PATIENTS’ PERCEPTIONS OF THE QUALITY OF OUTPATIENT CARE AT THE PORT MEDICAL CENTRE IN TEMA COMMUNITY ONE

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OCTOBER, 2018
DECLARATION

I, Anita Ago Asare, declare that this dissertation is my own work and it has not been presented either in whole or in part for the award of any degree. All references have been duly acknowledged.

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ABSTRACT

Introduction: Ghana is an emerging market with high demands on its health, especially to achieve universal health coverage while maintaining quality of care. Quality of care is a standard that is measurable from different perspectives, including the patients’ perspectives. The government is pushing for private public partnership in all areas of the economy including the health sector where the state owned health facilities are inadequate to mop up all the cases reporting for healthcare delivery. Quality of care has been studied extensively in Ghana among public health facilities yet presently, very little is known about the concept in the private healthcare setting. Understanding quality of care issues from the perspective of private providers will improve healthcare delivery in the country. The objective of this study is to assess patients’ perspectives of quality of care at the outpatient department of Port Medical Centre.

Methodology: Study was a quantitative cross-sectional study undertaken at the outpatient department of Port Medical Centre using exit pre-tested self-administered questionnaires. The consecutive sampling technique was used to select 390 study participants. Quality of care was measured using a modified form of the Service Quality (SERVQUAL) model gap analysis and satisfaction measured with the Short Assessment of Patient Satisfaction (SAPS) instrument. Data was entered into Microsoft excel and imported into Stata 15.0 for analysis. Descriptive statistics were used to describe the characteristics of the participants. The paired t test, simple linear and logistic regression techniques were used to examine relationships between patient satisfaction and socio-demographic and quality of care variables. Multiple linear regression was used to examine the association between satisfaction and quality of care dimensions. A p-value of 0.05 was used to determine statistical significance.

Results: Satisfaction measured was 74% Mean percentage of perceptions of quality was 86.0% while mean expectations of quality was 87.6% and the mean difference between the
two was -0.08 (p = 0.002). Out of 25 service quality factors, 12 showed significant negative gaps in service quality between perceptions and expectations. All 5 positive gaps were not statistically significant. As composite variables, holding perceptions of quality constant, as expectations increase, satisfaction with quality of service reduce by 0.46% (p = 0.079) and holding expectations constant, as perceptions of quality of care increases, satisfaction with outpatient service quality increases by 2.4% (p < 0.001). Significantly, increasing perceptions of reliability and assurance, increase satisfaction; and increasing expectations of empathy and tangibility significantly reduce and increase satisfaction respectively. Together, these four (after controlling for socio- demographic characteristics) explain only 24% of satisfaction with outpatient care.

**Conclusions:** There are high expectations as well as high perceptions of quality of care at the Port Medical Centre outpatient department but with a significant negative gap. There are 12 significant negative gaps in quality factors noted that can be improved. Satisfaction in this study is not significantly different from that noted in government hospitals in Ghana. Only perceptions of assurance and reliability and expectations of tangibility and empathy are associated with patient satisfaction.

**Key words**
Quality of care, Outpatient Department, outpatients, patient satisfaction, SERVQUAL dimensions; SAPS, expectations, perceptions
DEDICATION

To my daughter Anna-Maria
ACKNOWLEDGEMENT

To the University of Ghana and School of Public Health for the impartation of invaluable knowledge

To my formal supervisor, Dr Reuben Esena for his oversight

To the management of Port Medical centre for allowing me to carry out this research in their facility

To my employers C and J Medicare Hospital for their support

To loved ones for encouragement

To the Almighty God
# TABLE OF CONTENTS

DECLARATION .................................................................................................................. i

ABSTRACT ........................................................................................................................ ii

DEDICATION ...................................................................................................................... iv

ACKNOWLEDGEMENT ...................................................................................................... v

LIST OF TABLES ................................................................................................................ ix

LIST OF FIGURES .............................................................................................................. x

LIST OF ABBREVIATIONS ................................................................................................. xi

CHAPTER ONE .................................................................................................................. 1

INTRODUCTION ................................................................................................................ 1

1.1 Background to the study ............................................................................................. 1

1.2 Problem statement ..................................................................................................... 3

1.3 Objectives of the Study ............................................................................................. 6

1.3.1 General Objective ................................................................................................. 6

1.3.2 Specific Objectives ............................................................................................... 6

1.4 Research Questions .................................................................................................. 6

1.5 Conceptual Framework ............................................................................................. 8

1.6 Significance of study/ Justification ........................................................................... 10

CHAPTER TWO ................................................................................................................ 11

LITERATURE REVIEW .................................................................................................... 11

2.1 Background to literature review ................................................................................ 11

2.2 Quality of care .......................................................................................................... 12

2.3 Concept of patient satisfaction in quality of care ..................................................... 13

2.4 ‘Theories, models and dimensions of patient satisfaction and quality of care,’ .............. 14

2.4.1 Historical models ................................................................................................ 14

2.4.2 SAPS Model ........................................................................................................ 17

2.4.3 SERVQUAL Model ............................................................................................. 18

2.5 Meeting the patient’s information needs .................................................................... 21

2.6 The socio- demographic variables and patient satisfaction ......................................... 24

CHAPTER THREE ............................................................................................................ 25
LIST OF TABLES

Table 1: Reliability Coefficient ........................................................................................................33
Table 2: Socio-demographic characteristics of respondents...............................................................35
Table 3: Associationss between sociodemographic variables and patient satisfaction ........36
Table 4: Associations between socio-demographic variables and perceived quality of care .37
Table 5: Mean scores of service quality dimensions ........................................................................39
Table 6: Patient satisfaction ..............................................................................................................44
Table 7: The influence of quality of care on outpatient satisfaction.................................................44
Table 8: Model of satisfaction against perceived service quality dimensions...............................45
Table 9: Regression model of satisfaction against perception of quality dimensions and moderating factors. ........................................................................................................46
LIST OF FIGURES

Figure 1: Conceptual framework of patients’ perceptions of the quality of outpatient care. ...8
Figure 2: System Framework of Port Medical Centre ..........................................................26
Figure 3: Mean gap scores for 6 service quality dimensions ...................................................43
LIST OF ABBREVIATIONS

SERVQUAL - Service Quality Model

SAPS - Short assessment of patient satisfaction questionnaire

OXFAM - Oxford Committee for Famine Relief

GHS - Ghana health service

CHAG - Christian Health Association of Ghana

MOH - Ministry of health

QOC - Quality of care

IMF - International monetary fund

MDG - Millennium Development Goal

SDG - Sustainable Development Goal

OPD - Outpatient Department

COR - Crude odds ratio

AOR - Adjusted odds ratio

SE - Standard Error
CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Quality can be defined as living up to set standards. Quality of care which is one of the objectives of the Ghanaian Ministry of Health (Turkson, 2009) can be viewed from the clinical perspective and also the patients’ perspective (Atinga et al., 2011; Tucker & Adams, 2001). The perception of quality of care by the patient has now come to be accepted as a performance indicator of health facilities (Turkson, 2009, Fenton, 2012). The patient determines quality as a conceptual difference between their predictions and their perceptions of service performance indicators (Camgöz-Akdağ, Tarım, Lonial, & Yatkin, 2013). Apart from the obvious poor logistics, apathy and inadequate human resource, low quality of care also results in poor health outcomes (Swanson, Rubenstein, Meredith, & Ford, 2007; Chimbindi, Bärnighausen, & Newell, 2014). In developing countries such as Ghana, how the patients perceive quality, builds their confidence in the mainstream healthcare system and prevents them from avoiding the system or accessing healthcare only when other unorthodox and unsafe means of healthcare have failed (Akter, Upal, & Hani, 2008).

Researchers, healthcare industry players, health sector investors, corporate organizations as well as insurance companies are keen on the indicators of service quality as it informs their daily decisions about which health facilities to engage which would therefore have an impact on the survival competitiveness of these health facilities especially private ones (Camgöz-Akdağ et al., 2013).
Patient satisfaction and quality are two separate concepts with quality being one of the strong predictors of patient satisfaction (Xiao & Barber, 2008). In general, patient satisfaction and quality of healthcare are not simple to measure as there are multiplicities of factors that can be assessed to arrive at the said conclusion. Among these include the knowledge and technical ability of the doctor, communication skills and the ability of the patient to obtain adequate information related to their health, accessible and convenient location of facility, customer service of staff, queues, referral policy, patient doctor contact time, financial barriers, access etc (Mohammadreza Hojat, PhD; Daniel Z. Louis, MS; Kaye Maxwell; Fred W. Markham et al., 2011; Chimbindi et al., 2014). Boult C, Reider L, Frey K, Leff B, Boyd CM, (2008), showed that efficiency, effectiveness, timeliness and technical proficiency are also modalities that impacted patients’ perception of quality of care. To them, good communication led to higher levels of satisfaction; this included the provider giving adequate information to both patients and their relatives and motivating and giving the patient encouragement.

Most patients expect from their healthcare service providers: available information, excellent customer staff relationship, and to take active part in decisions about their health (Assefa, Mosse, & H/Michael, 2011). A study conducted in a poor community in Tanzania noted that patients would choose health facilities that they perceived gave them high service quality as opposed to the reverse (Assefa et al., 2011).

At the level of a local facility, conduction of patient satisfaction surveys shows the level of commitment of the management to improving quality of care, and healthcare marketing needs to be a priority of all health facility managers (Habbal, 2007). Globally it has been found that it is
essential for the patients’ satisfaction to be measured on a regular basis (Assefa et al., 2011). Quality assurance in many countries requires that patient perception of quality of care be measured and taken into consideration (Assefa et al., 2011). As management inculcates measures based on patient perception and satisfaction reviews into their practice, there is general improvement is service delivery (Kelly, 2014).

An analysis comparing private and public healthcare facilities in low income and middle income societies asserted that the public facilities have poor sense of time and poor customer service skills, as compared to their private counterparts and those private health facilities are more efficient and have high levels of QOC (Basu, Andrews, Kishore, Panjabi, & Stuckler, 2012). Relatively more is known about the nature of the service quality in the state owned health facilities as quite a number of research data has been collected in the area. Conversely, little data is available to quantify quality of healthcare delivered in the private health sector in Ghana (MOH, 2013).

1.2 Problem statement

As a growing middle income economy, Ghana has seen an immense expansion of its population over the past years, resulting in an increase in the demand for social services including education, electricity, water supply, as well as healthcare. The introduction of the National Health Insurance Scheme (NHIS) which was instituted to address the financial barrier to health, has also led to further increase in access to healthcare across the country (Atinga, Abekah-Nkrumah, Domfeh, 2011). A high patient to doctor ratio in Ghana has cumulated in the state owned facilities being inadequate to serve the entirety of the populace. This has led to the proliferation of private health facilities which accounts for a significant proportion of healthcare delivery in
the country, mopping up many cases at mainly the primary and secondary levels of care. This increase has however not been commensurate with the quality of care in our health institutions (MOH, 2013).

