Factors Affecting Provision of Service Quality in the Public Health Sector: A Case of Kenyatta National Hospital

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Abstract

Purpose *– This paper seeks to explore the factors affecting provision of service quality in the public health sector in Kenya, focusing on employee capability, technology, communication and financial resources. The paper reviews existing literature and experiences on public health service provision and quality management.*

Design/methodology/approach *– The paper reports on empirical evidence drawn from a case study of Kenyatta National Hospital – the largest referral hospital in Eastern & Central Africa. A total of one hundred and three respondents, comprising; sixteen doctors, thirty two nurses, twenty nine clinical officers, fourteen laboratory technologists and twelve pharmacists. Data was collected using closed and open ended questionnaires.*

Findings: *Low employee's capacity led to a decrease in provision of service quality public health sector by factor of 0.981 with while Inadequate Technology adoption in provision of health service led to a decrease in provision of service quality by a factor of 0.917. The Ineffective communication channels affected delivery service quality in public health sector by a factor of 0.768 while insufficient financial resources resulted to decrease in provision of health service quality by factor of 0.671. This implied that low employees capacity, low technology adoption, ineffective communication channels and insufficient fund affect delivery of service quality to patients in public health sector affecting health service quality perceptions, patient satisfaction and loyalty.*

Practical Implications *– In the paper the implications for policy include: comprehensive healthcare policy, addressing the plight of the worker, the working environment, the resources to enable the healthcare personnel perform effectively, and emotional intelligence management of the workforce.*

Originality/value*- The paper shows that the respondents in this study were various professionals in the healthcare provision, covering the comprehensive process of healthcare provision from diagnosis to treatment. The approach to study the largest referral hospital in Eastern and Central Africa region and data collected is indicative of special case of Kenyatta National hospital and may be entirely different from other public health institutions within the Eastern and Central Africa region.*

Key Words: Service, Quality, Management, Technology,

Introduction

Delivering service quality has significant relationship with customer satisfaction (Swanson and Davis, 2003), customer retention (Yavas, Benkenstein and Stuhldreier, 2004), loyalty (Boshoff and Gray, 2004), costs (Wilson 2008), profitability (Irving and Dickson, 2004), service guarantees (Kandampully and Butler, 2001) and growth of organization (Sohail, 2003). However, the poor state of customer service in some public hospitals in Kenya has resulted in high turnover and weak morale among staff, making it difficulty to guarantee 24-hour coverage resulting in, problems with patients care, increased cost of operations due to inefficiencies (Owino and Korir, 1997) leading some patients to look for an alternative provider and to spread negative word of mouth which affects potential clients hence growth of the hospital (Tam, 2005). This situation is further worsened by the patients or customers perception of functional issues which they perceive and interact with during the course of seeking treatment such as physical facilities, internal process; interactions with doctors, nurses and other support staff as poor and unresponsive (Boshoff and Gray, 2004; Algılanan hizmet and Connor , 2003). In their studies, Demirel, Yoldas and Divanoglu (2009) found a positive and significant relationship between customers' perception of service quality and their willingness to recommend the company.

Whereas there has been an attempt to improve the situation (RoK, 2010) it seems not much has been achieved in raising the quality of service in public health institutions and this is compounded by limited information on the factors that ail the delivery of service quality in the public health sector in Kenya. Local studies done on service quality had focussed on banking and public sector in general. For instance, Gachie (2008) investigated an evaluation of Service Quality focusing on Kenyan Commercial Banks, Momanyi, (2008) carried out a Survey of Service Quality Management Initiatives In the Public Sector focusing on case study of selected ministries in Kenya while Wambugu (2009) undertook a study on the influence of service quality on consumer preference in petroleum retailing in Thika District. There was no known study that had focusing on investigating on factor affecting service quality in public health sector. This study therefore sought to investigate factors affecting provision of service quality in public health sector in Kenya with specific reference to Kenyatta National Hospital.

2.0 Literature Review

2.1 Health Sector in Kenya

Quality' as defined by International Organization for Standardization is a relative concept and if the inherent characteristic of a service meets the requirements of the customer, it can be rated as high quality (Reinartz, 2004). In a service industry, like healthcare, experience of the patient plays a crucial role in rating and assessment of quality of services. Quality in healthcare may comprise of newer technology, newer and effective medication, and higher staff to patient ratios, affordability, efficiency and effectiveness of service delivery (Tam, 2005). The health sector comprises the public system with major players including the Ministry of Health and parastatals organizations, and the private sector, which includes private for-profit, Non Governmental Organizations, and Faith Based Organizations facilities (RoK, 2010). In healthcare industry service quality has become an imperative (Ennis and Harrington, 2001) in providing patient satisfaction because delivering quality service directly affects the customer satisfaction, loyalty and financial profitability of service businesses. In healthcare, service quality can be broken down into two quality dimensions: technical quality and functional quality (Dean and Lang, 2008). While technical quality in the health care sector is defined primarily on the basis of the technical accuracy of the medical diagnoses and procedures or the conformance to professional specifications, functional quality refers to the manner in which the health care service is delivered to the patients.

