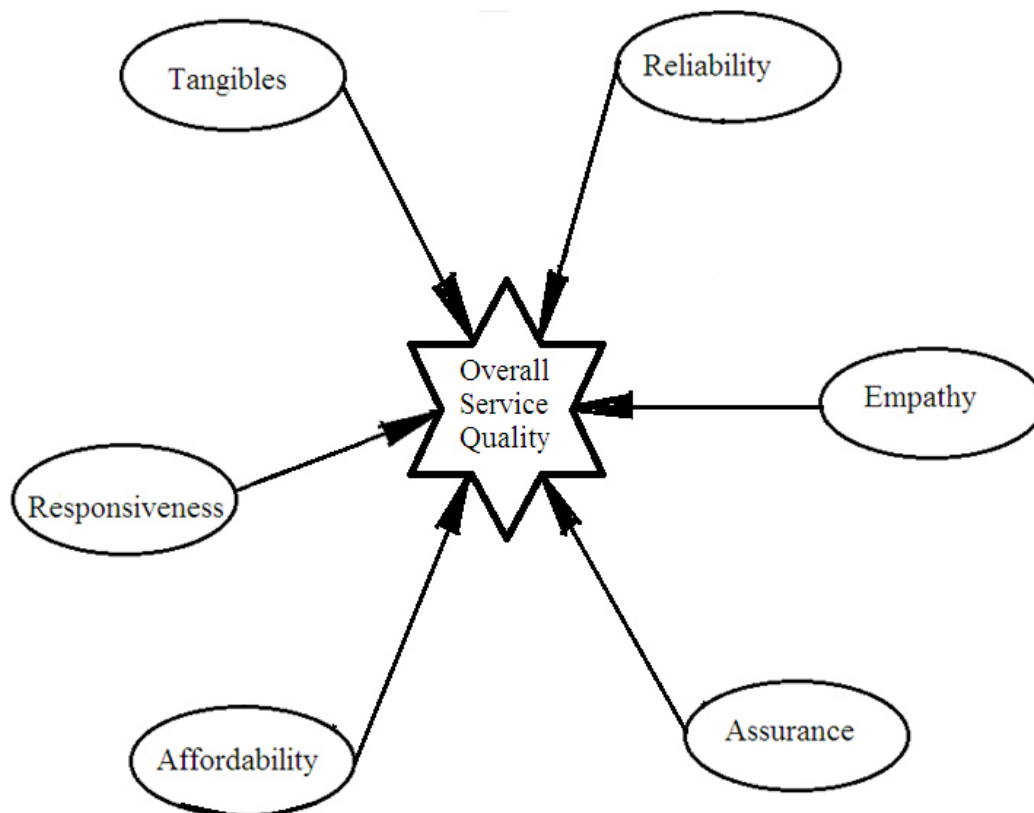


Figure 1 Conceptual framework for the determinants of health service quality
(Based on Parasuraman et al., 1988 & Lim and Tang, 2000)

3. Methodology

3.1 Research Design for the Study

This study was undertaken with a positivist's philosophical position. Furthermore, the current research is quantitative in nature and adopted the survey approach in collecting data through the use of questionnaires. The research problem was formulated based on existing theory, and the intention was to create more knowledge about specific factors. This study adopted the survey strategy because the researchers find it suitable in attempting to identify and explain statistically, the perception of patients in Ghanaian hospital regarding delivery of health services. The study is cross-sectional in nature which sampled heterogeneous respondents through a simple random sampling method. Structured questionnaires were administered to out-patients of different socio-economic groups in the Greater Accra Region. Selected patients in all the administrated districts of the GHS of the Greater Accra Region were included in the study. Only patients 18 years and above were considered as respondents in this study. This is in view of the fact that, the voting age (where one is considered mature) in Ghana is 18years and above.

3.2 Population of the Study

A population is the total collection of elements from which a researcher may draw inferences. All out-patients in the Greater Accra Region formed the population for this study. To increase generalisability of this study's finding, the population was made of patients from at least one hospital in all six administrative districts (Accra Metropolis, Tema Municipality, Ga West district, Ga East district, Dangme West district and Dangme East district) of the Ghana Health Service in the region.