Formerly, health facilities operated by seeing patients as benefactors of good deeds and so they often did not take a hundred percent responsibility for the patients’ experiences and outcomes (Assefa et al., 2011). Clients will exit a facility or provider they have a long standing relationship with when the expected outcome is elusive. Bedi (2010) says that it will cost a service institution less to retain old clients than to try to gain new ones and therefore it is important to maintain a high level of quality of service. The patient knows he has alternatives in choosing a health facility and so their loyalty must be earned and kept.

Empirical evidence has shown from various researches done, that service quality in Ghanaian healthcare is poor (Atinga et al., 2011). Poor service quality in healthcare has resulted in low patient satisfaction as a result of its importance to not only health outcomes in general, but also treatment compliance specifically (Mohammadreza Hojat, PhD; Daniel Z. Louis, MS; Kaye Maxwell; Fred W. Markham et al., 2011).

As opposed to institutions that provide products, service providing industries such as the healthcare industry, tend to have poor outcomes and little impact if their service delivery/ quality of service is poor, because the service rendered is not quantifiable or tangible, and they are more liable to low levels of quality as ordinary people with attitudinal flaws are at the forefront of the service delivery (Arlen, 2008; Berry, Parasuraman, & Zelthami, 1988).
This low quality of healthcare in Ghana has contributed to the unattainment of some Millenium development goals such as reducing under-5, child and maternal mortality, and also makes it herculean to attain global standards/benchmarks in healthcare (Priporas, Laspa, & Kamenidou, 2008).

How the patient views quality of care is not always commensurate with the clinical determinants/perspective of quality of care (Tucker & Adams, 2001). Because majority of patients aren’t knowledgeable in the technical aspects of medicine, they determine QOC by mainly non-technical indicators such as communication, good customer care etc. (Tucker & Adams, 2001; Atinga et al., 2011). It is however the case that patient’s make their decision to access one health facility or the other based on their assessment of the QOC; therefore, their evaluations, no matter how flawed, becomes therefore important (Ayensu, 2015).

There is paucity of data concerning the activities of private health players in general in Ghana, most especially, the quality of their service delivery (MOH, 2013). A number of studies have been conducted on patient satisfaction and quality of care in Ghana but mainly in the state owned institutions. ‘Private sector healthcare delivery in low- and middle-income countries is sometimes argued to be more efficient, accountable, and sustainable than public sector delivery. Conversely, the public sector is often regarded as providing more equitable and evidence-based care’ (Basu et al., 2012). Private Healthcare facilities have an increased tendency to have low quality of care and satisfaction rates, and this has been shown to vary from study to study (Basu et al, 2012). The Ministry of health policy guide recognizes that if private players improve service quality, the result will be improved health outcomes (Basu et al., 2012; MOH, 2013).
This study therefore sets out to assess quality of care at the outpatient department of a private hospital in Tema Community one from the patients’ perspectives, and to measure associations with identified factors that predict patient satisfaction. There is no comparison in this study to a state owned health institution.

1.3 Objectives of the Study

1.3.1 General Objective

The main objective of the study is to assess patients’ perceptions of the quality of care at the outpatient department of Port Medical Centre.

1.3.2 Specific Objectives

The specific objectives are:

1. To assess patients’ expectation of quality of care among the clients of the Outpatient Department of Port Medical Centre
2. To determine how patients, perceive the service quality of the outpatient department.
3. To analyze the differences between the patients’ expectations and their perceptions of the quality of care.
4. To determine the level of satisfaction of service quality of outpatients of Port Medical Centre.
5. To examine the association between perceived quality dimensions and client satisfaction

1.4 Research Questions

1. What is the level of expectation of quality of care among patients at the Out Patient Department of Port Medical Centre?
2. What is the level of perception of quality of care at the Outpatient Department of Port medical centre?

3. Is there a significant difference between the patients’ expectation and their perceptions of the quality of care?

4. What is the level of satisfaction with service quality among outpatient clients of Port medical Centre?

5. What is the association between perceived quality dimensions and satisfaction?
1.5 Conceptual Framework

<table>
<thead>
<tr>
<th>INDEPENDENT VARIABLES</th>
<th>MODERATING VARIABLES</th>
<th>DEPENDENT VARIABLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMPATHY</td>
<td></td>
<td></td>
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<tr>
<td>TANGIBILITY</td>
<td></td>
<td></td>
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<td>RELIABILITY</td>
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<td>RESPONSIVENESS</td>
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<td>ASSURANCE</td>
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<tr>
<td>PATIENTS’ INFORMATION NEEDS</td>
<td></td>
<td>PERCEPTIONS OF THE QUALITY OF CARE + PATIENT SATISFACTION</td>
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Socio-demographic variables
- Age
- Sex
- Occupation
- Education
- Mode of Payment
- Number of hospital visits

Figure 1: Conceptual framework of patients’ perceptions of the quality of outpatient care. (Adapted from Daniel & Berinyu, 2010; Tucker & Adams, 2001).
1.5.1 Conceptual framework narrative

The six dimensions: tangibility, assurance, reliability, responsiveness, empathy and patients’ information needs are the independent variables and they measure quality of care; They are all directly related to the outcome variable- patients’ perceptions of the quality of care, individually and collectively. Each of the 6 dimensions is a construct examined by several specific questions as seen in appendix 1. The representation of each of these 6 service quality dimensions is a pair of expected and perceived scores. The SERVQUAL model uses gap analysis i.e.

   Expectations- perceptions to predict the quality of care

Patient satisfaction in literature has also been found to be influenced by their evaluations of quality of healthcare. In this study, the effects of the quality of care dimensions on patient satisfaction are explored, making satisfaction also an outcome variable of interest.

The socio-demographic variables: age, sex, occupation, education and mode of payment and number of hospital visits are moderating factors. For example, a middle aged upper middle class patient may demand a bit more information from his healthcare provider than an 18-year-old student. The mediating variables, the socio-demographic characteristics are values that describe each and every patient seen at the outpatient department. So for example, every patient is either a male or female, has a quantifiable age in years greater than or equal to 18 years and is either has no education or a certain level of education. A patient’s socio-demographic characteristic such as age, sex or income level, has some influence on their satisfaction with healthcare as well as how they perceive healthcare (Xiao & Barber, 2008).
1.6 Significance of study/ Justification

This study will serve as a useful tool that will inform the management of the Port Medical Centre and other private hospitals of ways to improve quality of care from the clients’ perspective. It will highlight the aspects of quality of care dimensions most cherished by their clients as well as areas in which they fall short and need to make amends.

It will also add to literature and knowledge available, attempting to fill the gap in the lack of information regarding the patients’ views of private health facilities, and information in general of private health facilities in Ghana. The study will also highlight the factors that influence quality in healthcare and can be a future stepping stone to compare the performance of private against public hospitals in Ghana in quality, with the intention of improving universal coverage and access, and quality in healthcare delivery in Ghana.
2.1 Background to literature review

The following Literature review section cumulated from an extensive research of Pubmed, Science Direct, Google scholar etc. and available books specifically from Ministry of Health and Ghana Health Service related documents. There are six main subsections looking at the relevant areas of ‘Background to the literature review,’ ‘quality of care,’ ‘concept of patient satisfaction in quality of care,’ theories, models and dimensions of patient satisfaction and quality of care,’ and ‘meeting the patient’s information needs’ and ‘The socio-demographic variables and patient satisfaction.’

Service quality/quality of care measurement can take three forms:

1. Measuring the patient perceptions of quality of care
2. Measuring the technical outcomes of quality of care OR
3. Assessing the financial costs involved in the healthcare delivery. (Aduo- Adjei, 2015)

There is competition between state owned and other (including private) health facilities in Ghana due to the activities of health insurance players and also, as each account for approximately half of the nation’s healthcare delivery (Atinga et al., 2011; MOH, 2013; Abuosi & Atinga, 2013). Basu et al. (2012) noted that the part that each plays in healthcare in third world countries like Ghana has not been clearly defined. While the IMF encourages such countries to engage the private sector in health more, Oxfam argues that the government sector needs to maintain the lead for health to be accessible to all (Basu et al., 2012). Engagement of private players in healthcare is necessary to increase coverage of healthcare for all (MOH, 2013). They (private
health facilities) are contributing immensely to national growth through service provision as well as employment (Atinga et al., 2011).

The outpatient department is usually the first point of call for conditions that are not an emergency and the greater majority of all hospital visits are at the OPD. Evidence from a study of poor low and middle income countries in Africa and Asia shows that, private OPD attendance accounts for 60-80% of all OPD attendance in some countries (Basu et al., 2012; Khamis & Njau, 2014); Top ten conditions reporting for care in the Ghanaian outpatient includes -malaria, upper respiratory tract infections, rheumatism and others - diarrhoea, skin diseases, anaemia, intestinal worms, acute urinary tract infection, hypertension and eye infections (GHS, 2017; Habbal, 2007).

2.2 Quality of care

According to (Priporas et al., 2008), there are over a hundred definitions in literature for quality of care. This can be defined as how well a clients’ expectation of service is reasonably met, or ‘meeting the clients’ needs’ or matching up to a customer’s expectations or the ability to exceed the clients’ or patients’ expectations (Yousapronpaiboon & Johnson, 2013). Simply put, quality refers to the impact derived from the values and main aims and objectives of healthcare (Donabedian, 2016). This has been an evolving concept over many decades. The health sector offers differing services including diagnostics, hospital services and consultations; and the concept of quality of care is introducing competitiveness in the sector as it shifts the focus of service performance to the patients’ views (Yousapronpaiboon & Johnson, 2013). Quality of care
is also a strategy in healthcare marketing that helps administrators to focus on excellence (M, 2017).

2.3 Concept of patient satisfaction in quality of care

Client satisfaction globally has become an important appendage to quality of service and it can be defined as what the patient perceives service quality to be (Kelly, 2014). For three decades now, there has been a shift from the notion of helping the patient to the patient being autonomous as they are viewed as customers and the engine of growth of especially the private health sector. The satisfaction of the patient is a function of their access or use of healthcare services provided (Assefa et al., 2011).

The purpose of the existence of businesses (including private hospitals) is to serve the needs of their clients. Patients usually stay with a healthcare provider due to the concept of traceability of their medical records/ history. Lovelock’s classification scheme (1983) puts medical services delivery as an ongoing service and therefore it may take a patient a longtime to exit from one facility to the next. Kelly (2014) noted that clients who access a healthcare facility over and over are of greater value than those who visit just once. Such loyal customers deserve to be cherished and the relationship with them kept.

Almost every client who experiences a bad service is likely to tell at least 72 other people, primarily and secondarily (Atinga et al., 2011). The main reasons why patients will be dissatisfied include long waiting hours, unavailability of drugs and logistics, poor cleanliness, poor information provision, lack of privacy etc. (Assefa et al., 2011). Patient satisfaction surveys
need to be conducted from time to time to determine the indicators of patient satisfaction so that health facilities can continue to modify their service delivery to suit the patients’ needs.

When a patient’s expectations and their perception of service quality are compared, their satisfaction scores can be determined:

\[
\text{Perception - Expectation} = \text{Satisfaction} \quad (\text{Yousapronpaiboon \& Johnson, 2013}).
\]

2.4 ‘Theories, models and dimensions of patient satisfaction and quality of care,’

Patient satisfaction and quality of care have been used interchangeably with some researchers measuring one to represent the other; however even though empirical evidence has shown that the two are separate and factors affecting them are different, several overlaps have been seen (Tucker & Adams, 2001; Xiao & Barber, 2008).