In Kenya, Health services are provided through a network of over 4,700 health facilities countrywide, with the public sector system accounting for about 51 percent of these facilities. The public health sector consists of the following levels of health facilities: national referral hospitals, provincial general hospitals, district hospitals, health centres, and dispensaries. Health services are integrated as one goes down the hierarchy of health structure from the national level to the provincial and district levels (RoK, 2011). The two national referral hospitals are Kenyatta National Hospital in Nairobi and Moi Referral and Teaching Hospital in Eldoret. Provincial hospitals act as referral hospitals to their district hospitals. The provincial level acts as an intermediary between the national central level and the districts. They oversee the implementation of health policy at the district level, maintain quality standards, and coordinate and control all district health activities (RoK, 2001). District hospitals concentrate on the delivery of health care services and generate their own expenditure plans and budget requirements based on guidelines from headquarters through the provinces. The network of health centres provides many of the ambulatory health services. Health centres generally offer preventive and curative services, mostly adapted to local needs. Dispensaries are meant to be the system's first line of contact with patients, but in some areas, health centres or even hospitals are effectively the first points of contact. Dispensaries provide wider coverage for preventive health measures, which is a primary goal of the health policy.

The government health service is supplemented by privately owned and operated hospitals and clinics and faith-based organizations' hospitals and clinics, which together provide between 30 and 40 percent of the hospital beds in Kenya (RoK, 2010). Depending on their comparative advantage, Non Governmental Organizations, Faith Based Organizations and community-based organizations (CBOs) undertake specific health services (RoK, 2010).

2.2 Theoretical Review

2.2.1Service Quality and Productivity Interplay

Figure 2.1 draws a concept linking perspective of producers, be they units within a company and organization as a whole, or entire business sectors.

In other words, the conventional view of productivity is that it represents some measure of the ratio of a producer's output to input. Such a producer-oriented perspective works well in the context of products ranging from potato chips to computer chips, cosmetics to chemicals, mobile telephones to mining equipment (Parasuraman, 2002). The output in product contexts can be measured relatively easily and unambiguously in terms of units produced in a manufacturing facility and hence, improving productivity in product contexts is a matter of either: increasing the units produced that is output with no increase or less than a proportionate increase in production costs (input); or decreasing production costs with no decrease or less than a proportionate decrease in units produced. In service contexts customers often play a co-production role, providing some amount of direct or indirect input in the form of time, physical effort and mental energy. When service businesses subscribe to a purely producer-oriented view of productivity which is the case more often than not – the quality of service to customers invariably suffers.

Consider, for instance, a cable-television company's call center offering telephone-based support to customers. The call center's productivity measured in conventional terms converts to a metric such as the number of customer calls processed per hour per employee. Trying to maximize this metric is a matter of depleting the call center staff and/or setting stringent performance standards for the staff ; average time per call not to exceed two minutes; number of calls processed per hour should be at least 30). The problem with this approach to boosting productivity is its failure to consider customers' inputs into the process (e.g. waiting time and emotional energy due to frustration), as well as the outputs experienced by the customers for example service performance, satisfaction (Lui, (2005). The company and customer perspectives on productivity, when considered separately, are at odds with each other; improvement in one type of productivity is invariably accompanied by deterioration in the other. But the two perspectives need not and should not be viewed independently. Enlightened companies that examine productivity from a dual company-customer perspective can benefit from synergies that elude service businesses focusing on a single perspective (MacAuley, 2001).

