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UNIVERSITY OF GHANA, LEGON

PATIENT SATISFACTION WITH WAITING TIME AT THE OUT PATIENT DEPARTMENT (OPD), HOLY FAMILY HOSPITAL, TECHIMAN

BY

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THIS THESIS IS SUBMITTED TO UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF PUBLIC HEALTH DEGREE.

JUNE, 2019
DECLARATION

I, Kwabena Appiah declare that; this dissertation is the result of my own original work, however all references which helped me in the development of my dissertation for the attainment of Master of Public Health degree has been duly acknowledged at the reference section. The document contains no material already published by any other person for the award of a degree in any other university.

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(STUDENT NAME)

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SIGNATURE

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DATE

PROF. MOSES AIKINS

(ACADEMIC SUPERVISOR)

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SIGNATURE

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DATE
DEDICATION

I highly dedicate this piece of work to the Almighty God. Secondly to my beloved wife Mrs. Agnes Appiah.
ACKNOWLEDGEMENT

My vision and aspiration to pursue this master’s programme at the University of Ghana was inspired by my darling princess Mrs. Agnes Appiah, she supported me financially, emotionally and offered me immense advice which aided me to carry through, God bless you my wife.

More appreciation to my academic supervisor Prof. Moses Aikins for his guidance, direction and knowledge he impacted on my life whiles working with him, ‘Prof, I salute you’. I appreciate the work of the research assistants. Again, my thanks goes to my dear mother Madam Hannah Kyei for her concern whiles I was in school.
ABSTRACT

Introduction: Waiting time remains a vital indicator among several tools for patient’s satisfaction in the health services organization. Ideally, patients visiting out-patient department wants to spend less time (at least 30 – 45 minutes) and they would be very much satisfied. But often this is not the case in most of the hospitals in Ghana, hence there was the need to conduct satisfaction survey whether patients are satisfied with the time spent at the Holy Family Hospital, Techiman.

Objective of the study: To assess patient satisfaction with waiting at the OPD at Holy Family Hospital, Techiman.

Methods: A cross-sectional study was used. Data were collected from 10th September to 11th October 2018. Four hundred and eight respondents accessing the various units at the OPD services at the Holy Family Hospital were recruited. Exit interviews were conducted using semi-structured questionnaires. Data collection covered: socio-demography, morbidity, patient perceived reasons for waiting time, waiting time at each working area i.e. records, vital signs, consulting rooms and pharmacy. All data were entered on EPI Info screen and analyzed using STATA 15. Likert Scale (very satisfied, satisfied and dissatisfied) was used to rate the satisfaction levels. Composite satisfaction score was then used to determine the overall satisfaction with waiting time. The expected outcome of this study was to ensure and improve prompt and timely delivery of services at the OPD, at Techiman Holy Family Hospital.

Results: Most of the respondents were aged 31–40 with mean age of 42.7 years (95% CI: 41 – 44). Majority of the respondents were females 65.7%. The mean waiting time at Records was the highest, 74.5 minutes. For patient perceived reasons for waiting, high workload recorded the
highest with 38.7% at the Pharmacy 36.1% at Consulting room, 28.8% at Records and 15.2% at Vital signs. With patient flow the distribution were as follows: 25.2% at Vital signs, 24.2% at Records, 19.2% at the Pharmacy, 17.7% at Consulting rooms. The next reason for waiting was late arrival of patients with the following distributions, 30.9% for Vital signs, 17.4% for Pharmacy, 8.8% for Consulting room and 5.7% for Records.

**Conclusions:** The average waiting time at the OPD was high (2 hours 50 minutes) with the majority of the patients spending more than 2 hours. The time spent were more with patients presenting with chronic conditions compare to acute condition. The main perceived reason were high workload, patient flow and late arrival of patients to the facility. However, patients were satisfied with the time they wait to be treated at the Holy Family Hospital, Techiman.

**Key words:** patient satisfaction, perceive reasons, waiting time, working areas
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<tr>
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<tr>
<td>CHAG</td>
<td>Christian Health Association of Ghana</td>
</tr>
<tr>
<td>ENT</td>
<td>Ear, Nose and Throat</td>
</tr>
<tr>
<td>GP</td>
<td>General Practitioner</td>
</tr>
<tr>
<td>GHS</td>
<td>Ghana Health Service</td>
</tr>
<tr>
<td>HFM</td>
<td>Health Facility Management</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>Human immunodeficiency virus/Acquired immune deficiency disease</td>
</tr>
<tr>
<td>IOM</td>
<td>Institute of Medicine</td>
</tr>
<tr>
<td>LVPEI</td>
<td>LV Prasda Eye Institute</td>
</tr>
<tr>
<td>MIT</td>
<td>Massachusetts Institute of Technology</td>
</tr>
<tr>
<td>MOH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>NHA</td>
<td>National Hospital, Abuja</td>
</tr>
<tr>
<td>NHIS</td>
<td>National Health Insurance Scheme</td>
</tr>
<tr>
<td>OPAT</td>
<td>Organizational Performance Assessment Tool</td>
</tr>
<tr>
<td>OPD</td>
<td>Out Patient Department</td>
</tr>
<tr>
<td>RA</td>
<td>Research Assistant</td>
</tr>
<tr>
<td>USA</td>
<td>United State of America</td>
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DEFINITION OF TERMS

Arrival time: This is the moment the patient presents him/herself to the health facility, thus first point of services is the records unit.

Departure time: This is the moment the client or the patient exit the health facility (hospital).

Flow problems: a condition that occurs whereby there is availability of staff and patients but a delay is occurring at a working area e.g. records.

Out-patient: means the patient accesses the hospital and exit the same day as soon as receiving services (no admission at ward).

Patient flow: this occurs when there is a temporal blockage in the manner in which patients moves from one working area to the other.