2.4.1 Historical models

There exist many models that have been used in different settings to assess patient perception of service quality and their satisfaction (Mohammadreza Hojat, PhD; Daniel Z. Louis, MS; Kaye Maxwell; Fred W. Markham et al., 2011). The concepts are as yet not well developed. Most patient satisfaction models are based on how well patients’ expectations are met. These have been derived from theories of patient satisfaction which were mainly developed in the 1980’s.

Older theories and their proponents are described below;

- Lehtinen and Lehtinen in 1982 in discussing quality, referred to ‘interactive, physical and corporate quality’ (Yousapronpaiboon & C. Johnson, 2013)

- Hevdall and Paltschik in 1994 referred to ‘Willingness and ability to serve, and the physical and psychological’ to describe quality (Yousapronpaiboon & C. Johnson, 2013).
- Rust and Oliver (1994) divided quality of care into 3 parts namely- functional, technical and environmental.

- Ware, Snyder, Wright, & Davies (1983)- the patients’ satisfaction is based on his expectations being met.

- Linder-Pelz, (1982) – the patient’s satisfaction is based on certain beliefs they have as well as their past experiences (Tucker & Adams, 2001).

- Donabedian (1966), - the patients’ satisfaction is based on patient’s interactions that the patient has within the facility as well as the final result of the care he receives. He introduced the structure- process- outcome model (Donabedian, 2016).

In their assessment of healthcare quality in the Northern Region of Ghana, Atinga et al. (2011) adopted a four point dimension model namely- communication, patient- provider relationship, the hospital environment and waiting time. These are explored below:

- Patient/ provider relationship: According to Atinga et al., (2011) this encompasses various qualities that patients expect from their healthcare providers right from their point of registration, through the outpatient department, to the pharmacy and prominent are; courtesy, good manners, friendly receptiveness, care and support, attentiveness, socialization with the patient and formation of an amiable relationship with them. All these will have a direct bearing on the patient perception of quality at the facility. Patient-staff relationship was the most important factor that determined a patient’s satisfaction with service quality in their study.

- Communication- Refers to the patients’ ability to elicit information from his/ her service provider. Communication, though mainly verbal, has interpersonal skills that enhance the
communication and makes it acceptable/appreciable by the patient. In Atinga et al., (2011) communication did not have a significant impact on patients’ satisfaction with healthcare.

- The Hospital Environment: on first visit to a facility, the surroundings inform the patient’s initial impressions. A clean hospital environment has been noted to have a positive psycho–emotional impact on the patient, which enhances their healing process (Tucker & Adams, 2001). The environment is not only expected to be clean but accessible including disability friendly and also safe. (Atinga et al., 2011).

- Waiting Time: This has received much attention in literature as far as patients’ expectations and perceptions of quality of care are concerned. Prolonged unnecessary delays could be viewed in laborious processes involving payment and continuity of care. (Atinga et al., 2011). A study done in Ghana showed that waiting time is one and half hours longer approximately for the same condition in public hospitals than in private hospitals (Basu et al., 2012). Long waiting times of more than one hour than the predicted are usually attributable to avoidable delays (Turkson, 2009).

Assefa et al., (2011) noted that patients’ satisfaction assessment instrument has to always be used in a way that is appropriate to the type of investigation being done i.e. it has to be adapted to the type of study being carried out. There is sometimes little adaptation when researchers borrow these tools from other fields.

A 46-point questionnaire developed by Gogan et al. (2000) looks at patient satisfaction with different aspects of healthcare. Hojat, et al. (2011) developed a brief instrument specific to
patient satisfaction with their primary care physicians, whose validity was shown by empirical evidence.

Priporas et al. (2008) described service quality differently from clinical quality. They postulated that clinical quality refers to those aspects such as the knowledge of the health service provider, availability of drugs etc. Conversely, service quality is patient related and includes the factors that determine their satisfaction e.g. waiting time, clean environment etc. Gronoroos in 1984 divided service delivery directly into two main headings namely: technical and functional which are akin to clinical quality and service quality respectively above. Turkson, (2009) in his assessment of perceived quality in rural Ghana, measured waiting time, patient/ provider interpersonal relationship, cleanliness of the environment amongst others, as dimensions of quality of care. A study conducted assessed quality in healthcare under the following headings- service personalization, patient amenities, price, environment, professional and technical care, accessibility and catering (Kelly, 2014)

2.4.2 SAPS Model

This model has been used in clinical settings and its correlation with other highly valid instruments is high with a Cronbach’s alpha of 0.85 (Hawthorne, Sansoni, Hayes, Marosszeky, & Sansoni, 2014). It can be used in different clinical settings successfully to measure patient satisfaction. From its use, its simplicity has been demonstrated to maintain a high level of validity and reliability as far as patient satisfaction instruments go (Hawthorne et al., 2014). The SAPS model was adapted from four widely used patient satisfaction models- Client Satisfaction Questionnaire (CSQ-18), which consists of 18 items assessing satisfaction with health care services; the Consultation Satisfaction Questionnaire (ConsultSQ), which has 18 items assessing clinician consultations; the Patient Satisfaction Index (PSI), which has 23 items covering
satisfaction with medical care and the Genito-Urinary Treatment Satisfaction Scale (GUTSS).

The 7 recognized dimensions are below namely:

1. Effectiveness
2. Information
3. Technical Skill
4. Participation
5. Relationship
6. Access and Facilities
7. Satisfaction General

2.4.3 SERVQUAL Model

This is the most widely used model to assess quality in the service industries such as health, hospitality, banking and finance (Camgöz-Akdağ et al., 2013). The original domains of the model developed by Parasuraman et al in 1985 were: reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding the customer and tangibles. These were adapted from the fifth gap of the Gap Model which comprised 5 main gaps- listening gap, service design and standards gap, service – performance gap, service delivery external communication gap and finally the fifth, expected service perceived service gap (Ayensu, 2015). The 10 dimension were therefore scaled down to 5 by its proponents in 1988 as follows (Berry, Parasuraman, & Zelthami, 1988; Arlen, 2008):

1. Tangibility (appearance of physical environment, equipment)
2. Reliability (delivering service promised accurately)
3. Responsiveness (delivering service promptly without wasting time)
4. Assurance (communication, credibility, security, competence and courtesy)

5. Empathy (understanding the customer and accessibility)

This model has been modified and used in different ways and in different settings, according to the research being undertaken. Tucker & Adams (2001) used 7 dimensions – caring, empathy, reliability, responsiveness, access, communication and outcomes, with Cronbach’s alpha for each dimension more than 0.70. Daniel & Berinyuy (2010) added product with a Cronbach’s alpha of 0.91. All the dimensions have been proven to be significantly related to the quality of service from its use in a wide range of clinical settings. It therefore has wide applicability (Yousapronpaiboon & Johnson, 2013). Its 5 dimensions are described below:

1. Responsiveness-

How fast the provider will respond to the patients’ needs either by way of giving information on the phone, replying electronic messages, emergency responsiveness, low waiting time etc, is critical to the patients’ satisfaction of the quality of care. It refers to the speed of delivery of services.

2. Assurance-

This is a dimension that quantifies the knowledge, skill and technical abilities of the service provider from the patients’ view. It is a combination of the following components from the original SERVQUAL Model- communication, credibility, security, competence and courtesy (Daniel & Berinyuy, 2010). Physicians use the biomedical model mainly to assess the characteristics of diseases of patients, while the patients, using less of that, mainly rely on the
social and behavioural factors to assess their illnesses. The result is a communication gap (Platt & Keating, 2007).

In effect, the client/patient needs to see and appreciate the provider in order to be satisfied with the service received, after all, that is the aspect that drove the patient to the facility to address a need/challenge. Staff attitude with the patient: their friendliness, politeness etc is also key here.

3. Empathy-

This is a function of the interactions between the patient and the staff. Most clients expect that the delivery of services is done not in a robotic manner which does not take into account the presence or feelings of the client. Rather, the staff should relate to the client in an amiable manner with courtesy, serenity and calmness etc. The staff should be viewed by the patient as being caring, attentive and warm in the delivery of their services. A patient reportedly, left the services of a very good physician because she did not feel a physical connection with her doctor; This happened despite the fact that this patient has accessed care for many years with the same doctor (Coulter & Ligas, 2000).

4. Tangibility-

This makes reference to how the physical environment of the hospital appears to the patient- the neatness, how it looks good and modern, accessibility, staff appearance and attire etc. The physical atmosphere may have a psychological impact on the patient either positively or negatively. This is arguably the least important dimension for the client according to some literature from the use of the SERVQUAL model (Yousapronpaiboon & C. Johnson, 2013).
5. Reliability-

This is synonymous with dependability. It is the extent to which the service provider is able to deliver what he has promised. This bothers on trust issues and has been found to be more important to clients than the tangibles. The provider ought to do exactly as he has said he would (Arlen, 2008; Yousaponpaiboon & C. Johnson, 2013).

2.5 Meeting the patient’s information needs.

Patient information is at the core of medicine as eliciting patient information is the first step in the medical process. From ancient and pre-historic times, patient provider communication with its history taking and patient education etc., has been the cornerstone of medical practice across all specialties (Ha & Longnecker, 2010; Abdel-Tawab & Roter, 2002) The ability of the physician to get information out of the patient that the patient considers adequate and representative of their health status, leads to higher levels of satisfaction and this is consistent with other patient satisfaction literature (Xiao & Barber, 2008).

When doctor patient communication is effective, there is a high level of quality of care and unhappy or dissatisfied patients are not produced. Effective communication has healing properties on the patient as the patient is psychologically satisfied. Because private healthcare seeking patients are paying more for their healthcare, they tend to expect to know more concerning their state of health. Some patients avoid the state owned hospitals due to long queues the direct effect being that the patients are unable to access all the information that they desire and their information needs are not met. They expect to receive adequate information and understand all aspects that pertain to their health and that of their relations. According to Atinga
et al., (2011), meeting the patients information needs impacts their satisfaction with healthcare received. The patients expect to have ample time with their healthcare service provider to fully disclose their health challenges, ask questions and get answers, understand their diagnoses and investigations and procedures fully, and if applicable, get the opportunity to choose and add their voice where management options are concerned (Ha & Longnecker, 2010).

Communication between doctor and patient means that the doctor is able to get the right information from the patient about his concerns, the patient understands all steps in the medical service he is receiving, including procedures and treatment and issues bothering on side effects, lifestyle changes, life expectancy etc. where appropriate; and the patient is in agreement. In effect, it refers to ‘the nature of the problem, goals of treatment and (patient) psychosocial support’ (Ha & Longnecker, 2010).

Communication is bilateral and the outcome of which is meeting patient information needs which will lead to high perceptions of quality. According to Ha & Longnecker (2010) patients use the doctors’ ability to communicate relevant information as a yardstick to determine their competence.