3.3 Sample and Sampling Technique

The idea behind sampling is to select some elements of the population so as to draw conclusion about the entire population. This study employed a probability sampling technique. Specifically, a simple random approach was adopted since the study was not restricted to a particular case (hospital) but focused on a large population of out-patients; nonetheless, patients less than 18years (the voting age in Ghana) and those whose health conditions were terminal or underwent surgical operations were excluded from the study to avoid biases or subjective opinions owing to their unique experiences. According to Israel (1992), there are several approaches in the determination of a sample size. Some of them include: the use of a census for a small population, imitating a sample size of a similar studies, using published sample size tables and applying formulas to calculate the sample size. The sample size selected for this study was 400. This is in view of the fact that, previous studies by

Kavitha (2012); Yousapronpaiboon and Johnson (2013) and Andaleeb, Siddiqui and Khandakar (2007) chose the same sample size.

3.4 Instrumentation

This study utilized a modified SERVQUAL (an adapted SERVPERF) which featured an additional dimension of affordability(1 item) to the 5 dimensions of tangibles(4 items), responsiveness(4 items), reliability(4 items), assurance(4 items), and empathy(6 items). These 6 dimensions were the independent variables while overall service quality was the dependent variable. The modified SERVQUAL in this study is an adaptation of the SERVPERF instrument postulated by Cronin and Taylor (1992). The SERVPERF unlike the SERVQUAL measures the perception (performance) component of service quality excluding the expectation components. Cronin and Taylor (1992) argue that, SERVPERF performs better than other measures of service quality and has the ability to provide more accurate service quality scores.

For this study, a structured questionnaire was developed which consisted of two sections; the first part comprising of demographic variables (sex, age, academic qualification, profession and income) while the second part had the 23 service quality items which were measured using a 7-point likert scale which ranked items from '1'= 'Strongly Disagree' to '7'= 'Strongly Agree'. In a bid to obtain a high response rate and also facilitate easy comprehension, the questionnaires were worded in simple language which ignored jargons and terminologies for the understanding of persons with basic education as recommended by Malhotra and Birks (2007). Scholars further prescribe that, questionnaire for a study need to be subjected to a pre-test on a small sample of respondents in order to identify how it will perform under the actual data collection (Malhotra & Birks, 2007).

This study was pre-tested on fifty (50) out-patients of the Greater Accra Region. Initial problems ascertained were rectified and corrected before administering the final questionnaires.

3.5 Data Gathering Procedure

Primary data was solicited from outpatients in the various hospitals in the Greater Accra Region. This was achieved with the help of a structured questionnaire. A number of research on service quality in the health sector have relied on primary data with a questionnaire as a tool (studies by Arasli et al., 2008; Atinga, 2012; Duggirala et al., 2008). In anticipation of the possible challenges that could emanate from the use of questionnaire, the researchers carried-out a pre-test of the questionnaire. This was administered to 50 respondents to assess the level of comprehension in a bid to circumvent errors and achieve content validity. To this end, respondents were afforded the opportunity of making inputs to the instruments.

Questionnaires were administered to out-patients in selected hospitals in the greater Accra Region in the months of May and June 2013. In a bid to ensure high retrieval rate of the questionnaire, the research assistants collected filled-out questionnaires on the very day of its administration. The researchers also assisted personnel in the data collection stage to facilitate the research. The research assistants were people proficient in Ghanaian languages (to better communicate with patients) and were given adequate orientation on the dimensions of the instrument. Out-patients who filled the final questionnaires were made of 220 patients from government hospitals, 26 patients from mission hospitals, 89 patients from quasi-government hospitals and 65 patients from private hospitals.

3.6 Data Analysis Techniques

This study utilized quantitative techniques for its analysis. The unit of analysis for the study is the out-patient in the Greater Accra Region. Most research works on healthcare delivery in hospitals have focused on the patients' perspective of service quality (Zarie et al. 2012; Atinga et al. 2011). The present study concurs with the conceptualization in various studies that, health service quality must be evaluated from the patient's point of view since the core of every business is to make profits through customer satisfaction.

The researchers carefully examined all questionnaires in a bid to detect and eliminate errors. To this end, questionnaire with missing data were excluded from the data input process. Data that was inputted was also crosschecked to ensure high accuracy. To ensure internal consistency or reliability among the variables used, an exploratory factor analysis was performed. Reliability according to Joppe (2000) is "the extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable" (p. 1). Internal consistency is mostly determined using Cronbach's alpha coefficient. Hair et al., (2010) admonish that, ideally this value should be greater than 0.7. This study employed a multiple regression analysis in which overall service quality represented the dependent variable while tangibles, reliability, responsiveness, assurance, empathy and affordability served as the independent variables.