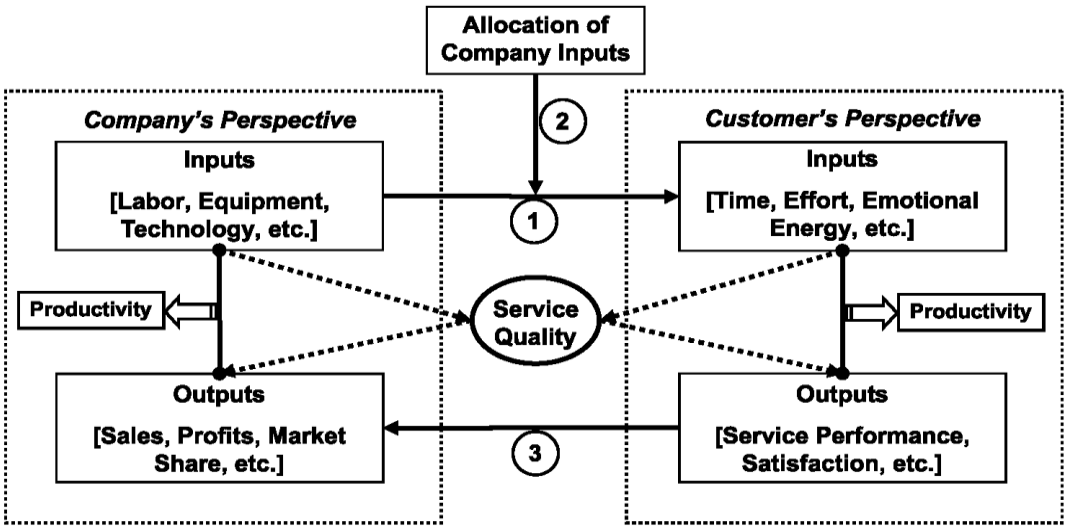

Figure 2.1: A conceptual Framework on Understanding Interplay between service quality and Productivity (Parasuraman 2002).

2.2.2 Gap Model in Service Quality

The conceptual framework of service quality can also be applied to health care service and is relevant to this research study as a healthcare service requires high consumer involvement in the consumption process; hence, the attainment of quality healthcare service relies significantly on the co-contribution of the patient to the service delivery process. Studies have also evidenced that compliance with medical advice and treatment regimes is directly related to the perceived quality of the service and the subsequent resulting health outcome (Irving and Dickson, 2004; Sandoval, Brown, Sullivan and Green, 2006). In line with Edvardsson, (2005) and sentiments that that customers' experiences has a strong impact on customers' quality perceptions; Patients experience accruing from their encounter with medical staff and other support staff and the process of getting treatment create the customer's cognitive, emotional and behavioural responses of either satisfaction or dissatisfaction with the quality of service.

As in this study this encounter is influenced by many other factors such communication, medical staff skills, the technology used in the treatment and the availability of the required facilities and equipment as proposed in the conceptual framework 2.3 which shape this experience and determine the outcome.

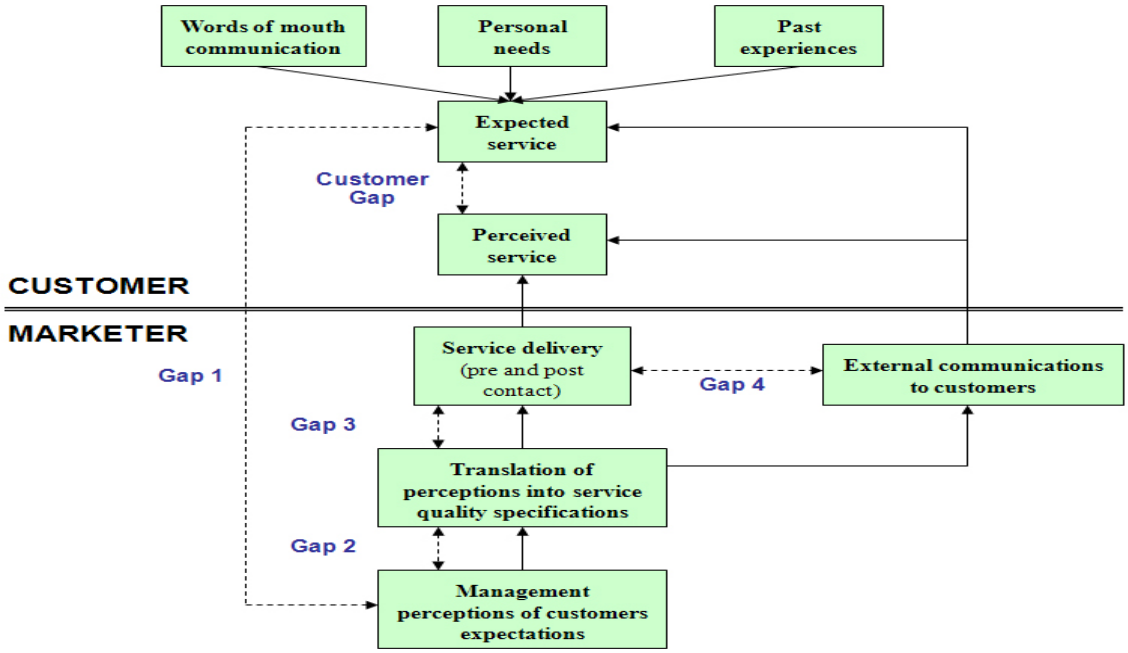

Figure 2.2:Gap Model In Service Quality (Parasuraman, Zeithaml and Berry, 2002)

2.2.3 Service Quality Dimension

There are two main models of service quality, which include: Service Quality Model of Glied, (2000) which indicates that the expectations of the customer depend on the five determinants market communication, image, word of mouth, customer needs and customer learning. Experiences depend on the technical quality (what/ outcome) and the functional quality (how/process), which is filtered through the image (who). Both expectations and experiences can create a perception gap. While the Gap Model propounded by Parasuraman, Zeithaml and Berry (1990) was a slight modification of Gonzalez Padin and Romon. (2005) model and says that the expected service is influenced by the word-of-mouth, the personal needs, past experience and also by the external communication to customers. A perception gap can appear between the expected service and the perceived service (Coulthard, 2004). Petrick, (2009) identified ten determinants of service quality that may relate to any service: Competence, Courtesy, Credibility; Security; Access; Communication, Understanding knowing the customer; Tangibles; Reliability; Responsiveness. Later they were reduced to five to include Tangibles; Reliability; Responsiveness; Assurance: competence, courtesy, trustworthiness, security and Empathy.