Queuing problems: this means that patients are not attended in an orderly (illogical) manner.

Section waiting time: the periods the patient spends waiting to access a service at a specific unit at the hospital.

Service time: this is the number of minutes a patient spends to acquire a service from a specific unit at any of the working areas.

Total waiting time: the addition of all the time the patient spend to receive services at all the various working areas.

Waiting time: the number of minutes or hours a patient spend to receive a service at the OPD.

Working areas: this means the various units at the hospital at the OPD where specific services are provided to the patients.
CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Healthcare is a vital aspect in the life of human beings. When an individual is sick or ill, he or she would not be able to perform numerous activities he could have perform when very strong. If a person is sick, he is more likely to be prevented by his ailment from going about his normal duties. Healthcare institutions are conducting their business in an increasingly rivalrous environment; where patient satisfaction has become an essential indicator for acquiring and retaining market share (Amin, 2007).

Patient satisfaction is a conception that has been receiving increasing awareness reflecting an evolving focus in the service-oriented health care market (Umar, 2011). Understanding satisfaction and health care quality have been recognized as critical to developing many improvement strategies (Yeddula, 2012). A unanimous consensus on the definition of satisfaction with healthcare is not already fully achieved due to the multidimensional and subjective nature of this concept, which is affected by individuals’ expectations, needs or desires. (Murante, 2010).

Adopting a definition from the general marketing perspective, satisfaction is defined as a person's feelings of pleasure or disappointment as a result of comparing a product's perceived performance (or outcome) in relation to his or her expectations. Such expectations of patients are based on their experiences, environment, social background and personality. When the expected
performance is more than perceived performance, customers become dissatisfied. Alternatively, if the expectation exceeds perceived performance, customers turn to be satisfied. Otherwise, if the perceived performance is equal to expectations, customers are in an indifferent or neutral stage (Hailu, 2015).

Patient satisfaction is among the created indicator to assess the progress of healthcare delivery offered in the hospital organization. Sometimes it is tough to assess the satisfaction and gauge sensitiveness of the healthcare industry as not only the clinical but also the non-clinical outcomes of care do affect the consumer satisfaction (Agrawal, 2006).

The quality of work done by Donabedian which is recognized worldwide pointed out the necessity of patient assessment and provided much of the studies in the aspect of standards of care in health service delivery. The necessity of assessing patient satisfaction is well stipulated and has been studied and measured broadly as a stand-alone contrives and as a portion of quality end-results health. (Yeddula, 2012).

Sources of satisfaction with the environment of care include: general pleasantness of the atmosphere, comfort of seating, attractiveness of waiting rooms, clarity of signs and directions, good lighting, quietness, clean, neat and orderly facilities and equipment. Lee et al. (2006) suggested that, since hospitals exist as healing institutions, a very tidy environment is necessary not only as a primary measure to control disease outbreak but also to provide some form of psychological relieve to the patient’s condition.

People who are running the affairs of health institutions must concentrate on attaining utmost or outstanding scoring of patient satisfaction to better the standards of healthcare services. This implies that administrators should portray the conditions affecting patient satisfaction to which
are applied as a means to assess the standards of health services delivery. In order to grasp the numerous determinants of patient satisfaction, scholars who are into researches have traverse various dimensions of the perceived service quality, as relevant and vital assessment of patient perception of healthcare quality. (Hailu, 2015).

Many health care systems globally continue to grapple with lengthy waiting time for patients. For instance in developed countries like the United States (US), the Institute of Medicine called the long waits in emergency outpatient department a national epidemic. (Wafula, 2014). Waiting time is generally referred to as the length of time between when a patient is enrolled on a waiting list and when the service is received (McDonald et al, 1998). It is the time a patient takes at each service point before being served and the overall time a patient spends in a facility from arrival to the registration desk till the time of leaving the facility or last service (Musinguzi 2015 and Pillay et al. 2011).

Depending on the type of services being sought, different operational definitions are also given to waiting time: such as time from seeing a General Practitioner (GP) to treatment, time from seeing specialist to treatment, time from being enrolled on hospital waiting list to treatment, among others. A waiting list is a list that patients are enrolled in once they opt to pursue an elective procedure (nonemergency surgery) assuming that they cannot get this procedure performed immediately. There are different measurements of waiting times according to whether treatment is offered immediately (outpatient health care) or a patient is put on waiting list for elective procedures, (Chua, 2006). On these bases waiting time may also differ from country to country as situations apply.
The Institute of Medicine (IOM) recommends that, at least 90% of patients should be seen within 30 minutes of their scheduled appointment time. This is, however, not the case in most developing countries, as several studies have shown that patients spend 2-4 hours in the outpatient departments before seeing the doctor. A recent study carried out at the outpatient departments in Mulago hospital found out that the overall satisfaction of patients with outpatient services is closely related to their satisfaction with waiting time (Nabbuye-Sekandi et al., 2011).

Several factors lead to long waiting hours in majority of hospitals in the developing world. Some of these factors are few health or medical personnel, high patient load, and few record clerks. These factors and the subsequent long waiting time are not only prevalent in Africa but also in other developing nations such as Malawi, where other factors such as insufficient equipment, long registration procedures, patient overload, and insufficient human resources are the main causes of long waiting time (Chen et al. 2010 and Maluwa et al. 2012).

Waiting time can arise under various situations. Generally, in all situations waiting time arises as a result of variations in supply and demand. When demand for health care exceeds supply for whatever reason, supply of health care cannot be instantaneous and consumers will have to wait to access health care. In order to overcome the problem of long waiting times, countries try to implement policies to introduce greater patient choice like making provision for private care that mostly provide health care at shorter waiting times. In most cases patient choice is seen as an instrument to reduce waiting times for elective (non-emergency) hospital services (Diane et al, 2006).