In acute medical conditions, their perceptions of quality will determine if the patients will adhere to treatment or not and this has a direct effect on health outcomes. Information dissemination is the focus of communication and it has to be bilateral and patient centered. There are three main outcomes for effective communication in health between a doctor and his/ her patient:

- Meeting the patient’s information needs,
- Involving the patient in the decisions concerning their health
- Enforcing good patient doctor relationship (Ha & Longnecker, 2010)
It also helps the medical staff/personnel to understand the patients’ needs (Ha & Longnecker, 2010).

The concept of Doctor’s avoidance behavior is the doctor not opening up on issues that need to be discussed because he/she may either not have the time or is incapable of solving the patient’s needs. This leads to the patient not opening up and giving adequate information about their symptoms which affects diagnoses also (Ha & Longnecker, 2010).

Patients and their relatives prefer to be seen by a doctor who respects and provides all the information they need and ensures they have a good level of understanding of the issues relating to their health (Parker et al., 2007). When patients take part in their healthcare decisions, they have greater perceptions of service quality. In some studies it was noted that meeting the patients’ information needs was more important for satisfaction for men than women (Platt & Keating, 2007).

Poor and inadequate information in the healthcare process results in misinformation which also leads to misperception, and therefore noncompliance and poor health outcomes. Physician patient communication when done appropriately can avert recurrence of certain conditions, and the development of complications of certain other conditions (Platt & Keating, 2007).

A patient’s ability to obtain information that is related to his health condition is crucial not just for his/her satisfaction, but also impacts on patient compliance with treatment (Atinga et al., 2011). Explanation of results of investigations and medical procedures are important factors concerning patient information that should be assessed in their satisfaction determination (Tucker & Adams, 2001).
2.6 The socio-demographic variables and patient satisfaction

The socio-demographic variables have been described as enabling/ predisposing as well as mediating factors discriminating between satisfaction and quality analyses from one group to the next (Swanson et al., 2007). This is an intermediate variable that moderates (sometimes confounding) and whose analysis will show how various groups of patients vary in their responses to various questions. According to Kelly (2014), socio-demographic characteristics of clients have an influence on their satisfaction with healthcare and even access to healthcare: Persons who earn more and have fewer health challenges access private health facilities (Basu et al, 2012); More women generally access healthcare either by themselves or when they accompany their relatives etc. (Hojat et al., 2011).

The possession of a valid health insurance, higher income and better education are associated with higher level of quality of care among patients generally (Xiao & Barber, 2008). A patient having health insurance or not has implications for the outcome of their health depending on their medical conditions. It has been found in literature to impact their satisfaction with quality of care directly (Xiao & Barber, 2008). In some societies, a patient’s health plan will determine the outcome of their treatment (Kolstad & Chernew, 2009).

The mode of payment of a patient has been found to significantly impact how a patient views quality of care. It was noted that, the National health insured patients consistently gave low quality of care rates (Assefa et al., 2011).
CHAPTER THREE

METHODOLOGY

3.1 Introduction

This section discusses the methods used in this research. It includes study design, study location, variables used in the study and data collection methods. They are presented as follows:

3.2 Study design

The quantitative approach to research was adopted in this study in order to answer the research questions. A non-experimental cross sectional design was used to conduct the study and collect data after which analysis was done.

3.3 Study location

Data was collected over a period of 2 weeks from the outpatient clinic of the Port Medical Centre located in Community One, Tema. Tema community one is a business locality in Tema Metropolis and so the clientele base of the hospital is fairly representative of the different classes of urban Ghana—mainly salesmen, craftsmen, elementary occupations and professionals (Ghana Statistical Service, 2014). Tema Metropolis has the third highest population of people after Accra Metropolis and then Ga South Metropolis in the Greater Accra Region in Ghana (Ghana Statistical Service, 2012) accounting for 7.3% of the population in the region. The Port Medical Centre is a 47 bed health facility that was set up 37 years ago to provide affordable and comprehensive healthcare for the residents of Tema and its surrounding towns. It provides outpatient and inpatient services and specialties present include Family Medicine, Internal
Medicine and Nephrology, Obstetrics and Gynecology, General Surgery, Dermatology, Pediatrics and Ophthalmology as shown in figure 2. The study was based at the general outpatient clinic that receives all cases initially and refers to the appropriate specialty when needed.

Figure 2: System Framework of Port Medical Centre. Adapted from Kelly (2014).
3.4 Inclusion criteria: Patients of the age 18yrs and above (who are legally adults)

3.5 Exclusion criteria:

1. Patients below 18yrs
2. Patients not interested in partaking in the study
3. Patients who require inpatient services after outpatient assessment; (ethically the state of their health is critical and it is not appropriate to recruit them)
4. Language barrier (when there is no common language between the patient and the principal investigator/ research assistants).

3.6 Sampling

Consecutive sampling technique was used to select outpatient clients to get the required number of the sample size. All eligible patients were chosen to fulfill at least the minimal requirement of sample size. Exit self-administered questionnaire based interviews were done. The principal researcher and trained research assistants translated and aided patients who were not fluent in the English language to fill their questionnaires if there was a common language (i.e. Twi and Ga). Where a common language did not exist, such patients were excluded from the study. The questionnaires were collected on the spot to avert low response rates (Atinga et al., 2011).

3.7 Sample size calculation

From review of the literature, it is estimated that patient satisfaction falls between 70% to 90% (Hawthorne et al., 2014). Turkson (2009) undertook a study in the Northern Region of Ghana and found a patient satisfaction value of 89%.
Sample size was calculated using the Cochran sample size formula:

\[
(z^2pq)/d^2
\]

q = 1 - p

p is the estimated proportion of 0.89%

at 95 % Confidence Level

z = 1.96

d = 0.05

Estimated sample size from the formula is 322 plus 10% non-response rate of 33, giving 355. In all 390 patients were interviewed; the extra number were added as more patients were available for interview considering that the sample size calculated represented the minimum rather than the maximum number.

3.8 Variables

Outcome/ dependent variables being studied were perceptions of quality of care and patient satisfaction. Perceptions of quality was predicted and measured using the perceived service components of the 6 service quality variables. A composite variable was computed from the mean scores of the 6 expected service dimensions. It was treated as continuous variable. Patient satisfaction was measured by the 7 variables of the SAPS questionnaire- effectiveness, information, technical skill, participation, relationship, access and facilities and satisfaction general. The original categorization of the questionnaire as propounded by its developers is into
four parts- very dissatisfied, dissatisfied, satisfied and very satisfied with scores of 0-10, 11-18, 19-26 and 27-28 respectively. The patient satisfaction results in this study were dichotomized into two- satisfaction and dissatisfaction according to the scoring system of the SAPS questionnaire namely: very dissatisfied and dissatisfied were categorized as dissatisfied, and satisfied and very satisfied categories were categorized as satisfied categories. This was categorized into satisfied and dissatisfied. In measuring associations, satisfaction was treated as a continuous variable.

Independent Variables are:

- Socio- demographic/ moderating variables – age, sex, education, occupation, mode of payment, number of hospital visits (Priporas et al., 2008)
- Six service quality variables which are each paired, consisting of expected and perceived scores- Reliability, Assurance, Empathy, Tangibility, Responsiveness, patient information needs.

3.9 Data collection method

The questionnaire was pretested in C and J Hospital, a private hospital in Tema whose clients have similar characteristics to the study population, in order to ascertain whether the questions asked in the questionnaire can be easily understood and answered by the respondents. Issues of concern raised included clarity in some of the questions asked, the appropriateness of certain words used to convey an idea and also the meanings of the codes used in the questionnaires and what they represented. Changes were made as the pretesting went on. A total of 22 people were
interviewed and valid concerns were addressed in the questionnaires by making alterations to provide clarity in all questions asked.

Exit self-administered questionnaire based interview was conducted at the outpatient clinic. The various aspects of the questionnaire were explained to the participants after they consented to partake in the study. Each questionnaire took approximately 7 to 10 minutes to be completed by the participants.

The questionnaire entailed the socio-demographic characteristics, the five domains of service quality – Empathy, Reliability, Assurance, Tangibility and Responsiveness, and patients’ information needs which was added to the SERVQUAL questionnaire constructed through detailed review of literature on the information that patients require of their healthcare providers. Each item had sub headings that were scored on the five point Likert scale, 1 to 5 with 1 being the lowest and 5 being the highest. There were two parts for each dimension, one measuring patients’ expectations and the other, patients’ perceptions of the service they have received. The patients’ satisfaction was measured using the SAPS patient satisfaction instrument a valid 7 item scale covering all important areas of patient satisfaction (Hawthorne et al., 2014). In all there were 38 questions.

3.10 Analysis

The data was entered into Microsoft excel and imported into Stata version 15 for analysis. Means, frequencies, frequency percentages and standard deviation and error were used to organize, describe and present the results obtained from the analysis of the variables. Tables and
graphs were drawn to represent these. Paired t-test was used to determine the mean differences between the expected quality of care and perceived quality of care.

Composite variables for patients’ expectations and perceptions of QOC were generated for the quality of outpatient care derived from the modified SERVQUAL dimensions (Tucker & Adams, 2001). Multiple linear regression was used to examine the strength of association between general expectations and perceptions as composite factors, and patient satisfaction. The socio-demographic variables were put into a multiple linear regression as they have been found in previous literature to be associated with patient satisfaction and quality of care. Associations between the socio-demographic variables and the perceptions of service quality and satisfaction were also examined using both simple linear regression and multiple linear regression.

Stepwise backward elimination was used to model a regression of all service quality dimensions and socio-demographic variables on patient satisfaction.

Cronbach’s alpha was determined using STATA for both modified SERVQUAL and the SAPS satisfaction questionnaire as used in this study.

3.11 Limitations of the study

This study is limited in that the study was conducted in a single health facility and this may affect the generalizability of the results. This was because the time period for the study was short and so bringing on board other health facilities each with representative numbers of patients may not have been feasible. It also assessed only the patients’ satisfaction with QOC and perceptions of quality as outcomes of interest. Other outcomes such as the patient loyalty can also be studied in future research (Yousapronpaiboon & Johnson, 2013). A comparative study of private and
public hospitals can also be done to improve the robustness of such study with the aim of improving healthcare delivery across all sectors of health in the country.

Furthermore, using the SERVQUAL model, there is very little information as to how to close the service quality gaps that have been identified. In future quality determinations, the SERVQUAL can be integrated with other instruments that highlight the technical requirements in quality to help to define ways of closing the gaps. The findings of this study may not be generalized to the other departments of the hospital as it was carried out purely among the outpatients (Noest et al., 2014). Qualitative techniques can be deployed to explore grey areas such as the influence of patients’ previous experiences in a facility on their expectations of quality (Williams Susan, Weinman John, Dale Jeremy and Newman Stanton, 1995).