2.2.4 Employees' Capacity

Highly skilled physicians, nurses, administrators, and ancillary staff are critical to producing high-quality outcomes and effective quality improvement hence hospital growth (Argote, 2000). There is need for selective hiring of qualified staff. Successful recruitment and retention of staff is tied to empowerment of staff that must be treated as full partners in the hospital operation and given opportunities for advancement (Brown and Duguid, 2003). The hospitals need to place great emphasis on recruiting and retaining top-level physicians and nurses, accompanied by an effort to encourage these professionals to form working teams, including case managers, pharmacists, social workers, and others, to promote quality (Brown and Duguid, 2003). To facilitate service quality and growth, hospitals must implement effective human resource strategies involving selective hiring, and retention of physicians and nurses (Cohen and Levinthal, 2001); monitoring of doctors on staff (or with privileges) and ensuring that they must continue to meet certain performance and practice standards to retain credentials (Crewson, 2004). To improve efficiency in service delivery, public sector hospitals must build the capacity to o attract and employ an adequate number of high-quality nurses (Argote and Ingram, 2000) suggests that the key to service delivery is to adapt to circumstances that are constantly changing and that the long-term winners are the best adapters, but are not necessarily the winners of today's race for market share.

Hospitals quality of service often fails because of the sum total of seemingly inconsequential events arising from employees lack of capacity as in itself service delivery requires specific skill levels and experience which must be continuously learned (Cohen and Levinthal, 2001).

2.2.5 Technology

Technology for harnessing of Information and data play a critical role in the quality service delivery in hospitals (Allen, 2001). Investments in Technology that facilitate service assessment and improvement process is essential (Dutton and Starbuck, 2002). The hospital must show four main commitments: a willingness to invest in Information Technology; investments in Information Technology and in Quality Insurance departments with qualified staff that abstract medical records, analyze data, and facilitate the Quality Insurance process (Cibulskis and Hiawalyer, 2002). According to the Government of Kenya (2001) report , successful Technology strategy that needs to be employed by hospitals and this must involve four main commitments: a willingness to invest in Information Technology, Working with physicians and others to customize an information system to meet specific needs and culture of the institution; nurturing and encouraging buy-in so new systems will be utilized and their benefits will be realized and devising information technology systems that provide real-time feedback to providers as they are caring for patients (GOK, 2001).

The main ingredients of a real-time system involve its timeliness. Hospitals want to develop a system that allows all caregivers to have access to relevant information as soon as it is available (Karimi, Somers, Gupta, 2001). To that end, the hospitals have or are adopting applications that do the following: Reduce time lags in getting laboratory and imaging results. Whether an information system is completely home-grown or purchased off the shelf, Information Technology must be customized to incorporate and meet the particular needs and circumstances of the hospital (Sun and Shibo, 2005). This is not a one-time process, but one that must engage clinicians and administrators to adapt and refine systems over time (Singh and Ranchod, 2004). A proprietary information systems that shapes the culture, patient mix, and staffing of the hospital and engaging physicians and nurses in developing or adapting Information Technology serves to ensure that the resulting system meets the needs of clinicians (Blas, and Limbambala 2001). It also encourages buy-in, and helps create Information Technology champions among the staff, who then teach and encourage their colleagues to use the new system (Baldrige National Quality Program, 2003). The newer Information Technology systems reflect the hospitals' commitment and willingness to invest in the tools that promote quality (Davis, Hughes and Audet, 2002). Nerenz and Neil, (2001) recommends the kinds of quality-related Information Technology investments that the hospitals need to make include: Moving to a paperless system that provides information at the right time (electronic medical records, e-hospital notes with input at bedside); Moving toward bar-coded medications and automatic dispensing; Coordinating patient admissions with bed capacity, immediate tracking of filled beds and daily changes in nursing needs (MacAuley, 2001).

Hospitals need to develop a system that allows all caregivers to have access to relevant information as soon as it is available (Oliveira-Cruz, Hanson and Mills, 2001). To that end, the hospitals have or are adopting applications that do the following: reduce time lags in getting laboratory and imaging results; deliver information on test results, history, health status (Tam, 2005) while providers are treating patients so that treatment decisions can be made based on the latest information; and making user-friendly guidelines and recommendations readily accessible to physicians, based on the latest medical research on specific conditions, procedures, medications, (Nerenz and Neil, 2001) hospitals places much emphasis on getting the right information to the right people at the right time, resulting in demonstrable quality improvements (Rust and Tuck, 2006). The quality and timing of information should be tailored to the needs of decision makers. Information should not just include current and historic data, but also include projections for the future (Allen, 2001).