This study was on patient satisfaction with waiting time at the General OPD in the Holy Family Hospital, Techiman.
1.2 Problem Statement

In Ghana, the waiting times for securing healthcare services at healthcare institutions are reported to be high. It is even higher in public hospitals and private hospitals which are accredited with the National Health Insurance Scheme (NHIS). Tagbel (2013) argued that there is the likelihood that waiting times could have a negative effect on demand for OPD healthcare in public and some private hospitals which are accredited to the NHIS. This view is supported by Boadu (2011) who pointed out from the records of Ghana Statistical Survey (2009) that 65% to 95% of unsatisfied but non-complaining customers will never patronize the services of health institutions at a point in time. Dissatisfied patient may resort to unaccredited healthcare institution or self-medication. This situation possess a challenge to the utilization of modern health services. It rather worsens the situation of disease control, thus contributing to more morbidity and mortality (Tagbel, 2013).

Studies have shown that in many developing countries in sub Saharan Africa, more than four hours has been reported as an average time patient take to wait in facilities. An average waiting time of up to 4.6 hours was reported in a study of patient flow efficiency in three HIV healthcare centers in Uganda (Wanyenze et al. 2010).

From existing literature, minimizing the time patient spent at the out-patient has been the center of attention of numerous studies (Jessica Jitta, 2008 and Nabbuye-Sekandi et al., 2011) since waiting is appraised as an index for quality of services and satisfaction of patient. (MOH 2004 and Nabbuye-Sekandi et al., 2011). Conducting studies to assess patient satisfaction with waiting time produce results that is considered useful in order to pin-point the flaws in the working areas which the delays occur most. The study of patient satisfaction and waiting time has gain some
attention. However, anecdated evidence and most literature show that majority of studies are carried out in public health facilities. This study aimed at assessing the satisfaction level with waiting at the OPD, Holy Family Hospital, Techiman.

1.3 Objective of the study

a. General Objectives:

The general objective of the study was to assess patient satisfaction with waiting time at the OPD at Holy Family Hospital, Techiman.

b. Specific objectives:

The specific objectives were:

1. To determine the waiting time of patients at the various working areas at the OPD.
2. To ascertain patient perceived reasons for waiting at the various OPD working areas.
3. To assess patient satisfaction with waiting time at the OPD.

1.4 Research Questions

Based on the objectives the study sought to achieve, it attempted to address the following research questions:

1. What is the waiting time of patients at the various working areas at the OPD?
2. What are the patient perceive reasons for waiting at the various OPD working areas?
3. What is the level of patient satisfaction during waiting time at the OPD?
1.5 Conceptual Framework

From the literature review, (Wafula, 2014 and Musinguzi 2015) a conceptual framework was deduced to provide direction for the study. It was based on the conceptual framework the problem of the study was investigated. The conceptual framework is demonstrated in Figure 1.1.

- **Socio-Demographic**
  - Age
  - Sex
  - Marital Status
  - Education
  - Occupation

- **Morbidity**
  - Disease Type
  - Duration of disease with patients

- **Patient perceived reasons**
  - Patient flow
  - Physical design
  - High workload
  - Patient turn up in batches
  - Logistical problems
  - Flow problems
  - Queuing problems
  - Arrival time of patients etc.

- **Patient Satisfaction with waiting time**
  - Records
  - Vital signs
  - Consulting room
  - Pharmacy
Figure 1.1: A Conceptual Framework for patient satisfaction with waiting time

From figure 1.1, the socio-demography (age, sex, marital status etc.) would determine the type morbidity the patient presents to the health facility and the duration of the diseases with the patient. This morbidity determines how long a patient spends at the various working areas. The longer a patient harbors a disease condition at home, the more that condition deteriorates and it would require much time to be attended to by health staffs at the various working areas. Thus waiting time at the facility would affect the satisfaction level of patients as patients always prefer to receive prompt and timely services. Finally, there are some various reasons from the patient perspective which would determine the waiting. These variables known as patient perceived reasons i.e. patient flow, physical design, high workload etc. when addressed properly could minimize the waiting time at the OPD hence patient becoming satisfied when accessing healthcare.

1.6 Justification

Health care delivery is recognized as an area subjected to competition, where the patient is seen both as a client and consumer of health care. To improve quality of health care delivery, there was the need to conduct patient satisfaction with waiting time because prompt service would always be needed to save life. Health care delivery plays the key role in providing satisfaction in this arena.

Again the quality of health care delivery is very important to patient outcomes and safety. Patient satisfaction with waiting time is strongly associated with patients overall satisfaction with hospital experience. To ensure service improvement initiatives at appropriative levels in hospital
is a prerequisite to understand patients perceive reason for waiting time which influence patient satisfaction with healthcare delivery. The mensuration of patient satisfaction with waiting is essential to determine and what the patients need in relation to care and to assess quality of care provided. The outcome of this study was expected to help to assist stakeholder in the Techiman Holy Family Hospital Management to put measures in place to deal with the patient dissatisfaction with waiting time at the OPD because it was expected to reveal the exact working areas the delays occur. This study was also expected to be useful for the management of the Holy Family Hospital since they would get to know if patients who are accessing healthcare are satisfied or not with the time they spent at the OPD. Finally, it would serve as a source of literature for students who are interested in researching into waiting time.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter review relevant literature on the concept of Patient’s Satisfaction; the concept of patients waiting time which include patient’s perceived reasons for waiting time; and patient satisfaction with waiting time.