3.12 Ethical Considerations

Ethical approval was sought from the Ghana Health Service ethical review board upon submission of the research proposal for this study to them. Consent was sought from the facility-Port Medical Centre at which the study was conducted. Once approval was received from both institutions, the study participants were chosen and consented to partake in the study after the objectives of the study and the rights to refrain from participation at any point in the study was explained to them. Also, anonymity and confidentiality were maintained by excluding the names of the patients from the study as it is not essential for analysis of the study at any point. The information collected and the study results are not being used for other purposes except for the academic one.
CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter focuses on the results of the analyses done for this study. All three aspects of the questionnaire (socio-demographic characteristics, modified SERVQUAL quality of care questionnaire and SAPS satisfaction questionnaire), were analyzed separately. The reliabilities of both the modified SERVQUAL and SAPS scales as used in this study were determined using stata and found to be respectively 0.98 and 0.71 (Table 1); the original reliabilities of the two scales determined by their developers being 0.92 and 0.85 (Hawthorne et al., 2014; Daniel & Berinyuy, 2010). Associations between the moderating variables- the socio-demographic characteristics, the independent variables- tangibility, reliability, responsiveness, assurance, empathy and patient information needs, and the dependent variable, patient satisfaction, were examined statistically.

<table>
<thead>
<tr>
<th>Table 1: Reliability Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SCALE</strong></td>
</tr>
<tr>
<td>Type of questionnaire</td>
</tr>
<tr>
<td>SERVQUAL</td>
</tr>
<tr>
<td>SAPS</td>
</tr>
<tr>
<td>Modified SERVQUAL added dimension</td>
</tr>
</tbody>
</table>
4.2 Socio-demographic characteristics of respondents

A total of 390 questionnaires were administered as exit self-administered questionnaire for data collection and were all retrieved on the spot. The data was thoroughly cleaned and analyzed. The mean age of respondents was 33.5 ± 11.4 years. The youngest of respondents was 18 years and oldest was 74 years. Female respondents were in the majority 55.1% (215/390). Majority of the respondents had some level of education 96.7% (377/390) as compared to those who had no formal education 3.3% (13/390). More than half of the respondents were employed 93.1% (363/390). About half-53.9% (210/390) paid for treatment out of their pockets while 31 people used private health insurance as their health plan. The others used credit payment facilities for example as provided by their companies/employers to finance their healthcare. Summaries of the frequencies and percentages of the socio-demographic characteristics are presented in table 2 below.

A majority of 76.7% of respondents had attended the facility at least twice. Those who had visited the hospital more than twice were 1.18 times more satisfied with care as compared to those who were visiting the first time (R² = 0.0196; F (11, 372) = 1.70; p = 0.003) and also had 0.3 times higher perceptions of quality (R² = 0.0540; F (13, 370); p= 0.002). Patients accessing healthcare using credit facilities or private insurance are more satisfied with healthcare than those paying cash (R² = 0.0196; F (11, 372) = 1.70; p = 0.4) but this was not significant statistically.

Increasing educational level results in lower perceptions of the quality of outpatient care and those with tertiary education had 0.4 times lower perceptions of quality of care than those with
no formal education ($R^2 = 0.0540; F (13, 370); p= 0.01$). These associations are seen in table 3 and 4.

**Table 2: Socio-demographic characteristics of respondents**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Age</td>
<td>33.5 ± 11.4</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>175</td>
<td>44.9</td>
</tr>
<tr>
<td>Female</td>
<td>215</td>
<td>55.1</td>
</tr>
<tr>
<td>Educational level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>13</td>
<td>3.3</td>
</tr>
<tr>
<td>Primary</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Junior high</td>
<td>43</td>
<td>11</td>
</tr>
<tr>
<td>Senior high</td>
<td>125</td>
<td>32.1</td>
</tr>
<tr>
<td>Tertiary</td>
<td>208</td>
<td>53.3</td>
</tr>
<tr>
<td>Employment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>20</td>
<td>5.1</td>
</tr>
<tr>
<td>Trader/business man</td>
<td>120</td>
<td>30.8</td>
</tr>
<tr>
<td>Government employee</td>
<td>72</td>
<td>18.5</td>
</tr>
<tr>
<td>Private sector employee</td>
<td>96</td>
<td>24.6</td>
</tr>
<tr>
<td>Student</td>
<td>75</td>
<td>19.2</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>1.8</td>
</tr>
<tr>
<td>Paymode</td>
<td></td>
<td></td>
</tr>
<tr>
<td>out of pocket</td>
<td>210</td>
<td>53.9</td>
</tr>
<tr>
<td>Insurance</td>
<td>31</td>
<td>7.9</td>
</tr>
<tr>
<td>credit/company</td>
<td>149</td>
<td>38.2</td>
</tr>
</tbody>
</table>
Table 3: Associations between socio-demographic variables and patient satisfaction

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Coefficient</th>
<th>p-value</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.01</td>
<td>0.52</td>
<td>-0.02 - 0.04</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>male reference</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>female</td>
<td>-0.13</td>
<td>0.67</td>
<td>-0.71 - 0.46</td>
</tr>
<tr>
<td>Education</td>
<td>-0.10</td>
<td>0.56</td>
<td>-0.43 - 0.24</td>
</tr>
<tr>
<td>Employment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None reference</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trader</td>
<td>-0.32</td>
<td>0.63</td>
<td>-1.62 - 0.98</td>
</tr>
<tr>
<td>Government</td>
<td>0.21</td>
<td>0.76</td>
<td>-1.14 - 1.57</td>
</tr>
<tr>
<td>Private</td>
<td>-0.90</td>
<td>0.19</td>
<td>-2.25 - 0.44</td>
</tr>
<tr>
<td>Student</td>
<td>-0.31</td>
<td>0.66</td>
<td>-1.69 - 1.072</td>
</tr>
<tr>
<td>Paymode</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cash reference</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insurance</td>
<td>0.53</td>
<td>0.32</td>
<td>-0.52 - 1.58</td>
</tr>
<tr>
<td>Credit</td>
<td>0.26</td>
<td>0.40</td>
<td>-0.35 - 0.88</td>
</tr>
<tr>
<td>Visit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>once reference</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Twice</td>
<td>0.53</td>
<td>0.13</td>
<td>-0.16 - 1.22</td>
</tr>
<tr>
<td>&gt;twice</td>
<td>1.18</td>
<td>0.003</td>
<td>0.40 - 1.96</td>
</tr>
<tr>
<td>constant</td>
<td>19.73</td>
<td>0</td>
<td>17.57 - 21.88</td>
</tr>
</tbody>
</table>

Adjusted $R^2 = 0.0196$; $F (11, 372) = 1.70; p= 0.07$  
*significance level/ p <0.05
Table 4: Associations between socio-demographic variables and perceived quality of care

<table>
<thead>
<tr>
<th>Perceived Quality</th>
<th>Coefficient</th>
<th>p-value</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>0.004</td>
<td>0.19</td>
<td>-0.002 - 0.01</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>reference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>-0.03</td>
<td>0.61</td>
<td>-0.15 - 0.09</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>Reference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>0.088</td>
<td>0.88</td>
<td>-1.06 - 1.24</td>
</tr>
<tr>
<td>Junior High</td>
<td>-0.40</td>
<td>0.03</td>
<td>-0.76 - 0.04</td>
</tr>
<tr>
<td>Senior High</td>
<td>-0.36</td>
<td>0.04</td>
<td>-0.69 - 0.02</td>
</tr>
<tr>
<td>Tertiary</td>
<td>-0.44</td>
<td>0.01</td>
<td>-0.78 - 0.1</td>
</tr>
<tr>
<td><strong>Employment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>reference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trader</td>
<td>-0.08</td>
<td>0.58</td>
<td>-0.35 - 0.19</td>
</tr>
<tr>
<td>government*</td>
<td>-0.15</td>
<td>0.28</td>
<td>-0.44 - 0.13</td>
</tr>
<tr>
<td>private*</td>
<td>-0.28</td>
<td>0.05</td>
<td>-0.56 - 0.004</td>
</tr>
<tr>
<td>student</td>
<td>-0.09</td>
<td>0.56</td>
<td>-0.37 - 0.20</td>
</tr>
<tr>
<td><strong>Paymode</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>reference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insurance</td>
<td>-0.17</td>
<td>0.12</td>
<td>-0.39 - 0.05</td>
</tr>
<tr>
<td>Credit</td>
<td>0.07</td>
<td>0.29</td>
<td>-0.06 - 0.20</td>
</tr>
<tr>
<td><strong>Visit</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Once</td>
<td>reference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Twice</td>
<td>0.15</td>
<td>0.04</td>
<td>0.01 - 0.29</td>
</tr>
<tr>
<td>&gt;Twice</td>
<td>0.26</td>
<td>0.002</td>
<td>0.09 - 0.42</td>
</tr>
<tr>
<td>Constant</td>
<td>4.48</td>
<td>0</td>
<td>4.03 - 4.93</td>
</tr>
</tbody>
</table>

Adjusted $R^2 = 0.0540$; $F (13, 370) = 3.38; p= 0.0013$  *significance level/ $p<0.05$
4.3 The expectations of patients of the quality of outpatient care at Port Medical Centre.

Data on the patients’ expectation of service quality were collected on a 5 point Likert scale. Descriptive statistics was used to determine the means, mean percentages and standard deviation of the scores. The mean percentage of patients’ expectations of quality of care at the outpatient department was 87.6% (SE 0.031).

The highest expectation by mean among the service quality dimensions was in the patient information needs, with a mean score of 4.44 (SE 0.03). The individual factors that were assessed under patient information needs had different mean scores. The highest was seen in explanation of treatment/medications with a mean score of 4.53 (SE 0.04), tying in with explanation of diagnosis with a mean score of 4.53 (SE 0.04). Following these were- ‘I had the opportunity to say all my problems’ and ‘investigations and procedures were explained to me’ respectively with mean scores of 4.39 (SE 0.04) and 4.33 (SE 0.04).

Empathy was the next in highest ranking dimensions of expectations with a mean score of 4.43 (SE 0.03). Individual factors namely- staff understanding needs of patients and staff welcoming patients weaknesses, were the highest ranked with mean scores of 4.51 (SE 0.04) and 4.48 (SE 0.04) respectively. Summary of the mean scores for the Empathy dimension can be referred to in table 5.

Assurance was the third highest ranked expected service quality dimension with a mean score of 4.38 (SE 0.03). The highest expectation was expressed in courtesy of staff followed by treating patients with dignity and respect with mean scores of 4.49 (SE 0.04) and 4.47 (SE 0.04) respectively.
Reliability and responsiveness followed with mean scores of 4.37 (SE 0.04) for each. The tangibility dimension was the least scored in expectations with mean score of 4.26 (0.04). The summaries of the mean scores of their individual factors of all modified SERVQUAL dimensions can also be found in table 5.