4. Results and Discussion

4.1 Demographic Profile of Respondents

Respondents for this survey have been profiled based on their gender, age, educational qualifications, occupation, income levels and health insurance status. A sample size of four hundred (400) was chosen however, in

anticipation events such as: of unreturned questionnaires, unusable questionnaire due to incomplete or missing relevant data among other factors, a little over four hundred questionnaires were administered to cater for these constraints. In the end, exactly 400 usable questionnaires were obtained for analysis.

Table 1 Gender of Respondents

Gender	No. of Respondents	Percentage%
Female	230	57.5
Male	170	42.5
Total	400	100

Table 1 indicates the gender of respondents in the study. The results show that majority (57.5%) of the respondents were females whiles 42.5% were males.

Table 2 Age of Respondents

Age	Frequency	Percentages %
18 – 25	157	39.2
26 – 35	106	26.5
36 – 45	48	12
46 – 55	26	6.5
55 and above	63	15.8
Total	400	100

Table 2 gives details on the age ranges of respondents in the study. It is seen from the table that the largest of the age groups was ages 18 – 25. They constitute 39.2 percent of the respondents. Those from 26 – 35 years formed 26.5%. Whiles respondents from 36 – 45 years accounted for 12%, those from 46 – 55 years formed 6.5 % with those above 55 years forming 15.8%.

Table 3 Educational Qualifications

Qualifications	Frequency	Percentages %
JHS/Middle School	42	10.5
SSS/SHS	70	17.5
Professional	26	6.5
Diploma	104	26
Degree	145	36.2
Postgraduate	13	3.2
Total	400	100

From table 3, it is seen that a significant percentage of the respondents (36.2%) were degree holders. Those with diploma also accounted for a significant percent (26%). Whiles 17.5% of respondents were senior secondary school graduates, 10.5% were junior or middle school graduates. Respondents with professional qualification formed 6.5% whiles those with postgraduate certificates accounted for 3.2%.

Table 4 Occupation of Respondents

Occupation	Frequency	Percentages %
Unemployed	187	46.8
Self-employed	60	15
Salary employed	148	37
Pensioner	5	1.2
Total	400	100

Table 4 gives an indication of the occupational status of respondents in this study. The table reveals that; majority of the respondents (46.8%) were unemployed. Whiles 37 % of them were salary employed, 15% were self-employed with 1.2% of the respondents being pensioners.

Table 5 Holders of Valid NHIS Cards

Responses	Frequency	Percentages %
Yes	259	64.8
No	141	35.2
Total	400	100

Majority of the respondents (64.8%) are registered under the National Health Insurance Scheme and hold a valid NHIS card, however, 35.2% of the respondents were not registered under the scheme and hold no NHIS card.

4.2 Data Analysis

4.2.1 Descriptive Statistics

Table 5 displays the means and standard deviations of the various variables used which indicates the extent to which the respondents disagreed or agreed with the statements in the 7-point-likert scale questionnaire. The

mean results of the variables indicate how each statement performed from the 400 respondents' points of view. From the table, the highest mean was 5.59 (hospital personnel are always neatly dressed) whilst the lowest was 4.62 (hospital charges are affordable). Mean for overall service quality was 5.22. The table also revealed that, the neat appearance of hospital staff recorded the highest mean (M=5.59), while the ability of hospitals to fulfill promises of doing something by a certain time had the lowest mean rating (M=4.57). The modern looking equipment of hospitals recorded the highest standard deviation (SD=1.974); this implies respondents have more diverse views vis-à-vis the appealing nature of equipment in hospitals. The lowest standard deviation (SD=1.441) on the other hand was recorded for knowledge of hospital staff to answer questions posed by patients. The low standard deviation value indicates that respondents had similar opinions with respect to the knowledgeability of hospital staff. Respondents rating of the overall service quality however can be considered as significant (M= 5.22, SD=1.459).