2.2 The concept of Patients’ Satisfaction

According to Agrawal, (2006) one of the recognized benchmark in measuring the success or failure of healthcare service delivery in the healthcare industry is patient satisfaction. He further argued that since non-clinical outcomes influenced patient satisfaction, it was however not easy to measure patients satisfaction and gauge responsiveness of the healthcare systems (Agrawal, 2006). Hailu (2015) defined satisfaction in the marketing context as a person's feelings of displeasure or pleasure as an outcome of comparing a perceived performance of a product or service (or outcome) in the context to his expectations. Hailu (2015) viewed expectation as what the patient wanted, expected; and thought which needed to be completed. Patients experiences, social background, environment, and personality are what their expectations are based on (Hailu, 2015). Customers were dissatisfied in event their expected performance exceeded their perceived performance. On the other hand, customer were satisfied in event their perceived performance exceeded their expected performance. Customers were however indifferent or neutral when their perceived performance were equal to their expected performance.
The satisfaction of patients was initially considered a difficult concept to be measured and interpreted, notwithstanding its large use today. As a result of subjective and multidimensional nature of the concept of patient satisfaction, which is influenced by the expectation of individuals, desire, or needs, an unanimous consensus on the definition of satisfaction with healthcare is not already fully achieved. A level of high satisfaction score may be recorded although on the basis of poor standards of care when patients have little or no knowledge of low expectations and opportunities of healthcare service quality (Murante, 2010).

According to Hailu (2015), the ambiguities which associated with the concept of patient satisfaction enhance the argument among, health experts, supervisors and researchers. Currently, new approaches to the concept of patient satisfaction have also been examined and agreed, which has led to the introduction of more impartial tools for measuring healthcare service quality. A practical example is that experts use rating scales to gather data by asking patients to provide into details, their experience with a particular healthcare services under investigation. Once the experts obtained results from their test, it is considered useful as it reveals the strength and weakness of healthcare service delivery in the healthcare institution. There are also instances where patients’ willingness to subscribe to or recommend a healthcare service is considered as a proxy of overall evaluation.

Existing literature on patient satisfaction points out that the satisfaction of a customer is the outcome of customer’s perceived service implementation against the customer’s expectation. Hailu (2015) is of the view that the influence of satisfaction and willingness and expecting to have healthcare services create alternatives for patients is willingness to buy a service or return to receive the same services is. The greater the level of patient contentedness, the more patients are delighted with the healthcare service delivery (Hailu, 2015). A higher level of satisfaction
will be shown in event healthcare services meet the wishes of patients. In event healthcare services do not meet the wishes of patient, the level of satisfaction will be low. In the circumstances, patients will be satisfied or dissatisfied, depending on how healthcare service meets their wishes (Vadhana). Vadhana (2012) argued that the procedures of equality between a set of generically agreed quality with their personal previous participation is the positive opinion of patients about the services they have received.

A lot patients are sensitive with regards to what is pertaining with their health condition according to the findings from various studies (Vadhana, 2012). The studies pointed out that patients honestly insisted to find out exactly what wrong with them, what treatment was needed, and what was the consequence associated with the treatment. While it might disappoint or frighten them in difference ways, the still do (Vadhana, 2012). Murante (2010) pointed out the fact that in 1990s health policy-makers, researchers, and managers gave more special care to the perception of patients about healthcare services quality. Recently, studies on patient satisfaction have increased.

Factors generating satisfaction could be somewhat different from the factors influencing dissatisfaction. On one hand, a feeling of satisfaction may arise from high quality healthcare services while on the other hand, an acceptable or adequate standard of quality may be considered as necessary. In addition to that, patients may be dissatisfied in case something negative happens. This will depends on whether the negative situation is as a result of the health professionals or their behavior. It is therefore possible that what make another one person dissatisfied will make another person satisfied (Vadhana, 2012).
2.3 Importance of Patient Satisfaction

It is important to understand the expectations and needs of patients to improve healthcare services. According to Hailu (2015), it is important for healthcare services to satisfy the needs of patients. It is also important for healthcare services to meet the expectations of patients. For this reason, it is therefore important for healthcare service providers to understand the experiences that contribute to patients’ satisfaction. Hailu (2015) pointed out the behavior of support staff, attitude of paramedic staff, competence of doctor, doctor patient relationship, hygienic condition of the healthcare institution, and various services provided by the health care institution are major experiences of patients.

Duggirala et al. (2008) argued that one of the standards of measuring patient perception about health services is patient’s satisfaction. They further argued that patient satisfaction as a standard of measuring the quality of healthcare services has been used to conduct remarkable study over the decades. Some of these studies about patient satisfaction have been conducted by academicians and practitioner with various motives. Hailu (2015) is off the view that the behavior of patients are hard to predict which make them more sophisticated in terms of their healthcare preference. Healthcare service provider are becoming very mindful about the preference of patient, considering the fact that there is competition in the healthcare service industry. For this reason, patient satisfaction is used as a tool to gather relevant information to improve healthcare service delivery (Boyer et al. 2006). The outcome of patients through the satisfaction study aids in improve their perception about the healthcare services under investigation.

Patient satisfaction is significant improving the quality of healthcare service delivery through gathering suggestions from patients and stakeholders (Hailu, 2015). Actions in relation to
satisfaction are thus relevant tools for forecasting and examination. Patient satisfaction is important for taking decision of healthcare service delivery. This is due to the fact that a higher level of satisfaction is associated with improved attendance at healthcare institution, superior compliance, and better outcomes. Through a study that was conduct by Andrew & Erik (2009) it was revealed that quality healthcare assessment was influence by decreased inequality with respect to the healthcare systems. It was also revealed that the quality of healthcare assessment was influenced by desire to improve healthcare service delivery. The study revealed the healthcare assessment also intended to address key areas in relation to structure, process, and outcome from the health service provider’s view point. From majority of researchers’ point of view, patient satisfaction is an important technique in conducting research, and managing a healthcare institution (Papanikolaou & Ntani, 2008).