Table 5: Mean scores of service quality dimensions

<table>
<thead>
<tr>
<th>SERVQUAL Dimensions</th>
<th>Mean perception score (SE)</th>
<th>Mean expectation score (SE)</th>
<th>Mean gap score (SE)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tangibility</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 the hospital has up to date facilities</td>
<td>4.04(0.03)</td>
<td>4.08(0.04)</td>
<td>-0.04(0.03)</td>
<td>0.2</td>
</tr>
<tr>
<td>2 the physical environment of the hospital is appealing</td>
<td>4.36(0.04)</td>
<td>4.39(0.04)</td>
<td>-0.03(0.04)</td>
<td>0.3</td>
</tr>
<tr>
<td>3 the hospital has modern looking equipment</td>
<td>4.04(0.04)</td>
<td>4.15(0.04)</td>
<td>-0.11(0.04)</td>
<td>0.002*</td>
</tr>
<tr>
<td>4 there is availability of adequate seating at the hospital</td>
<td>4.42(0.04)</td>
<td>4.40(0.04)</td>
<td>-0.02(0.04)</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Average Tangible score</strong></td>
<td>4.21(0.03)</td>
<td>4.26(0.04)</td>
<td>-0.04</td>
<td></td>
</tr>
<tr>
<td><strong>Reliability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 the staff provides service on scheduled time</td>
<td>3.93(0.05)</td>
<td>4.21(0.04)</td>
<td>-0.28(0.05)</td>
<td>0.000*</td>
</tr>
<tr>
<td>2 doctors and staff are professional and competent</td>
<td>4.49(0.04)</td>
<td>4.48(0.04)</td>
<td>0.01(0.05)</td>
<td>0.67</td>
</tr>
<tr>
<td>3 medical procedures were performed correctly the first time</td>
<td>4.22(0.04)</td>
<td>4.34(0.04)</td>
<td>-0.12(0.04)</td>
<td>0.003*</td>
</tr>
<tr>
<td>4 there is consistency in duty performance by staff at the hospital</td>
<td>4.38(0.04)</td>
<td>4.47(0.04)</td>
<td>-0.09(0.04)</td>
<td>0.04*</td>
</tr>
<tr>
<td><strong>Average Reliability scores</strong></td>
<td>4.26(0.03)</td>
<td>4.37(0.04)</td>
<td>-0.11</td>
<td></td>
</tr>
<tr>
<td><strong>Responsiveness</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 hospital staff was helpful to the patients</td>
<td>4.23(0.04)</td>
<td>4.29(0.04)</td>
<td>-0.06(0.04)</td>
<td>0.1</td>
</tr>
<tr>
<td>2 the staff was responsive to patient needs</td>
<td>4.46(0.04)</td>
<td>4.45(0.04)</td>
<td>0.01(0.04)</td>
<td>0.89</td>
</tr>
<tr>
<td>3 the staff responded immediately when called by the patients</td>
<td>4.12(0.04)</td>
<td>4.31(0.04)</td>
<td>-0.19(0.05)</td>
<td>0.000*</td>
</tr>
<tr>
<td>4 prompt service delivery without wasting time</td>
<td>4.22(0.05)</td>
<td>4.42(0.04)</td>
<td>-0.2(0.05)</td>
<td>0.0001*</td>
</tr>
<tr>
<td><strong>Average Responsiveness scores</strong></td>
<td>4.25(0.04)</td>
<td>4.37(0.04)</td>
<td>-0.11</td>
<td></td>
</tr>
<tr>
<td><strong>Assurance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 the hospital had skilled staff to provide healthcare</td>
<td>4.30(0.04)</td>
<td>4.28(0.04)</td>
<td>0.02(0.04)</td>
<td>0.6</td>
</tr>
</tbody>
</table>
delivery
2 the hospital staff treats patients with dignity and respect 4.45(0.04) 4.47(0.04) -0.02(0.04) 0.6
3 the staff at the hospital possesses a wide spectrum of knowledge 4.22(0.04) 4.29(0.04) -0.07(0.02) 0.04*
4 the staff at the hospital was courteous 4.49(0.04) 4.49(0.04) - 0.002(0.04)

Average Assurance scores 4.36(0.03) 4.38(0.03) -0.02

Empathy
1 the staff has my best interests at heart 4.27(0.04) 4.37(0.04) -0.10(0.03) 0.002*
2 the staff understands my specific needs at the hospital 4.48(0.04) 4.51(0.04) -0.03(0.04) 0.4
3 the personnel give me special attention at the hospital 4.14(0.04) 4.37(0.04) -0.23(0.04) 0.000*
4 the staff welcomes your weakness in facility 4.41(0.04) 4.48(0.04) -0.07(0.04) 0.09
5 the staff at the hospital was caring to patients 4.33(0.04) 4.43(0.04) -0.10(0.04) 0.01*

Average Empathy scores 4.33(0.03) 4.43(0.03) -0.10

Information Needs
1 I had the opportunity to say all my problems 4.39(0.03) 4.39(0.04) 0.00(0.03) 0.9
2 my diagnosis was explained to me 4.42(0.04) 4.53(0.04) -0.11(0.04) 0.02*
3 investigations and procedures were explained to me 4.15(0.04) 4.33(0.04) -0.18(0.04) 0.0001*
4 treatment/medications were explained to me 4.54(0.04) 4.53(0.04) 0.01(0.04) 0.6

Average Information Needs scores 4.38(0.03) 4.44(0.03) -0.66

*statistically significant (p<0.05) adapted from (Khamis & Njau, 2014)

4.4 The perceptions of patients of the quality of outpatient care at Port Medical Centre.

The analysis of the perceptions/experiences of outpatients of the service quality at Port Medical Centre was also done with means, mean percentages, and standard error. The mean percentage of perceptions of service quality was 86.0% (SE 0.0288192).

Again, the highest perception of quality of outpatient care was experienced in the information needs dimension with a mean score of 4.38 (SE 0.03) as opposed to the tangibility dimension.
which had the least mean score of 4.21 (SE 0.03). Assurance followed as second highest ranking with a mean score of 4.36 (SE 0.03). Empathy ranked third with a mean score of 4.33 (SE 0.03), then came reliability with a mean score of 4.26 (SE 0.03) and responsiveness with a score of 4.25(SE 0.04). Summaries of the breakdown of the modified SERVQUAL dimensions into their individual factors with their mean scores and standard error are reported in table 5.

4.5 Differences between patients’ perceptions and expectations of quality of care.

In gap analysis, the patients’ expectations are subtracted from the perceptions with the assumption that service providers will provide higher levels of quality than the patients expect. Results are usually negative (meaning most service providers are not able to exceed the patients’ expectation of quality even though the mean perception of quality may be high) as shown by the proponents of the SERVQUAL model – Parasuraman et al in 1988 (Daniel & Berinyuy, 2010). The mean difference in the composite expectations and perceptions of quality is approximately -0.08 (p <0.002).

The assurance dimension showed the least overall gap between perceptions and expectations of – 0.02. The individual factors under assurance that were also assessed showed that skilled staff” was the only factor with a positive gap of 0.02 (p = 0.6) in which the patients’ expectations were exceeded by what they actually expected. All the other factors assessed had negative gaps. Ranking from the smallest gap to the largest gap are- ‘courteous staff” with a mean gap score of – 0.002 (SE 0.04; p = 0.6); staff treating patients with dignity and respect with a mean gap score of – 0.02 (SE 0.04; p = 0.6) and finally, wide spectrum of knowledge of staff with a mean gap score of -0.07 (SE 0.02; p = 0.04).
The tangibles dimension came second with a mean gap score of 0.04. There was no single factor assessed under this dimension that had a positive mean gap score. The lowest mean score gap of –0.02 (p = 0.6) was in the availability of adequate seats. The highest gap noticed was in ‘the hospital has modern looking equipment’ with a score of –0.11 (p = 0.002). The breakdown of the tangibles dimension can be seen in table 5.

Patient information was ranked third with a mean gap score of 0.06. There was no gap (mean gap score of 0.00) in ‘I had the opportunity to say all my problems’ (p = 0.00). The only positive gap in this dimension was found in ‘treatment/medications were explained to me’ with a score of 0.01 but this was found not to be significant (p = 0.6). ‘My diagnosis was explained to me’ had a mean gap score of -0.11 (SE 0.04; p= 0.02) and then finally, ‘investigations and procedures were explained to me’ had a mean score of 0.18 (SE 0.04; p = 0.0001).

Ranking fourth with a mean gap score of -0.10 was empathy. Of the five factors assessed under this dimension, the least gap was seen in staff understanding specific needs of patients with a score of -0.03 (p = 0.4). The remainder of the factors with their mean score gaps can be referred to in table 5.

Reliability and responsiveness tied with mean gap scores of -0.11 each. The breakdown of the individual factors that were assessed under each, with their mean score gaps and p values can be seen in table 5. Comparative differences in the gaps in service quality dimensions can be seen in figure 3 below.
Figure.3: Mean gap scores for 6 service quality dimensions.

4.5 Patient Satisfaction

Using the Short Assessment of Patient Satisfaction (SAPS), a valid and reliable questionnaire used in different clinical settings, the level of satisfaction of the service quality received at the outpatient department of Port Medical Centre was measured. Majority of the respondents - 74.68% were satisfied with the outpatient service quality. Percentage of dissatisfaction with the service quality at Port Medical Centre outpatient department was 25.32% (99/390) among the respondents. A representation of dichotomized results of patient satisfaction is shown in table 6 below.
Table 6: Patient satisfaction

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissatisfied</td>
<td>99</td>
<td>25.32</td>
</tr>
<tr>
<td>Satisfied</td>
<td>292</td>
<td>74.68</td>
</tr>
<tr>
<td>Total</td>
<td>391</td>
<td>100</td>
</tr>
</tbody>
</table>

4.6 Associations between quality of care and satisfaction with care

It was found in a multiple linear regression model, that when expectations of quality was held constant, the patients’ satisfaction increased by 2.4% ($R^2 = 0.2029$; $F (2, 387) = 49.24$; $p=0.000$) as their perceptions of quality increases. Conversely when perception of quality was held constant, increasing expectations of service quality leads to a 0.5% decrease ($R^2 = 0.2029$; $F (2, 387) = 49.24$; $p=0.079$) in the patients’ satisfaction with care. Composite variables of expected and perceived quality of care scores were used here. Table 7 summarizes the details.

Table 7: The influence of quality of care on outpatient satisfaction

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Coefficient</th>
<th>p-value</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived</td>
<td>2.42</td>
<td>0.000</td>
<td>1.86 - 2.98</td>
</tr>
<tr>
<td>Expected</td>
<td>-0.47</td>
<td>0.079</td>
<td>-0.98 - 0.05</td>
</tr>
<tr>
<td>coefficient</td>
<td>11.59</td>
<td>0.000</td>
<td>9.63 - 13.6</td>
</tr>
</tbody>
</table>

*p-value < 0.05

All the modified perceived SERVQUAL dimensions showed significant association with patient satisfaction in a bivariate analysis but none was significantly associated in a multiple logistic regression model where satisfaction was categorized into satisfied and dissatisfied (table 8).
Table 8: Model of satisfaction against perceived service quality dimensions.