Table 5 Descriptive Statistics

Variables	N	Mean	Std. Dev
This hospital has modern looking equipment	400	4.72	1.974
Physical facilities are always visually appealing	400	4.78	1.729
Hospital personnel are neatly dressed	400	5.59	1.618
Hospital materials are appealing	400	4.99	1.72
Hospital fulfils its promise of doing something by a certain time	400	4.57	1.773
The hospital shows interest in solving patients' problems	400	4.98	1.682
This hospital performs services right the first time	400	4.86	1.655
This hospital insist on error-free records	400	5.13	1.671
Staff tell patients exactly when a service will be performed	400	4.99	1.694
Staff of this hospital are always willing to help patients	400	4.72	1.738
Staff of this hospital give prompt services to patients	400	5.18	1.628
Staff are never too busy to respond to patients' request	400	4.82	1.718
Staff of this hospital instil confidence in patients	400	4.98	1.625
Patients feel safe with hospital personnel	400	5.07	1.567
Staff are consistently courteous with patients	400	5.02	1.599
Hospital staff have the knowledge to answer patients questions	400	5.38	1.441
This hospital gives patients individualized attention	400	4.99	1.643
Staff are polite and friendly when dealing with patients	400	5.04	1.553
Hospital staff are always available (24- hour- service daily)	400	5.35	1.71
Hospital staff understand the specific needs of patients	400	5.06	1.521
Staff give attention to the patient's beliefs and emotions	400	4.95	1.503
Hospital staffs have the patient's best interest at heart	400	5.06	1.528
Hospital charges are affordable	400	4.62	1.812
Overall service quality	400	5.22	1.459

Table 6 Means for the Dimensions

Dimensions	N	Mean
Tangibility	400	5.02
Reliability	400	4
Responsiveness	400	4
Assurance	400	4
Empathy	400	6.09
Affordability	400	4.62

Table 6 describes the cumulative mean of the items that constitute the service quality dimensions in this research. The table indicates significant mean values for three dimensions; empathy (6.09), tangibility (5.02) and affordability (4.62). However, reliability, responsiveness and assurance had average mean values of 4 each. A high mean value indicates that, majority of respondents strongly agreed or agreed that, a trait or quality was exhibited or was a characteristic of health facilities in Ghana, While a low mean value indicates that most respondents either strongly disagreed or simply disagreed with a quality evident in health facilities in Ghana.

Table 7 Overall Service Quality in Hospitals

Responses	Frequency	Percent
Strongly Disagree	13	3.2
Disagree	8	2.0
Moderately Disagree	22	5.5
Neutral	67	16.8
Moderately Agree	93	23.2
Agree	118	29.5
Strongly Agree	79	19.8
Total	400	100

Table 7 reveals that, respondents who strongly disagreed, disagreed and moderately disagreed with the assertion that overall service quality in Ghanaian hospitals was excellent formed 10.7%. Those who were neutral accounted for 16.8% however, respondents who moderately agreed, agreed and strongly agreed to the same assertion formed 72.5%.

4.3 Exploratory Factor Analysis

➤ Initial Considerations

Prior to the extraction of factors, the Bartlett test of Sphericity (Approx: Chi-square= 5113.792, df. 253, sig. 0.000) and the KMO measure of sampling adequacy (Value of .953) confirmed that, there was significant correlation among the variables to warrant the application of exploratory factor analysis. Table 8 below displays the results of the KMO test which was ran for the data obtained from the respondents. The KMO overall statistic of 0.953 for the variables used in the study gives an indication that, there is a higher possibility of an inter-correlation between the variables thereby making them sensible for analysis.

Table 8 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.953
Bartlett's Test of Sphericity	Approx. Chi-Square	5113.792
	df.	253
	Sig.	.000

According to Velicer and Fava (1998), the variable loadings for exploratory factor analysis are regarded high, if they are all 0.8 or greater however; in real life, this not likely to be achieved. Hair et al. (2010) stated that; ideally, variables should have loadings greater than 0.5 to be retained for analysis. However, more common magnitudes in the social sciences are low to moderate variable loadings of above 0.40. If an item has a loading of less than 0.40, it may either not be related to the other items, or may suggest an additional factor that should be explored. The loadings used in the analysis table are all high, which indicates that the extracted components represent the variables well. A compilation of the various alpha values is presented in Table 9.