Existing literature has generally agreed that studies on patient satisfaction has an impact on improving the quality of healthcare service delivery. It has also agreed that patient satisfaction study is an accurate too for providing chance for enhanced strategic decision making, reducing cost, meeting the expectations of patient, improvement, providing a standard across healthcare institutions, and monitoring healthcare performance (Hailu, 2015).

Conducting a study on patient satisfaction provides basic for making valued judgment on the healthcare service performance of healthcare service personnel (Hailu, 2015). Again patient satisfaction reveals the failure or success of healthcare service policy development and implementation. As a complicated principal, patient satisfaction is usually influenced by socio-economic factors, personal characters, physical and mental aspects, cause and effect of the services, and patient’s expectations.
Despite the complex nature of patient satisfaction, measures of measuring it have been proposed as: marketing strategies with respect to consumers’ satisfaction that have been brought in the healthcare industry; accurate merging of the opinions of consumers about healthcare service delivery for the sake of quality assurance and quality improvement; and increasing compliance level with treatment, which originated from the vital study of the behaviors of patients toward healthcare services. With respect to quality improvement, patient satisfaction assessment becomes an important process of enlightening to discover the developments that have better healthcare service set of qualified standards and performance, and are less expensive to make (Hailu, 2015).

2.4 The concept of Patient Waiting Time

Musinguzi (2015) and Pillay et al. (2011) agrees that patient waiting time can be defined as the time it takes a given patient at each service point before he is served and the total duration of a patient in a healthcare facility from time of arrival, through registration and the various service point till the time of leaving the healthcare facility after the last service. The waiting time of patient in a healthcare institution is one of the benchmarks which is used to evaluate the efficiency of healthcare service delivery in healthcare institutions (Wanyenze et al. 2010). In the case of a study conduct in Malaysian public healthcare institutions, it was established that patients took as long as more than two hours since the time of their registration till the time they collected their drugs (Pillay et al. 2011). Wafula (2014) in her case argued that in public health institutions, teaching hospitals, and outpatient trauma centers, the waiting time of patients has shown to be longer. Lane et al. (2010) argued that the shift system of the staff of healthcare institutions has little effect on average waiting times till a decision is made to admit. Musinguzi (2015) pointed out that the Institute Of Medicine recommended that patients should be attended
to within 30 minutes of their arrival. This recommendation has however not worked in African Countries. In support of this view, a study conducted by Oche & Adamu (2013) in a tertiary hospital in Nigeria indicated that majority of their patients waited between 90-180 minutes in clinic.

2.5. Patients perceived reason for waiting time

Studies have pointed out a number of reason for waiting time from patients’ point of view. Some of the reasons include: patient flow, operational efficiency; physical design; emergency of bottlenecks, high workload, patients turn up in batches, lack of efficiency, logistical problems, queuing problems, and arrival time of patients.

2.5.1 Patient flow

The capacity of the system of health facilities to attend to patients rapidly without waste of time as they progress through the stages of receiving care is referred to as patient flow. In the situation where the flow is obstructed, it can result in waiting time being increased and can result in negative effect on the standards of delivery of healthcare services (Vos et al., 2007). When patient flow is critically looked at very well, it could reduce wait at the various working areas i.e. registration, vital signs, consulting, laboratory etc. (Belson, 2010). Thus implies that remodeling patient flow is one of the best approaches to improving the services delivered at the out-patients departments.

2.5.2 Operational efficiency

In the instances whereby hospitals get the full comprehension of the patient flow principle, it can aid to better the performance of the hospital. This means that high efficiency level of patient flow could help to attain utmost performance in the OPDs. According to (Wanyenze et al., 2010) some factors could affect efficiency and the emergence of bottleneck in health service delivery
system operation during examining operational efficiency with regard to patient flow. These factors consists of the quantum of patients seen on the daily basis, the kind of patient seeking healthcare in relation to the phases of care, clinic policies on frequency of patient visits, the kind of provider who they should see, the proportion and make-up of the providers and the workforce model (Musinguzi, 2013).

2.5.3 Physical design
The physical environment considerably influence the standards, efficiency and effectiveness of health services delivery in out-patient surroundings. In order to understand this concept, it is very necessary to understand the stages of processes the patients make through the working areas. Patient environment can best be studied from the usual experience. The manner in which various working areas are connected, the changes in direction foist by the motion system, the construction of rooms sequences, the dispensation of branching points, the availability of possible substituted paths and the relation of visibility between and across areas at the various units at the OPD. (Peponis and Zimring, 1996).

several researches have shown that how the hospital is designed accompanied with the magnitude of walking experienced by patients and common journeys has effect on every department (Wanyenze et al., 2010), with a direct impact on the movement of patients, staff, and supplies (HFM, 2011). Therefore managing the movement in terms of; the number of changes in direction needed to access different service points from the main reception or entry point, the distance and number pit stops (consulting rooms), would see to it that minimal time is for walking to locate service points. Therefore, physical accessibility is a crucial factor for optimizing patient flow; and to achieve operational efficiency (Musinguzi, 2013).
2.5.4 Emergence of bottlenecks in Outpatient departments
People who are seeking healthcare are seen at various units at the facility system, but without exceptions a greater number of are attending OPD pharmacy department to be served with their medications. Many of the patients progress through only one file from records to be registered to consulting room to be examined but as promptly as they exit the consulting rooms they either returned back and forth for enquiries to the labs or x-rays departments at many times. Queues form when the rate of patient arrival at the any service point is greater than the service rate (Musinguzi, 2013).

2.5.5 High Workload
If the health personnel are overworked, it results in patients having to wait longer as the staff member have much patients to provide healthcare services to. Hailu (2015) has also argued that high workload contribute to long waiting time. High workload can be addressed by decreasing service times (in event they are too long); or by supplying sufficient staff member in event service times are appropriate or low; or by rotating staff members from departments with a low workload (Musinguzi, 2013).