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>COR</th>
<th>p (COR)</th>
<th>AOR</th>
<th>p (AOR)</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsiveness</td>
<td>3.10</td>
<td>0.000</td>
<td>1.22</td>
<td>0.431</td>
<td>0.74 - 2.02</td>
</tr>
<tr>
<td>Assurance</td>
<td>4.81</td>
<td>0.000</td>
<td>1.87</td>
<td>0.093</td>
<td>0.70 - 3.95</td>
</tr>
<tr>
<td>Empathy</td>
<td>3.99</td>
<td>0.000</td>
<td>1.73</td>
<td>0.127</td>
<td>0.87 - 3.49</td>
</tr>
<tr>
<td>Information needs</td>
<td>2.80</td>
<td>0.000</td>
<td>0.81</td>
<td>0.469</td>
<td>0.45 - 1.44</td>
</tr>
<tr>
<td>Reliability</td>
<td>4.40</td>
<td>0.000</td>
<td>2.30</td>
<td>0.006</td>
<td>1.26 - 4.18</td>
</tr>
<tr>
<td>Tangibility</td>
<td>2.82</td>
<td>0.000</td>
<td>0.82</td>
<td>0.470</td>
<td>0.49 - 1.42</td>
</tr>
</tbody>
</table>

*significance level p< 0.05

A stepwise backward selection was used to fit a regression model of satisfaction and the perceptions of quality dimensions and socio-demographic variables as shown in table 9 below. Approximately 22.4% of the variability in patient satisfaction is accounted for by assurance and reliability, all other factors were eliminated. For every unit increase in assurance, satisfaction scores increases by 0.69 holding reliability constant and adjusting for socio-demographic variables ($R^2 = 0.2242; F (2, 381) = 55.05; p=0.013$); and for every unit increase in reliability, satisfaction scores increase by 1.4, holding assurance constant and adjusting for socio-demographic variables ($R^2 = 0.2242; F (2, 381) = 55.05; p=0.000$). When all variables were fitted into the model however, increasing expectations of empathy was associated with a reduction of 0.8 in satisfaction ($p= 0.002$), while increasing expectations of tangibility was associated with increase in satisfaction of 0.5 ($p= 0.04$) with care in addition to perceptions of reliability and assurance being positively associated with satisfaction.

These quality of care dimensions together explain 24.3% of the variability in patient satisfaction.
Table 9: Regression model of satisfaction against perception of quality dimensions and moderating factors.

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Coefficient</th>
<th>p-value</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>assurance</td>
<td>0.68</td>
<td>0.013</td>
<td>0.14 - 1.22</td>
</tr>
<tr>
<td>reliability</td>
<td>1.37</td>
<td>0.000</td>
<td>0.87 - 1.86</td>
</tr>
<tr>
<td>coefficient</td>
<td>11.17</td>
<td>0.000</td>
<td>9.44 - 12.90</td>
</tr>
</tbody>
</table>

Adjusted $R^2 = 0.22; F (2, 381) = 55.05; p = 0.000$  
*significance level $p<0.05$
CHAPTER FIVE

DISCUSSION

5.1 Introduction to discussion of results

This chapter brings to light the interpretation and discussion of the results obtained from the analyses. The patients’ perceptions of the quality of outpatient care are discussed in line with the objectives of the study.

5.2 Socio-demographic characteristics of Port Medical Centre outpatient department

There was a very wide age distribution of participants which increases the representativeness of the sample of the population. The sex distribution which was 55.1% females to 44.9% males in the sample is comparable to 51.2% of females to 48.8% males found in Ghana with females being more satisfied with care than males even though this is not significant (Ghana Statistical Service, 2012). A huge majority of the attendees of the OPD of Port Medical Centre have received formal education. More than half of the sample size has received tertiary education which though impressive, may have influenced the satisfaction rating and perceptions of quality downwards. In contrast, Xiao & Barber (2008) found that in the USA, higher educational levels increase satisfaction with healthcare.

A majority of the hospital’s outpatient attendees were employed i.e. 93.1% and it is probably why a little more than half of the outpatients are able to pay for healthcare out of their pockets, and the minority access care financed by private insurance and through credit facilities paid by their companies/employees. Those who do not pay cash in general are more satisfied with care in this study than those paying cash; yet private insurance users were less satisfied with care than
cash payers. In contrast Fenny, Enemark, Asante, & Hansen (2014) showed that users of the national health insurance scheme are more satisfied with their healthcare accessed than cash payers in government hospitals in Ghana. A greater majority of the participant can be said to have given a reliable assessment of quality at the facility as at least more than 76% of them had used the facility more than once; this can be compared to 78% found in a study conducted in a government hospital in Ghana (Atinga et al, 2011). This may give the impression crudely that in general hospitals retain more than half of their clients as regular attendees and this can be studied further. In general, the influence of socio-demographic characteristics on patient satisfaction has been inconsistent leading to a shift of focus away from the socio-demographic characteristics as an influencing factor on patient satisfaction (Fox & Storms, 1981).

5.3 Patients’ expectations of the quality of outpatient care at Port Medical Centre.

Patients’ expectations may not generally reflect what they truly wish for as it may be influenced by their previous experiences of the service quality (Williams et al., 1995). The outpatients of Port Medical Centre have high expectations (86%) of service quality according to this study keeping in mind that about 74% of them have visited the facility before the day of the study to access healthcare. This is higher but comparable to 84% found by Abuosi & Atinga (2013) when they applied the SERVQUAL to inpatients and patients on review/ follow up in 5 government hospitals in Ghana. The outpatients’ greatest expectation of service quality was for their information needs to be met. In this dimension, the highest expectation of quality is for the patients’ treatment and medications to be explained to them. Explanation of diagnosis, ability to express themselves and explanations of investigations done and procedures ranked from top to bottom.
Empathy was the second highest ranked in expectations of quality of care. In this dimension, the outpatients expected the staff to understand their specific needs. It can be frustrating for patients when they perceive that they are not well understood and that would mean they cannot trust the management given them to solve their problems.

Assurance ranked third highest. Issues bothering on security, knowledge and skill of staff, staff attitudes etc. are examined here (Arlen, 2008). Good attitudes of staff and security bothers on trust issues which can determine if the patient will continue to use the facility or not (Turkson, 2009). It has been argued that doctors and healthcare personnel working in the private sector tend to have a better attitude towards patients as compared to doctors working in governmental owned health facilities (Ayensu, 2015) and this may be due to the lower staff to patient ratios in private hospitals which renders them relatively less overworked than healthcare staff in government hospitals. Most of the attendees of the hospital’s OPD may have this assertion from their previous experiences and that may be why this is relatively one of their highest expectations of service quality.

Reliability ranked fourth highest in expectations of QOC. The highest expectation was for the doctors and other staff of the hospital to be professional and competent and deliver on the healthcare they say they would. People access healthcare primarily to get answers to problems they are experiencing. Their belief in the competence of the medical personnel would be one of the factors that may determine why they visit one facility and not the other (Arlen, 2008).

In responsiveness, the greatest expectation was for the staff to be quick to attend to patients’ needs followed immediately by a reasonably low waiting time with prompt delivery of service. It is surprising that this dimension did not rank higher in their expectations than fourth as waiting
time and prompt delivery of service has been found to be one of the factors strongly associated with patient satisfaction in government hospitals in Ghana (Atinga et al., 2011). This may be due to the fact that mean waiting time in general has been found to be 2.1 minutes: 3.58 minutes in private compared to public hospitals, almost twice difference in Ghana (Ayensu, 2015); and the lack of use of the National health insurance in our study population as opposed to its use in the public health facilities may influence this and hence the patients’ expectations. It may also be the case that this low ranking goes to support the claim that patients’ expectations in general has low influence on their satisfaction with care, even as found in this study (Tucker & Adams, 2001).

Tangibility came last in the patients’ expectations with a mean percentage score of 84.2% It was most important to the outpatients for the hospital environment to be clean than for it to have modern equipment. This is in keeping with a study done in the northern part of Ghana where the cleanliness of the hospital environment was found to be one of the strongest influences of the patients’ satisfaction with service quality (Atinga et al., 2011).

5.4 Patients’ perceptions of the quality of outpatient care at Port Medical Centre.

Patients’ perceptions of QOC has been found to be the factor associated with their satisfaction with care rather than their expectations, leading to some researches focusing on the perceptions and entirely not measuring the expectations in their assessment of QOC (Tucker & Adams, 2001). The outpatients of Port Medical Centre perceive a mean percentage QOC of 86% at the hospital compared to 68.4% found in five government hospitals among inpatients and those reporting for review (Abuosi & Atinga, 2013). In general there was a lower level of perception of the quality of outpatient care as compared to expectations and this is comparable to a patient showed lower levels of perceived quality as compared to expectations (Khamis & Njau, 2014).
They perceive the highest QOC when their information needs are met. In this dimension, the factor in which they perceive the best quality is in their treatment/medications being explained to them, while the worst perception of QOC is in their investigations and procedures being explained to them. It is possible that explanation of medication use and their side effects is being done adequately by a joint effort of doctors and pharmacists but the doctors may not be explaining the details of investigations done to the outpatients adequately. The participants asserted that their diagnosis being explained to them came second in highest perceptions of QOC in ‘meeting their information needs.’

Their perceptions are that, the tangibility, which refers to the physical appearance of the environment of the hospital with adequate seating, up to date facilities and equipment etc. gave them the least perception of service quality in the facility.

5.5 Differences between patients’ perceptions and expectations of quality of care

It is noteworthy to state that most gap analysis using the SERVQUAL model is negative as described by Berry et al. (1988) and this is interpreted to mean that there is always room for improvement in service industries (Daniel & Berinyuy, 2010). Altogether, the outpatients of Port Medical Centre have shown that they expect and do experience high levels of QOC even though most of their expectations in the service quality variables were marginally not met. The composite patient expectation and the composite patient perception of service quality reveal that the mean difference between the outpatients’ expectations and their perceptions of service quality is significant. High levels of perception of quality in which patients’ perceptions of quality exceeded their expectations were found in 5 factors across all the modified SERVQUAL dimensions: the competence and professionalism of the staff and, the responsiveness of staff to
patients’ needs, the presence of skilled staff to deliver healthcare, the opportunity given to the patients to express all their problems and the explanation of treatment and medications to the patients. Though all these gaps were not significant, it is commendable as the confidence of patients in the capability of the service provider to deliver quality healthcare has a huge impact on health outcomes (Atinga et al, 2011).

It was found that 12 out of all 25 factors assessed under all the SERVQUAL dimensions showed significant negative gaps which may be important factors affecting the patients’ perceptions of QOC at the facility. From the highest to the lowest ranked dimensions of perceptions of service quality, these significant individual factors will be discoursed:

In patient information needs, it was found that the most significant gaps which were negative were investigations and procedures being explained to the patients, and then, their diagnosis being explained to them. The outpatients of Port Medical Centre are demanding for improved communication about their diagnosis, results of investigations done and more explanation of procedures performed on them, which is not being met adequately and hence can be improved.

In assurance, the only noteworthy factor of significance was the spectrum of knowledge possessed by staff of the hospital. This factor may not be limited to the clinical staff and their technical knowledge but also to the non-clinical information such as dates and times for specialist clinic, the myriad of services provided or not provided at the hospital, which doctors are on duty, where the hospital administrator may be located etc. The outpatients’ expectation of this is generally not met. In empathy, even though the perceptions of staff’s attitude as being caring were ranked high, they could not exceed the patients’ expectations. The patients also asserted that they would like to be given more attention on a personal level.
The outpatients of the hospital are waiting longer periods to assess care than they would like to, and they want the staff to improve the promptness with which they attend to their needs. These were the factors with significant gaps assessed under responsiveness.