Table 9 Factor Loadings & Reliability of Scales- Independent Variables

Variables	Loadings	Cronbach's Alpha
This hospital has modern looking equipment	0.837	0.800
Physical facilities in this hospital are always visually appealing	0.817	
Physical facilities in this hospital are always visually appealing	0.723	
Hospital materials associated with service delivery are appealing	0.56	
Reliability		
This hospital fulfils their promise of doing something by a certain time	0.514	0.801
When patients' have a problem, the hospital shows sincere interest in solving it	0.468	
This hospital performs services right the first time	0.56	
Hospital insists on error-free records (eg. Patient's name, lab result etc)	0.617	
Responsiveness		
Staff of this hospital tell patients exactly when a service will be performed	0.644	0.806
Staff of this hospital are always willing to help patients	0.499	
Staff of this hospital give prompt services to patients	0.811	
Staff of this hospital are never too busy to respond to patients' request	0.514	
Assurance		
The behaviour of staff of this hospital instil confidence in patients	0.526	0.845
Patients feel safe in their transactions with hospital personnel	0.534	
Staff of this hospital are consistently courteous with patients	0.555	
Staff of this hospital have the knowledge to answer patients	0.628	
Empathy		
This hospital gives patients individualized attention	0.567	0.872
Hospital staff are polite and friendly when dealing with patients	0.752	
Staff are always available for service (24-hour service)	0.563	
Hospital staff understand the specific needs of patients	0.662	
This hospital gives attention to the patient's beliefs and emotions	0.778	
Hospital staff have the patient's best interest at heart	0.678	
Affordability		
Hospital charges are affordable	0.919	

Table 10 Overall Reliability for all Independent Variables

No. of Items	Cronbach's Alpha
23	0.942

Table 10 displays the overall reliability value for all the 23 items that constitute the independent variables. A score of 0.942 for Cronbach's Alpha is very high exceeding the recommended value of 0.70 (Hair, Black, Babin, Anderson & Tatham, 2006) and this gives an indication of high reliability.

4.4 Multiple Regression Analysis

A multiple regression was performed to analyze the relationship between overall service quality and its drivers. This was done to educe the independent variables that substantially better explicate the dependent variable. Overall service quality was used as the dependent variable whilst the independent variables were delineated by: tangibles, reliability, responsiveness, assurance, empathy and affordability. Table 11 presents a summary of the multiple regression results for the dependent and independent variables.

Table 11 Multiple Regression Analysis for Determinants of Service Quality

Variable	Beta	S.E.	T	Prob.
Constant		0.259	2.782	0.006
Tangibility Dimension	0.204	0.013	4.206	0.000
Reliability Dimension	0.174	0.017	2.776	0.006
Responsiveness Dimension	0.011	0.017	0.184	0.854
Assurance Dimension	0.031	0.019	0.461	0.646
Empathy Dimension	0.328	0.014	4.767	0.000
Affordability Dimension	0.079	0.031	2.032	0.043
S.E of Estimate	1.079			
R- Square	.461		F- statistics	56.078
Adj. R - Square	.453		Prob.(F-tats.)	0.000

The regression (prediction) equation on the above model can be presented as follows:

$$OSQ = \alpha + .204Ta + .174Re + .011Res + .031As + .328Em + .079Af + E$$

Where:

OSQ= Overall Service Quality

Ta= Tangibility Dimension

Re=Reliability Dimension

Res =Responsiveness Dimension

As= Assurance Dimension

Em = Empathy Dimension

Af= Affordability Dimension

E =Error term

The regression results in table 11 implies that, the model can be used to predict overall service quality in Ghanaian hospitals. In specific terms, the R-Square value of .461 implies that, independent variables (tangibles, reliability, responsiveness, assurance, empathy and affordability) in this study explains or accounts for 46.1% of overall service quality in Ghanaian hospitals.