2.5.6 Patients turn up in batches
In case plenty patients report at the same time it means that the waiting time of them would be extended because the personnel would be occupied attending to the patients who reported earlier in the batch and the remaining would patients would be waiting. So in case twenty patients show up to seek services at the same moment, the first would wait for zero minutes if the hospital were empty and the next patient would wait for the period it took the personnel to attend to the first patient assuming (seven minutes) but the patient who is numbered twentieth would wait for the other nineteen to be attended to, which would be 19 times 7 minutes or a wait of 1 hour.
63 minutes. A big batch refers to as double as many patients reporting in a time-period that can be attended in that time period. (Musinguzi, 2013).

2.5.7 Absence of efficiency
There could be some instances where patient would not be attended to have quick service since personnel would be engaged with other activities example working at the administrations, educating (Musinguzi, 2013). Hailu (2015) has argued that lack of efficiency adversely affect the quality of care that is provide by hearth services.

2.5.8 Logistical problem
Shortages and lack of medical tools and equipment like thermometer, weighing scales and rooms for consulting can affect waiting time at the OPD. Chen et al. (2010) has also argued that insufficient equipment is a contributing reason for long waiting time. A study which Muinguzi (2013) made reference to indicated that personnel present but patients waiting and the health personnel questionnaire stipulated that there was insufficiency of hospital apparatus for working or rooms.

2.5.9 Flow Problem
Health personnel are available to attend to patients and patients are at the hospital but they are being delayed at some other working areas. Birna (2006) has argued in the work of Hailu (2015) that patient waited hours in the process of registration, meeting the medical officers in the consulting room after registration, engaging in laboratory procedures, and coming back to the medical doctor for evaluation with the findings of the labs. Musinguzi (2013) pointed out that there are situation where staff are present but are no not ready to attend to patients. As a result, patients are made to wait for much time at the before service point.
2.5.10 Queuing problems
When patients do not follow the logical manner in which they form the queue, first come first serve rule is not obeyed. Those who report first at a service point are not attended first. Skipping of queue could be a factor causing delay of patients at the OPD. (Musinguzi, 2013).

2.5.11 Arrival time of patients
Arrival time to the health facility is the time the patient presents themselves to the first service point which is the registration office (Whyte & Goodacre 2016). The time a patient arrives in the facility is used as the start point for checking or measuring how long it takes to receive the entire service in a facility. This arrival time is assumed to be the time that the patient was booked for the appointment or is in need of the health care service. Arriving late at the health facility for the appointment has been shown to affect amount of time a patient spends with a physician and the overall efficiency of the facility. The time a patient presents to the facility has a direct association with the length of waiting. The mean wait time for patients who arrive early is shorter than those who arrive late to receive specialized services (Whyte & Goodacre 2016; Chan et al. 2010).

2.6 Patient’s satisfaction with waiting time
Studies have shown that there is negative relationship between patients’ satisfaction and long waiting time. The studies have largely used quantitative method, such as direct patient interview, survey or filling feedback to evaluate patient satisfaction with waiting time. They are then followed by statistical analysis to compare the results before and after applying a change in healthcare organizations (Raghda, 2015).

Harnett et al. (2010) conducted a study to improve patients’ satisfaction and efficiency in a preoperative evaluation health institution in the United States of America. In two time periods,
they administered a questionnaires to a sample of 872 patients. Their findings indicated that due to long waiting time in the initial period, patients were dissatisfied. According to Harnett et al. (2010) it was a survey that generated the most negative responses from patients. This was due to the fact that on the average, patient sent about 1 hour and 32 minutes. The changes which were implemented were composed of health education lectures for the staff of the health institution, and modifications in clinical processes to improve the service delivery for patients. Significantly, the changes which were implemented decreased the waiting time to 42 ± 5 minutes from an initial 92 ± 10 minutes. It also brought minimal cost impact and noticeable improvement in the satisfaction of patients (Raghda, 2015).

In a study was carried out in the OPD of Tertiary Health Institution of Usman Danfodiyo University, Sokoto. The purpose of the study was to access patient satisfaction with waiting time. Questionnaires were administered to a sample of 384 patients. The study indicated that most of the patients had to wait for a long time before they got attended to by a doctor. 118 patients which constituted 31% of the total sample stayed less than an hour. Out of the proportion which stayed less than an hour, 83 patients which constituted were satisfied. On the whole, 173 patients who constituted 45% and also constituted the majority of the sample were dissatisfied with the waiting time (Umar et al., 2011). An issue that was detected at Tertiary Health Institution was the fact that health learning activities affected the satisfaction of patients. This was due to the fact the health leaning activities brought waiting time to patients. During waiting times, most patients either observed situations at the health institution or watched TV.

A study was conducted by Anderson et al. (2007) in the United States of America to determine waiting time with patient satisfaction. 5030 questionnaire were administered online to patients.
The findings of the study indicated that patients felt highly satisfied in situations where they spent less waiting time. The findings of their study was similar to the findings of a study which was conducted ducted by Massachusetts Institute of Technology Sloan Team.

Raghda (2015) argued that patients obviously suffered from delays which varied from 45 minutes to 6 hours. The long waiting time put significant pressure on the health workers. This compelled them to work extra hours. From the patient perspective, the situation made them continually anxious and bored. In the circumstances, it brought patient dissatisfaction which ultimately ruined the reputation of the health institution (Kamil & Lyan, 2013).

Ogunfowokan & Mora (2012) carried out a study to determine Patients’ experience at National Hospital Abuja (NHA), Nigeria. In trying to measure patient satisfaction with waiting time, the issued out questionnaires to 270 patients. The study indicated that mean waiting time was 2.7 hours. It took a random patient an average of 1 hour to see the doctor. 196 patients who constitute 72.6% of the sample perceived the clinical procedure as too long that it reduced their level of satisfaction. The literature under review highlights the need for investigating the patients’ satisfaction with waiting time in the Holy Family Hospital, Techiman.