2.2.6 Communication Channels

Communication is the most important aspect of the Service delivery as Communication with patients is vital to delivering service satisfaction because when hospital staff takes the time to answer questions of concern to patients, it can alleviate many feelings of uncertainty (EFP, 2006). In addition, when the medical tests and the nature of the treatment are clearly explained, it can alleviate their sense of vulnerability (Friedman and Kelman, 2006). This component of service is valued highly as reflected in the in-depth interviews and influences patient satisfaction levels significantly (Pickton and Broderick, 2001).

Research (Payne,2006) indicates that communication challenges have a negative impact on: access to treatment, participation in preventive measures, ability to obtain consent, ability for health professionals to meet their ethical obligations, quality of care, including, hospital admissions, diagnostic testing, medical errors, patient follow-up, quality of mental health care and patient safety. According to the Institute of Medicine of the National Academies (U.S.), communication challenges contribute to reduced quality, adverse health outcomes, and health disparities (2004).

Furthermore, there is evidence that communication challenges may result in increased use of expensive diagnostic tests, increased use of emergency services and decreased use of primary care services, and poor or no patient follow-up when such follow-up is indicated (Irving and Dickson, 2004). There is compelling evidence that communication challenges have an adverse effect on initial access to health services. These challenges are not limited to encounters with physicians and hospital care. Patients face significant barriers to health promotion and disease prevention programs: there is also evidence that they face significant barriers to first contact with a variety of providers (Arhin, 2000). The research indicates that there is a general pattern of lower use of many preventive and screening programs by those facing language barriers (Brown and Duguid, 2003). Higher use has been reported for some emergency department services, and for additional tests ordered to compensate for inadequate communication.

2.2.7 Financial Resources

Financial management, in service organizations, has been a constraint and an obstacle to other functions that contribute to service delivery (Adams and Colebourne, 1999). They suggest an 'enlightened' approach to finance in service organizations. This consists of more participative and positive approach where far from being an obstacle, it contributes to strategic planning, costing systems, personnel motivation, quality control, continued solvency, and keeping outsiders' confidence in management (Arhin-Tenkorang, 2000). In particular, there is a need to distinguish 'good costs' that improves organizational capabilities and quality service delivery from 'bad costs' that increase bureaucracy hence becoming obstacles to service delivery (Sun and Shibo, 2005). Allocated resources for health flow through various layers of national and local government's institutions on their way to the health facilities (Blas and Limbambala, 2001). Financial accountability using monitoring, auditing and accounting mechanisms defined by the country legal and institutional framework is a prerequisite to ensure that allocated funds are used for the intended purposes (Oliveira-Cruz, Hanson, and Mills. 2001).

In many developing countries, governments do not have the financial and technical capacity to effectively exercise such oversight and control functions, track and report on allocation, disbursement and use of financial resources (Smee, 2002). Political and bureaucratic leakage, fraud, abuse and corrupt practices are likely to occur at every stage of the process as a result of poorly managed expenditure systems, lack of effective auditing and supervision, organisational deficiencies and lax fiscal controls over the flow of public funds (Peters, Elmendorf, Kandola and Chellaraj, 2000). Falsification of financial statements is more of a problem in proprietary (private) hospitals. Executives will sometimes exaggerate revenue and misstate expenses in order to meet expectations of industry analysts and shareholders (Maureen, 2005). Public hospitals in Kenya are in dire need of funding to rehabilitate, redesign, equip and staff them to ensure effective and efficient service delivery to Kenyans (RoK, 2001). Low funding for Community Health Workers programme in the country has adversely affected the delivery of health services especially at the grass-roots (Maureen, 2005). Most of the public hospitals in Kenya especially rural areas are in a sad state that has incapacitated them from offering efficient services to patients and to alleviate the deplorable condition proper measures must be taken into consideration (Maureen, 2005).

3.0 Methodology

3.1 Research Design

The study adopted descriptive survey approach in collecting data from the respondents. The descriptive survey method was preferred because it ensures complete description of the situation, making sure that there was minimum bias in the collection of data and finding out the what, where and how of a phenomenon (Kothari, 2008).

3.2 Study Population

According to Mugenda & Mugenda (2003) a population is an entire group of individuals, events or objects with some common observable characteristics. The population under the study was the 1031 staff working in Kenyatta National Hospital.

3.4 Sampling Frame

A sampling frame is a list, directory or index of cases from which a sample can be selected (Mugenda & Mugenda, 2003). The sampling frame of the study was the list of permanent employees obtained from the Human Resource Department Data at the Kenyatta National Hospital.