Table 12 Overall Service Quality Predictor Order

Rank	Dimension	Items
1	Empathy	Hospital will give patients individualize attention, operating hours convenient to all patients, staff give patients personal attention, staff will understand the specific needs of patients, staff have patient's best interest at heart
2	Tangibility	Hospital will have modern looking equipment (x-ray machines, scanners etc), visually appealing physical facilities, neatly dressed personnel, appealing hospital materials (bed sheets, curtains etc)
3	Reliability	Fulfillment of promise of doing something by a certain time, showing a sincere interest in solving patients problems, performing services right the first time, hospital insisting on error-free records
4	Affordability	Hospital charges are affordable
5	Assurance	The behaviour of staff of hospitals will instil confidence in patients, patients will feel safe in their transactions with hospital personnel, staff of hospitals will be consistently courteous with patients, staff of hospitals will have the knowledge to answer patient questions
6	Responsiveness	Hospital staff will tell patients exactly when a service will be performed, will give prompt services to patients, will always be willing to help patients, will never be too busy to respond to patients request

Table 12 represents the ranking of the service quality dimensions used in this study. Based on the multiple regression analysis conducted (see table 11) in this study, empathy emerged the best predictor of service quality in Ghanaian hospitals followed by tangibility, reliability and affordability. Although assurance and responsiveness ranked fifth and sixth respectively, they were of little statistical significance.

4.5 Evaluation of the Model

The results from the regression analysis indicates that, there is a strong and significant reliability between variables used for the model to represent overall service quality and its drivers ($F = 56.078$, Prob. F -stats < 0.05). Hair et al. (2010) argue that, the model reaches statistical significance if the Sig $< .05$. In the present study, the Sig =.000 of the F statistics which gives an indication that the model is statistically significant. The R-Square value in the model summary depicts the degree of variance in the dependent variable which is explained by the model (including the independent variables). From the table, it can be seen that, R Square value= .461. Expressed as a percentage, it is found that the model consisting of independent variables (tangibles, reliability, responsiveness, assurance, empathy and affordability) explains 46.1% of the variance in overall service quality; an important indication of the fact the model averagely is of relevance.

From the regression analysis results, empathy was found to have the greatest influence on overall service quality ($\beta = 0.328$, $t=4.767$, $p=0.000$, < 0.05). This means that out-patients in Ghana consider to a large extent, the empathy exhibited by health professionals in the discharge of their duties before selecting a health facility.

The next strongest contributor to overall service quality is tangibles ($\beta = 0.204$, $t=4.206$, $p=0.000$, < 0.05) implying that, patients pay substantial attention to the physical layout or ambience in hospitals.

The third strongest determiner of service quality in Ghanaian hospital is reliability ($\beta = 0.174$, $t=2.776$, $p=0.006$, < 0.05). This indicates that, out-patients are influenced by the ability of hospitals to fulfill their service promises, interest exhibited by hospital staff in solving patients problems, performance of services right the first time and error-free records by hospitals.

Affordability emerged as the fourth best predictor of overall service quality in Ghanaian hospitals ($\beta = 0.079$, $t=2.032$, $p=0.043$, < 0.05). By implication, Ghanaian out-patients attach importance to the financial requirements made by health facilities in the country. This also suggests that, hospitals with moderate service charges are likely to create a positive perception in the mind of patients with respect to health care delivery.

Although assurance is a relevant predictor of overall service quality in hospitals, it was statistically insignificant in this study ($\beta = 0.031$, $t=0.461$, $p=0.646$, > 0.05). This means that, in Ghana, out-patients do not place high premium on the confidence exhibited by hospital staff, their personal feeling of safety in undertaking transactions with hospital personnel, consistent courtesy displayed by health workers and the knowledge of health workers in answering patients' questions.

The least predictor of service quality was responsiveness ($\beta = 0.011$, $t=0.184$, $p=0.854$, > 0.05). Like assurance, responsiveness is a relevant predictor of overall service quality in Ghanaian hospitals however; it was of little significance in this study.

4.6 Discussion of Results

Service quality is a concept that has received great attention for many decades owing to its cardinal role in brokering competitive advantages for service firms. Many firms today are breaking new grounds and realizing monumental corporate benefits attributable to high service quality. Findings from the study adequately reveals that, empathy exhibited by health professionals in a healthcare settings is the strongest predictor and immensely contributes to the overall service quality in Ghanaian hospitals. This finding confirms studies by O'Connor et al. (1994) which had empathy among the strongest factors associated with the overall satisfaction of patients. However, this study's discovery of empathy being the best predictor of service quality is inconsistent with a study by Abu-Kharmeh (2012) who identified empathy as the lowest predictor of service quality among patients. Similar to empathy, was tangibles that emerged as the next best predictor of quality in hospitals. This corroborates literature regarding the importance of tangibility as a service quality dimension. Bitner (1990) stated that, tangibility elements (which include noise, odour and temperature of a service location and visual scenes) are of enormous importance and strongly influence service quality. When patients are hosted in appealing environs, they become motivated to stay longer in a health facility and are compelled to easily interact with service providers (Donovan & Rossiter, 1982; Donovan et al., 1994).