2.7 Summary of literature review

From the literature review, patient’s satisfaction as a patient's feelings of pleasure or disappointment as a result of healthcare service delivery is a measure of the image and performance of hospital or a health center. Waiting time has been a major factor affecting patients’ satisfaction. Other factors affect patient satisfaction include: Socio-economic factors, Convenience and Availability, Quality of Care, Courtesy, and Physical Environment. Patients perceived reason for waiting time include: patient flow, operational efficiency; physical design;
emergency of bottlenecks, high workload, patients turn up in batches, lack of efficiency, logistical problems, queuing problems, and arrival time of patients. In improving healthcare service delivery, there is the need to improve on the long waiting time that patient spend at various sections at the OPD of health centers.
CHAPTER THREE

METHODS

3.1 Introduction
This chapter presents the research methods and design that was used in the study, the target population, sampling techniques, sample size, data collection methods and analysis methods that was used for the study, it further explains the data entry, data cleaning, quality control and ethical considerations observed.

3.2 Type of study
A cross-sectional study design was adopted for the research using quantitative approach. It was considered appropriate for the study due to the objectives of the research and also the sample size that was used.

3.3 Study location/Area
The study was carried out at Holy Family Hospital, Techiman. Techiman Municipality is situated in the central part of the Brong-Ahafo Region. It shares similar border lines with four districts namely, Techiman North, Wenchi, and Nkronzah Municipalities in the Brong-Ahafo Region and Offinso-North District in the Ashanti Region. The prominent commercial occupation are transport services, catering services, wholesale and retail trade, and mobile phone services which makes it a bustling 24 hours commercial center. Techiman is the capital town of Techiman Municipal, the Municipality recorded a total population of 147,788 in 2010 which represents 6.4 percent of the total population of the Brong-Ahafo Region. The population comprises 51.5 percent females and 48.5 percent males, similar to the pattern observed at the regional and
national levels. Out of the total population, a significant amount of 64.5% resides at the area denoted as urban community whilst 35.5% lives in the rural areas. (Population and Housing Census 2010).

Holy Family Hospital falls under the agency of Christian Health Association of Ghana of Ministry of Health and is ran by the National Catholic Health Services. The facility is situated in Techiman which is situated in a very busy town. The hospital has a bed capacity of 303 and known for providing primary and secondary healthcare services to the people in the localities and its surroundings. Because the facility is situated in a cross-section of the trunk road which connects the south and the three regions in the north of the country, it is very accessible and prudent for many patients in seeking services there.

The out-patient department of the hospital where the research took place consists of the following clinics; general OPD, specialist OPD (for hypertension, diabetic and HIV/AIDs) ENT, Eye clinic, Dental clinic, under fourteen OPD, mental OPD and patients who were attending these clinics were interviewed and their time spent was also measured. Average monthly OPD attendance is 16,580 patients and all these patients pass through these working areas before departing from the hospital; records, vital signs, consulting rooms, laboratory and pharmacy.

3.4 Study Variables

3.4.1 The dependent variable

That was investigated in the study was patient satisfaction with waiting time.
3.4.2 The independent variables
Were; socio-demographics (age, sex, marital status, educational level and occupational status), waiting time at the various OPD working areas, morbidity (disease types, duration of disease) and perceive reasons for waiting time at the OPD.

3.5 Study Population
The population of the study was made up of the all the patients seeking health services at the OPD working areas of the Techiman Holy Family Hospital during the period of 10th September to 11th October 2018. The sample size was drawn from this study population.

3.5.1 Inclusion criteria
All patients who attended OPD for services and who were aged 18 years and over.

3.5.2 Exclusion criteria
Patients who were attending OPD aged 18 years and over but refused to consent to take part in the study’s and patients who were referred to laboratory and X-rays.

3.6 Sampling Methods
Consecutive sampling method whereby every eligible person is recruited till the desired sample size is reached based on the inclusion criteria was applied in this study. This method was appropriate because of the limited time frame of the study. The selection of patients at each unit within the OPD was done at peak and non-peak hours to prevent bias and to ensure fair distribution of the patients during busy and non-busy hours of the day.

The apportioned number of patients recruited from each unit within the OPD was based on the monthly average number of attendance of that particular unit over the overall monthly average OPD attendance expressed in relation to the sample size (408). The breakdown of the monthly
attendance for each unit was as follows according to the hospital administration and management software and the OPD attendance register; Antenatal care unit 879, Obstetrics and Gynecology unit 534, Surgical OPD 423, Eye clinic 1,475. Dental 335, ENT 1,200, specialist OPD 3,523 and general OPD 8,211. The formula below was used to calculate the number of patients that was recruited in each unit;

Average monthly attendance at the unit \( \times \) sample size (n) 
Average total OPD attendance

10% was added to each apportioned number of patients because Antenatal Care, Surgical OPD and Obstetrics and Gynecology unit were not included and they account for 10% of the total monthly attendance. For ENT and general OPD thirty three and two hundred and twenty two patients respectively were recruited. At the eye clinic forty one patients were selected to take part in the study whiles ninety six patients accessing the specialist clinic were interviewed. Only ten and seven patients from the dental and mental units were chosen to participate in the study.