3.5 Sampling Size and Sampling Technique

According to Oso & Onen (2009), a sample is part of the target (or accessible) population that has been procedurally selected to represent it. The study used stratified random sampling as the study population was not homogeneous as it consisted of Doctors (157), Nurses (320), Clinical Officers (291), Laboratory Technologists (143) and Pharmacists (120) making it the most appropriate sample to come up with the target sample. From the study population, a sample size of 10% was taken giving rise to a sample size of 103; 16 doctors, 32 nurses, 29 clinical officers, 14 laboratory technologists and 12 pharmacists.

3.6 Data Collection Instruments

The study used both primary and secondary data. Primary was gathered by use of closed and open ended questionnaires, which were self administered. According to Kothari (2004), primary data is that which is collected afresh and for the first time, and thus happen to be original in character. The secondary data for this study was collected from journals, reports and newspapers.

3.7 Data Analysis and Presentation

Data from questionnaires was analyzed using the descriptive statistics with the help of data analysis software - Statistical Package for Social Sciences (SPSS) package which offers extensive data handling capabilities and numerous statistical analysis routines that can analyze small to very large data statistics (Muijis, 2004).

4.0 Results and Discussions

4.1 Employee's Capacity

On whether Employee's incompetence affected service quality in the public health sector, majority (92%) of the respondents were in agreement while a few (8%) of the respondents were of contrary opinion.

4.1.2 Employees' Capacity Influence the Provision of Quality Service

On the extent to which employee's capacity influenced the provision of service quality in the public health sector, majority (53%) of the respondents indicated that employee's capacity influenced the provision of service quality in the public health sector to a very great extent, (31%) of the respondents indicated that the influence was to a great extent while 16% of the respondents indicated that employee's capacity influenced the provision of service quality in the public health sector to a moderate extent. This concurred with Argote, (2000) who stated that highly skilled physicians, nurses, administrators, and ancillary staff are critical to producing high-quality outcomes and effective quality improvement hence hospital growth.

4.2 Technology

4.2.1 Level of Technology Investment

On the level of technology in the public health sector, majority (56%) of the respondents indicated that there was high level of technology investment (34%) of the respondents indicated that there was medium level of technology investment while a few (10%) of the respondents indicated that there was low level of technology investment.

4.2.2 Adoption of Technology Improve Service Delivery

On whether the adoption of technology improved the service delivery in Kenyatta Hospital, majority (64%) of the respondents replied affirmatively while a few (36%) of the respondents were of negative opinion. The findings concurred with Mills(2001) who found that devising information technology systems provided real-time feedback to providers as they were caring for patients, through technology, the hospital would be in a position of offering bar-coded medications and automatic dispensing; coordinating patient admissions with bed capacity, immediate tracking of filled beds and daily changes in nursing needs.

4.2.3 Technological Advancement Effect of Service Quality

The study sought to know the extent to which the technological advancement influenced the provision of service quality in the public health sector. From the findings majority (53%) of the respondents indicated that technological advancement influenced the provision of service quality in the public health sector to a very great extent while (47%) of the respondents indicated that technological advancement influenced the provision of service quality in the public health sector to a great extent. This concurred with Dutton and Starbuck (2002) who indicated that investments in technology facilitate service assessment and improvement process is essential.

4.3 Communication Channels

4.3.1 Effectiveness of the communication channel used

Majority (49%) of the respondents indicated that the communication channel used at Kenyatta National Hospital was effective,(42%) of the respondents indicated that the communication channel used at Kenyatta National Hospital was very effective while (9%) of the respondents were neutral on whether the communication channel used at Kenyatta National Hospital was effective. This concurred with Payne,(2006) who indicated that through communication patients access to treatment, participation in preventive measures , ability to obtain consent, improve health professionals abilities to meet their ethical obligations, quality of care, including, hospital admissions, diagnostic testing, medical errors, patient follow-up, quality of mental health care and patient safety.

4.3.2 Whether Communication Channel Used Lead to Patient's Satisfaction

All (100%) of the respondents indicated that the type of communication channel used lead to patient's satisfaction. Communication with patients is vital to delivering service satisfaction because when hospital staff takes the time to answer questions of concern to patients (EFP, 2006).

4.3.3 Medical Tests and Nature of Treatment Clearly Explained

On whether the medical tests and nature of treatment were clearly explained, all (100%) of the respondents indicated that medical tests and nature of treatment were clearly explained in the hospital. This is concurred with Rust and Tuck (2006) who stated that designing services to be user friendly will simultaneously facilitate consumer use and external communication what the service delivery system is actually able to provide the customers.

4.3.4 Poor Communication Channels Affect Delivery of Health Services

Majority (65%) of the respondents indicated that poor communication channels affected delivery of health services in Kenyatta hospital while a few (35%) of the respondents indicated that poor communication channels do not affect delivery of health services in Kenyatta hospital. Choi and Kim (2008) noted that service strategy had to be communicated over and over again to everyone; the "employee at all levels must be aligned with a single vision of what the organization is trying to accomplish" and that effective internal communications was the requisite for integration and harmony in the service organization's activities and quality.