The third significant predictor of service quality was reliability. It relates to the delivery of a service with a high degree of dependability and accuracy as promised by a service firm. This trait embodies timeliness of a service, entry of patients' records without mistakes and an exhibition of a sincere interest in solving patients' problems whiles performing services right the first time (Parasuraman et al., 1988). Whiles this current study's finding of reliability being the third best predictor is corroborated by studies conducted by O'Connor et al. (1994) which captured reliability as one of the strongest predictor of overall service quality among patients, it is nonetheless inconsistent with a study by Abu-Kharmeh (2012) which ranked reliability as the lowest predictor of service quality in hospitals.

Affordability also emerged as the fourth significant predictor of service quality in hospitals. This discovery is sufficiently substantiated by literature which underscores the enormous role that service charges play in satisfying patients. Patients consistently express reservations about the high cost of health services (Turkson, 2009) and will go as far as borrowing money from friends, relations and employees to offset hospital bills (Ranson et al., 2012). For this reason, patients of lower social class resort to public hospitals more than the upper

class (Peters et al., 2002). This preference is stimulated by the perception that, health service charges are relatively lower in government or public hospitals (Singh, 2010).

Although assurance is a key predictor of service quality, its contribution to overall service quality in statistical terms for this study is insignificant. This finding of assurance being the fifth contributor to overall service quality is inconsistent with a study by Abu-Kharmeh (2012) which identified assurance as the second best predictor of service quality. Although patients often register their dissatisfaction with delays and laxity in health service delivery (Atinga et al., 2011, Turkson, 2009; Hui & Tse, 1996; Bielen & Demoulin, 2007), the present study presents assurance as the least and insignificant predictor of overall service quality in Ghanaian hospitals.

The least predictor of service quality was responsiveness. Like assurance, it was of little significance though relevant as a service quality dimension. This finding is incongruent with a study by Abu-Kharmeh (2012) which identified responsiveness as the best predictor of quality.

This study also discovered that the quality of healthcare delivery in the Greater Accra Region of Ghana is generally good considering the fact that 72.5% of respondents moderately agreed, agreed and strongly agreed that overall service quality was excellent. This finding is further buttressed by the significant mean and standard deviation values ($M= 5.22$, $SD=1.459$) obtained for overall service quality. This finding is inconsistent with a study by Abu-Kharmeh (2012) which found the level of health service quality in Jordanian hospitals to be generally moderate. This current study further discovered that, the quality of healthcare delivery in the Greater Accra Region in specific terms is average except for three dimensions -empathy, tangibles and affordability- which can be considered as very good.

5. Conclusion

This study sought to assess perceived service quality in Ghanaian hospitals. It was also geared at investigating the quality of healthcare delivery in hospitals. In specific terms, the study was geared at unraveling the significant predictors of service quality and the most significant predictor of quality in Ghanaian hospitals. Based on the findings of the study, the following conclusions have been drawn:

- Affordability is among the four best predictors of service quality in Ghanaian hospitals. This discovery is not surprising considering the fact that, about 28% of Ghanaians live below the international poverty line of US\$1.25 and majority of such people reside in rural areas (IOM, 2012). To this end, a patient in Ghana; when considering a facility for health treatment will factor- in the cost of health services.
- The most significant predictor of service quality in Ghanaian hospitals is empathy. This is followed by tangibility, reliability, and affordability.
- The quality of health care delivery in the Greater Accra Region of Ghana is generally good. In specific terms, it is average in areas of reliability, responsiveness and assurance, good in areas of tangibility and affordability and very good in empathy; however measure could be put in place to make health care quality very good or excellent.