Lastly with reference to the tangibles the outpatients are saying that even though the facility has modern looking equipment, they had even higher expectations and think that the facility can improve. Probably if the patients have less to go outside the facility to do certain investigations or have less difficulty accessing the use of certain services/ equipment in the hospital on certain days for example, they would have higher perceptions of this factor.

5.6 Patient satisfaction with the quality of outpatient care at the Port Medical Centre

The client satisfaction rate at the outpatient department of Port Medical Centre is 74.68% using the SAPS patient satisfaction instrument (Cronbach’s alpha of 0.7048). This value seems lower than other satisfaction surveys done here in Ghanaian public hospitals with different instruments. Turkson (2009), found that satisfaction in rural Ghanaian hospital was as high as 89%. It was found that as at 2003, the general satisfaction in Ghanaian government hospitals was an average of 78% (Nketiah-Amponsah & Hiemenz, 2009). Considering the findings of this study that as the educational level increases, patient satisfaction decreases, it can be said that the variation in educational levels between our population and the population of the other researchers in government hospitals is what may be accounting for this disparity. Tabular representation of the patient satisfaction can be referred to in table 6.
5.7 Associations between the perceptions of service quality dimensions and the patients’ satisfaction

In general expectations of QOC as a whole do not significantly predict patient satisfaction in Port Medical Centre as does perceptions of QOC as was found by both Akter et al. (2008) and Tucker & Adams (2001). Only perceptions of reliability and assurance service quality dimensions positively predict the patients’ satisfaction. This refers to issues concerned with promptness of delivery of service delivery, staff attitude, competence and ability to deliver promised service. These are the patients’ perceptions that predict satisfaction in Port medical Centre. Interestingly, it was found in a multiple linear regression model controlling for all factors that as the patients’ expectations of empathy increases, their satisfaction decreases and increasing expectations of tangibility influence satisfaction upwards.
CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

Perceptions of QOC and patient satisfaction have been studied in this research. Associations between the two have been explored and intermediary associations with socio-demographic characteristics have also been studied and described.

6.2 Conclusions

There is a high level of expectation as well as a high level of perception of quality of care among the outpatients of Port Medical Centre. The outpatient’s greatest expectation and perception of quality in accessing healthcare at the facility is for their information needs to be met. The difference between the expected and perceived quality is a significant negative gap showing that there is a lower level of perception of service quality at the OPD than expected by the outpatients. The factors with significant service quality gaps are 12 out of 25 factors whose service delivery should be improved in order to increase the quality of care at the hospital; they include:

1. The staff not delaying in the delivery of service
2. Each patient receiving special attention
3. Prompt delivery of service without wasting time
4. The promptness of the response of staff to patients’ needs
5. Explaining outcomes of investigations, and procedures to be performed to the patient to their understanding
6. Clinical staff performing procedures correctly the first time
7. Modern technologically advanced methods and equipment used to deliver healthcare
8. Explaining patient diagnoses to their understanding
9. Staff demonstrating that they have the patients’ best interests at heart
10. Caring and positive staff attitude towards the patients
11. Staff consistency in their duty performance
12. The ability of the staff to demonstrate a wide range of clinical and non-clinical knowledge that has to do with patients’ healthcare needs

The level of satisfaction with services received at the outpatient clinic of Port Medical centre is high and not significantly different from that seen in government hospitals in Ghana though lower. Increasing perceptions of assurance and reliability, and increasing expectations of tangibility increase patient satisfaction significantly. While increasing expectations of empathy reduce patient satisfaction significantly. Perceptions of quality are better predictors of satisfaction than expectations of quality.

6.3 Recommendations

The hospital management can embrace newer and more efficient methods and equipment in the delivery of their services. They can consider and pilot going paperless by using the hospital/electronic management system. This will improve accuracy in service delivery and improve patient data management. It will also increase the promptness of service delivery to patients.

Also, old and relatively inefficient equipment that patients come into contact with regularly such as blood pressure measuring devices etc. should always be kept up to date and in good condition too.
The time spent at the OPD can be monitored through regular OPD surveys and regular OPD objective auditing processes. Conscious efforts to ensure that at rush hours there is an extra doctor or nurse for example, will also reduce the time spent or arguably wasted waiting at the OPD.

The staff can be trained and retrained on client service satisfaction and clinical care and motivated to exhibit a caring attitude, professionalism and excellence in their work. It has been determined that staff attitude when improved, increases service quality by 25% (Camgöz-Akdağ et al., 2013).

Regular review meetings of departments can be used to inform staff on patient complains obtained through surveys and empower them to overcome these. At such meetings doctors should be encouraged to holistically explain patients’ diagnoses and results of their investigations to them. This can be enforced by regular doctors’ appraisal by patients of their ability to communicate information regarding their diagnoses, investigations and treatment to them.

The greater the level of care shown towards patients than they currently perceive, the higher the level of service quality will be.
REFERENCES


Mohammadreza Hojat, PhD; Daniel Z. Louis, MS; Kaye Maxwell; Fred W. Markham, M,


Orijins of SERVQUAL model. (2013). *UK ESSAYS.COM*.


APPENDICES

Appendix 1: Questionnaire

Socio-demographic questionnaire

Please tick as applies to you:

1. Age (years)............

2. Gender
   - Male □
   - Female □

3. Education
   - None □
   - Primary □
   - Junior High □
   - Senior High □
   - Tertiary □

4. Employment
   - Unemployed □
   - Trader/Businessman □
   - Government employee □
   - Private sector employee □
   - Student □
   - Other.............

5. What is your mode of payment?
   - Private/ Cash □
   - Insurance □
   - If yes NHIS □
   - Private Insurance □
   - Credit/ Company □

6. Number of visit to the hospital in the last 6 months
   - Once 1x □
   - Twice 2x □
   - More than twice □
   - Not sure □
## SECTION B: SERVICE QUALITY QUESTIONNAIRE: 1= lowest, 5= highest

<table>
<thead>
<tr>
<th>TANGIBILITY</th>
<th>EXPECTED SERVICE</th>
<th>PERCEIVED SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The Hospital has up to date facilities</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>2. The physical environment of the hospital is appealing</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>3. The hospital has modern looking equipment</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>4. There is availability of adequate seating at the hospital</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RELIABILITY</th>
<th>EXPECTED SERVICE</th>
<th>PERCEIVED SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The Staff provides service on scheduled time.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>2. Doctors and staff are professional and competent</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>3. Medical procedures were performed correctly the first time</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>4. There is consistency in duty performance by staff at the hospital</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESPONSIVENESS</th>
<th>EXPECTED SERVICE</th>
<th>PERCEIVED SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hospital staff was helpful to the patients.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>2. The staff was responsive to patient needs</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>3. The staff responded immediately when called by the patients</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>4. Prompt service delivery without wasting time</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EXPECTED SERVICE</td>
<td>PERCEIVED SERVICE</td>
</tr>
<tr>
<td>--------------------------------</td>
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</tr>
<tr>
<td>ASSURANCE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. The hospital had skilled staff to provide healthcare delivery</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2. The hospital staff treats patients with dignity and respect.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. The staff at the hospital possesses a wide spectrum of knowledge.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. The staff at the hospital was courteous.</td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>EXPECTED SERVICE</th>
<th>PERCEIVED SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMPATHY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. The staff has my best interests at heart.</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2. The staff understands my specific needs at the hospital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. The personnel give me special attention at the hospital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. The staff welcomes your weakness in facility.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. The staff at the hospital was caring to patients.</td>
<td></td>
<td></td>
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<table>
<thead>
<tr>
<th></th>
<th>EXPECTED SERVICE</th>
<th>PERCEIVED SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>INFORMATION NEEDS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. I had the opportunity to say all my problems</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2. My diagnosis was explained to me</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Investigations and procedures were explained to me</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Treatment/ medications were explained to me</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

adapted from Aduo- Adjei, (2015)
Satisfaction Questionnaire

INSTRUCTIONS: Kindly read each question carefully, taking note that the ordering of the answers varies from question to question, and encircle the answer the best describes you.

1. How satisfied are you with the effect of your treatment/ care?
   - Very satisfied 0
   - Satisfied 1
   - Neither satisfied nor dissatisfied 2
   - Dissatisfied 3
   - Very dissatisfied 4

2. How satisfied are you with the explanations the doctor/ other health professional has given you about the results of your treatment or care?
   - Very dissatisfied 0
   - Dissatisfied 1
   - Neither satisfied nor dissatisfied 2
   - Satisfied 3
   - Very satisfied 4

3. The doctor was careful to check everything when examining you
   - Strongly agree 0
   - Agree 1
   - Not sure 2
   - Disagree 3
   - Strongly disagree 4

4. How satisfied were you with the choices you had in decisions affecting your healthcare?
   - Very satisfied 0
   - Dissatisfied 1
   - Neither satisfied nor dissatisfied 2
   - Satisfied 3
   - Very satisfied 4

5. How much of the time did you feel respected by the doctor?
   - All the time 0
   - Most of the time 1
   - About half the time 2
   - Some of the time 3
   - None of the time 4

6. The time you had with the doctor was too short
   - Strongly agree 0
   - Agree 1
   - Not sure 2
   - Disagree 3
   - Strongly disagree 4

7. Are you satisfied with the care you received in the hospital/ clinic?
   - Very satisfied 0
   - Satisfied 1
   - Neither satisfied nor dissatisfied 2
   - Dissatisfied 3
   - Very dissatisfied 4

Scoring
1. Reverse the scores for items #1, #3, #5, #7
2. Sum all scores. The score range is from 0 (extremely dissatisfied) to 28 (extremely satisfied)
Appendix 2: Participant’s Consent Form

School of Public Health, College of Health Sciences

University of Ghana

Dear Respondent,

I am a student (Anita Ago Asare) of the University of Ghana Currently enrolled to undertake this research titled ‘Patients’ perceptions of the quality of outpatient care at the port medical centre in Tema Community One.’ The information collected is purely for academic use. For the purposes of confidentiality, your name is not required and all information that you provide will not be traceable to you. Any questions that you are uncomfortable with, you can choose not to answer them. You can also decide to withdraw from the study after giving your consent at any point. The information will not be used for any other purpose than for the analysis of this research. I will be honoured to have you partake in this study. The questionnaire should take you approximately 7 -15 minutes to complete.

There are no direct benefits or risks in your participation, you will not be paid or compensated for your participation. This study may benefit you as a client attending Port Medical Centre in the future as suggestions for improvement in the quality of care will be made to the hospital administration after the research. The research has been reviewed and approved by the Ghana health Service ethical review board to ensure the highest standards of ethics are maintained in the conduct of the study. Thank you.

By signing this form, you are giving your voluntary consent to participate in this study.

I understand the import and purpose of this research and I consent to take part in it.
*(PS. The contact details of the Ethical Review Committee are as below. Please do not hesitate to contact them in the event that you have any issues of ethical nature to clarify from them:)*

Research and Development Division

Ghana Health Service

P. O. Box MB 190
Accra

Tel: +233-0302681109, +233-0302679323

Email: ghsesc@gmail.com

You may also contact my supervisor,

Dr Reuben Esena

The School of Public Health

University of Ghana
Legon)

Participant

Date....................