4.3.5 Communication Channels Influence Provision of Quality Service

Majority (84%) of the respondents indicated the communication channels influenced the provision of service quality in public health sector to a very great extent while 16% of the respondents indicated the communication channels influenced the provision of service quality in public health sector to a great extent.

4.4 Financial Resources

4.4.1 Operate with a Fixed Budget

The study sought to investigate whether there was a fixed budget at Kenyatta National Hospital. Majority (62%) of the respondents indicated that there was a fixed budget at Kenyatta National Hospital while a few (38%) of the respondents indicated that there was no fixed budget at Kenyatta National Hospital. Fixed budgets offered few incentives to maximize the effectiveness, quality, or quantity of care offered by hospitals (Smee, 2002).

4.4.2 Rating the level of financial resource allocation for the hospital

On the level of financial resource allocation for the hospital in the public health sector, majority (58%) of the respondents indicated that there was high level of financial resource allocation for the hospital while a few (42%) were of contrary opinion.

4.4.3 Inadequate Finances Affect Reliability in Delivery Of Medical Services

Majority (45%) of the respondents indicated that lack of finances affected the reliability in delivery of medical services in the hospital to a very great extent, (38%) of the respondents indicated that lack of finances affected the reliability in delivery of medical services in the hospital to a great extent while a few (17%) of the respondents indicated were neutral on whether lack of finances affected the reliability in delivery of medical services in the hospital.

4.4.4 Financial Resources Influence on Provision of Service Quality

The study sought to know the extent to which extent to which financial resources influenced the provision of service quality in public health sector in Kenya. From the findings, majority (79%) of the respondents indicated that financial resources influenced the provision of service quality in public health sector in Kenya to a great extent, (16%) of the respondents indicated that financial resources influenced the provision of service quality in public health sector in Kenya to a very great extent while a few (5%) of the respondents indicated were neutral on whether financial resources influenced the provision of service quality in public health sector in Kenya.

4.5 Service Quality

4.5.1 Quality Level of Health Services Provided

Majority (51%) of the respondents indicated that there was high quality level of health services provided in the hospital while (49%) of the respondents indicated that there was minimum quality level of health services provided in the hospital.

4.6 Regression Analysis

From the ANOVA, the significance of the predictor variables influencing the provision of service quality (dependence variable) was p= 0.01. The regression equation established was:

$Y = 7.000 - 0.981\ X_1 - 0.917X_2 - 0.768X_3 - 0.671X_4$

Where $X1_=$ Employees' capacity, $X_{2=}$ Technology, $X3_=$ Communication Channels, $X4_=$ Financial Resources

The values, 0.981, 0.917, 0.768 and 0.671 are the un-standardized coefficients. These were the coefficients that the study would obtain when standardized of all of the variables in the regression, including the dependent and all of the independent variables, and running of the regression. By standardizing the variables before running the regression, the study put all of the variables on the same scale, and compared the magnitude of the coefficients of the independent to determine which one had more effects on delivery of service quality. The larger betas were associated with the larger t-values and lower p-values.The column of coefficient shows the predictor variables of constant, Employees' capacity, Technology, communication channels and financial resources. The first variable constant of 7.000 represented the constant which predicted value of delivery of service quality when all other variables affecting delivery of service quality was constant at zero (0). From the above regression model, it was found that provision of service quality public health sector would be at 7.000 holding, employees' capacity, technology, communication channels and financial resources constant at Zero. Low employee's capacity would lead to a decrease in provision of service quality public health sector by factor of 0.981 with P value of 0.003 while Inadequate Technology adoption in provision of health service would lead to a decrease in provision of service quality by a factor of 0.917 with P value of 0.004.

The study also found that ineffective communication channels affected delivery service quality in public health sector by a factor of 0.768 with P value of 0.002 while insufficient financial resources would result to decrease in provision of health service quality by factor of 0.671 with P value of 0.001. This clearly indicates that there existed a negative relationship between factors affecting service quality in hospital and provision of service quality in Kenyatta National Hospital clearly indicating that low Employees' capacity, poor Technology adoption ineffective communication Channels and insufficient financial resources affected delivery of service quality in the hospital as they were statistically significant with a P-Value of 0.03, 0.04, 0.02 and 0.01 at 95% confidence level. This implied that low employees capacity, low technology adoption, ineffective communication channels and insufficient fund affect delivery of service quality to patients in public health sector affecting health service quality perceptions, patient satisfaction and loyalty. The findings concurred with Sandoval, Brown, Sullivan and Green, (2006) who found that most public hospital service processes lack flexibility and budgetary autonomy, while staff lack performance based incentives which leading to poor health service outcomes and inefficiency.