6. Recommendations

Based on the findings of this study, the following recommendations have been made:

- Directors of health services; medical, and health practitioners should at all time adopt practices that conform to internal standard and best practices vis-à-vis health service delivery. Based on the discovery that empathy significantly influences the quality of health care, administrators and all stakeholders in the health sector must make relentless efforts to consolidate personal and individualized attention given to patients. In the discharge of professional duties, doctors and nurses must take cognisance of the fact that, the patient is a “queen or king” hence, any care given must correlate with his/her best interest and specific needs. Additionally, health facilities should operate a 24-hour-service on a daily basis in a bid to increase convenience for patients.
- Considering the significance of tangibles as a service quality dimension, old hospital structures should be rehabilitated and given a facelift to signal some psychological healing to patients. Similarly, the satisfaction of patients will be enhanced with the availability of modern health equipment. Such provision aside being cost-saving to the patients pre-empts any delays in the rendering of specialized services. A conscientious effort must be made by health centres to frequently wash and change hospital materials like bed sheet, curtain etc. Health administrators should also continuously ensure that hospital staffs always appear neat before coming into contact with patients since this conveys a message of high professionalism.
- In view of the fact that reliability emerged as a significant predictor of health quality, managers of health facilities must fulfill promises made to patients at all times as this has the tendency of building trust between health care givers and patients. The overwhelming nature of duties and routines in health facilities may create error in record taking and entry. To pre-empt this, health service managers must develop modern systems (computerized systems) to ensure accuracy, speed and precision in the

management of patient records. Also, since the primary goal of health institutions is to offer quality health care, health professionals must be meticulous in their quest to solving the problems of patients.

- In determining the charges for health services, policy makers must factor-in the standard of living of their target market or groups. This is of great essence considering the fact that, 28% people in Ghana live below the poverty line (IOM, 2012). Furthermore, an exorbitant charge makes health services inaccessible to potentials patients especially the poor. For this reason, proper structures must be put in place to ensure that barrier (financial obligation) in accessing health service are eliminated. Systems instituted to accelerate patronage of health facilities like Health Insurance Schemes must be competently managed and continuously monitored to prevent systemic lapses. Again, managers or operators of private hospitals should demand realistic and affordable charges to boost patronage and create a positive perception or image for a facility.
- In striving to accomplish the health related MDGs, the government in collaboration with other health agencies should adequately resource the various health facilities in the country. If the health related MDGs will be achieved, steps must be taken to improve responsiveness, reliability and assurance in health centres. In the light of this, adequate professional staff must be trained and posted to all health facilities deficient in health personnel.
- To keep health professionals abreast of customer care and also update their professional knowledge and skills, the GHS should organize periodic refresher courses for all health workers and other stakeholders. Furthermore, the various in-service education units within the various hospitals should intensify their training activities. To this end, the MOH should ensure that, all Deputy Directors of Nursing Services (DDNS) spearhead the establishment of in-service education units for health facilities that do not have one.
- To ensure quality health delivery across the length and breadth of the country, the GHS should provide incentives such as: decent accommodation, bonuses, early promotion etc for health workers who accept postings to rural and deprived regions in the country.
- Aside the above recommendations, health administrators should ensure that, all other dimension of service quality are given adequate priority. Quality as a concept is not a single or onetime event, but a continuous improvement of processes (Ahire, 1997) hence; attempts must be made to perpetually identify fail points in a service system followed by corrective actions.

6.1 Implications for Theory and Further Research

This study was necessitated by the quest to unravel the driving forces of service quality in Ghanaian hospitals. Unlike a few studies in Ghana regarding the subjected matter, this study used a relatively large sample size. It also captured data from patients across the various health districts in the Greater Accra Region and employed a modified SERVQUAL as its instruments which featured a key dimension (affordability) in view of the low level of socio-economic development in Ghana. Although the SERVQUAL instrument has been employed for a numbers of studies, the simultaneous determination of expectation and perception score make the instrument weak in reliability and validity (Brown et al., 1993). Hence, the use of SERVPERF model (a modified SERVQUAL which features only perception component) is ideal; however, in an environment where hospital charges influences patronage of health facilities, an additional dimension like affordability can be included as employed by this study.

The current study has enriched literature on service quality in hospitals. Although there is no universally accepted model in the determination of service quality, findings from this study is sufficiently valid and relevant especially within the Ghanaian context. There is however the need for further enquiry into the subject matter from different perspectives. The current study's cross-sectional approach collated date from patients who visited any hospital in Ghana however; service quality can be investigated individually in quasi-government hospitals, private hospitals, mission hospitals and government hospitals. Future studies can also employ a qualitative approach or mixed methods in evaluating service quality in Ghana hospitals.

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