The findings also concurred with Arhin-Tenkorang, (2000), who indicated that underfunded public health centers, hampered by weak public health system and lack of skilled health workers, inadequate medicines, supplies and equipment and lack of essential support services such as laboratory services, pharmacy and amenities affected provision and delivery of service quality in public hospitals.

5.0 Conclusions

From the findings the study concluded that organization must enhance employee's capacity in order to improve provision of service quality. Adequate number of high skilled and experienced employees must be employed continuously, discourage ineffective recruitment, encourage monitoring of doctors and staff, ensure that performance and practice standards are met to enhance service quality provision. This would lead to proper medication services, patient satisfaction, good relationship between medical providers and patients, enable the participation in multi-disciplinary and attracts more patient hence effective improvement of hospital growth.
From the findings the study concluded that public health sectors should improve the level of adoption of technology and willingness to invest and advance in modern technology in order to facilitate service assessment, improve process and communication which are essential for effective and efficient service quality in public health sector in Kenya. Technology adoption in health institutions would enable the provision of high-quality medicine to patients, reduce time lags in getting lab and imaging results, ensure the resulting system meets the needs of clinicians and improve the accessibility of relevant information efficiently and effectively.

Use of more than one communication means to inform, persuade and educate the customer is also required. From the findings the study concluded that management should emphasize on the use of upward, horizontal and vertical communication channels in order to provide information to upper level managers about activities and performances throughout the organization as well as improving individual participation in provision of service quality through use of face-to-face communication in conveying difficult or ambiguous messages, or when sender and receiver differ in background or opinions. Effective communication would enable the accessibility to treatment, quality of health care, efficient admissions; diagnostic testing and patient follow-up also reduce risk of hospital admission, intubation and poor prescribed medication, delayed diagnosis, misdiagnosis, and inappropriate referral. From the findings, the study concluded that delivery of service quality health in the health sectors should be improved through effective allocation of financial resources in public health sector in order to promote other functions that contribute to service delivery, reduce the bureaucracy in financial management and offer funds for purchase of high quality health equipment and employing of more competent staff who could offer. The financial resource allocation should be done through a strategic planning, costing systems, personnel motivation, quality control, continued solvency, and keeping outsiders' confidence in financial management, financial accountability using monitoring, auditing and accounting mechanisms to ensure that allocated funds are used for the intended purposes in order to ensure good expenditure control and maximize the effectiveness, quality, or quantity of medical care offered by hospitals.

From the findings the study concluded that fixed budgets in hospitals led to inequities and fails to respond to new demands and priorities while centralized budget systems contributed to technical inefficiency by preventing health staff from optimizing the deployment of inputs perpetuating poor quality of service in hospital. Insufficient funds lead to purchasing of low quality drugs and medical equipment, low staff payment demotivating them in carrying out their duties as expected affecting provision of high service quality. From the findings, the study concluded that high quality level of health services must be provided efficiently without differing according to demographic factors gender and marital statuses in order to ensure improve patient's satisfaction level for health care provided to improve patient satisfaction, patient retention, loyalty, costs, profitability, service guarantees and growth of health institution from public sectors

6.0 Implications for Policy

The Kenya government in an attempt to improve its public healthcare system has been in the processes of drafting various health policies. From the findings of this study, it is imperative that the government comprehensively addresses all the issues of concern in the public health sector. The study recommends that management in public health sector should improve employees' capacity to enhance provision of health service quality. Adequate number of high skilled and experienced employees, effective recruitment should be adopted to improve monitoring of doctors and staff, meeting performance and practice standards enhances service quality provision.

From the findings and conclusion, the study recommends that public health sectors should adopt modern technology so as to facilitate service assessment, improve process and communication, provide high-quality medicine to patients, reduce time lags in getting lab and imaging results, ensure the resulting system meets the needs of clinicians and improve the accessibility of relevant information efficiently and effectively.

The study also recommends that public health institutions should adopt use of face-to-face, upward, horizontal and vertical communication channels as this would enable flow of information to upper level managers, improve individual participation, conveying difficult or ambiguous messages, enable the accessibility to treatment, quality of care, efficient admissions, diagnostic testing and patient follow-up also reduce risk of hospital admission, intubation and poor prescribed medication, delayed diagnosis, misdiagnosis, and inappropriate referral. From the findings the study recommends that the government should improve financial management in service organizations in order to promote other functions that contribute to service delivery, reduce the bureaucracy in financial management and offer funds for purchase of high quality health equipment and generally influence delivery of health service quality so as to enhance patient satisfaction, patient retention, loyalty, health service guarantees and growth and development of health institution from public sectors.

Policy makers interested in improving the public healthcare sector need to understand the interaction between a conducive working environment, complete with all the equipment and necessary resources for employees to perform, employee satisfaction and customer satisfaction. Unless we can put the employee/customer satisfaction into perspective, we cannot remove the barriers to quality health provision in the public health sector. Finally, there is need to understand and address the emotional intelligence factors of the workforce critical to success in service provision.

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