This formula was applied to generate the number of patients who were selected in each unit as summarized in the table below;

**Table 3.1: Summary of sampling method**

<table>
<thead>
<tr>
<th>Units at OPD</th>
<th>Calculations</th>
<th>Number of patients to interview (addition of 10%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ear, Nose, Throat</td>
<td>1,200 ( \times ) 408 ( = 16,580 )  ( = 30 )</td>
<td>33 patients; all patients visiting the unit were eligible for selection till the 33rd patient was gotten. (peak/non-peak hours were considered).</td>
</tr>
</tbody>
</table>
### 3.6.2 Sample Size

The study applied a cross-sectional design and the determination of the sample size was based on [Cochran formula for determining sample size](http://ugspace.ug.edu.gh) (Nabbuye et al., 2011). There was a study

<table>
<thead>
<tr>
<th>Department</th>
<th>Visiting Patients</th>
<th>Sample Size Calculation</th>
<th>Eligible Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>General OPD</td>
<td>8,211 × 408 / 16,580 = 202</td>
<td>222 patients; all patients visiting the unit were eligible for selection till the 222nd patient was gotten. (peak/non-peak hours were considered).</td>
<td></td>
</tr>
<tr>
<td>Eye</td>
<td>1475 × 408 / 16,580 = 37</td>
<td>41 patients; all patients visiting the unit were eligible for selection till the 41st patient was gotten. (Peak/non-peak hours were considered).</td>
<td></td>
</tr>
<tr>
<td>Specialist OPD (for hypertension, diabetes, HIV/AIDS)</td>
<td>3523 × 408 / 16,580 = 87</td>
<td>96 patients; all patients visiting the unit were eligible for selection till the 96th patient was gotten. (peak/non-peak hours were considered).</td>
<td></td>
</tr>
<tr>
<td>Mental</td>
<td>225 × 408 / 16,580 = 6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Dental</td>
<td>335 × 408 / 16,580 = 9</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>
done at Pune, India and the proportion (p) of patients who are satisfied with waiting time at the hospital was 50% (Pandit et al., 2018). This study therefore assumed the maximum sample size possible by setting p=0.5. This study made use of 95% confidence, resulting in standard normal deviate, Z = 1.96. Also, the level of precision (d) was set to 0.05. Using the above parameters, the minimum required sample size was:

\[
n \geq \frac{z^2 p(1 - p)}{d^2} = \frac{1.96^2 \times 0.5(1 - 0.5)}{0.05^2}
\]

\[
n \geq 385.16
\]

\[
n = 385
\]

Thus, a sample size of 385 patients was recruited for the study.

6% non-response rate was added to the sample size (Nabbuye et al., 2011) to cater for patients who were not able to complete the questionnaires and questionnaires that were destroyed. Therefore a sum of 408 patients was recruited in the study.

3.7 Data Collection Techniques/Methods & Tools

Structured (closed-ended) questionnaire was used to seek information from the sampled patients. The written questionnaire for the study was a 20-item questionnaire, comprising 3 segments namely, the patient’s background characteristics, perceive reasons for waiting time and satisfaction level. Other characteristics such as minutes spent at each working areas was measured and computed for each respondent by recording the exact time the patient enters a working area (time in) e.g. records and the time the patient exit from that working area (time
The questionnaire was adapted from Ghana Health Service patient satisfaction survey tool, GHS (2004) and organizational and patient’s assessment tool (OPAT), 2013 on patient satisfaction from CHAG. The questionnaire was used to seek information about the background of the patients, perceive reasons for waiting by face to face interviewing with written questionnaires. Satisfaction level with waiting time at each working area was collected by face to face interviewing with written questionnaires using a 3-point Likert scale satisfaction rate. The patients who received outpatient services and were ready to leave the health facility were interviewed. The satisfaction level responses were ranked as very satisfied, satisfied and dissatisfied. The questionnaires were administered by trained research assistants which lasted for a maximum of 20 to 30 minutes.

Table 3.2: Summary of Data collection techniques and tools

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Collection techniques</th>
<th>Collection instrument/tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic data</td>
<td>Exit interviewing</td>
<td>Written questionnaires</td>
</tr>
<tr>
<td>Patient’s perceive reasons for</td>
<td>Exit interviewing</td>
<td>Written questionnaires</td>
</tr>
<tr>
<td>waiting time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiting time at various working</td>
<td>Measuring minutes spent</td>
<td>Writing the exact time the patient enters and exit at each working.</td>
</tr>
<tr>
<td>areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction level</td>
<td>Exit interviewing</td>
<td>Written questionnaires</td>
</tr>
</tbody>
</table>
3.8 Quality Control

3.8.1 Training of fieldworks
The field workers that were employed for the study were trained for a maximum of two days before the commencement of the data collection. The aims of the training were: (1) to ensure that the field workers understood the objectives of the study; (2) to build the understanding on the survey tools and interpretation; (3) to assess the capacity of field workers to perform the survey tasks. Data collectors were educated on ethical issues and how to properly communicate and interview the respondents. Simulated practice was done to build consensus and consistency on study tool understanding, interpretation and administration. All the questionnaires and watches for recording the minutes were inspected by the principal investigator for absoluteness and for any errors routinely during the day throughout the week. The research assistants and the PI met at the end of each day to trouble shoot and fine-tune the design used for the study where necessary.

3.8.2 Pretest
Pre-testing was conducted at the OPD of the Opoku Agyemang Hospital which is a private hospital located at Techiman. Twenty patients thus 5% of the sample size were sampled for the study. Semi-structured questionnaire was administered to patients in a period of 2 days. Efforts were made to avoid bias which violated ethical standards. It was a small-scale study and was not intended for generalization. It was intended to enhance understanding of the questionnaire, to ensure reliability, it also helped in assessing the completeness, clarity and validity of the study. The outcome of the pre-test revealed and improve respondent’s understanding of the research instruments. Corrections in terms of the flow of the questions, wording etc. were made prior to the main study. Ambiguous questions after pre-testing were made clearer to the respondents.
3.8.3 Supervision of fieldwork
The entire research was supervised properly by the PI, by visiting each RA especially during the
time of recording the minutes at each working areas to ensure that correct time were taken, also
close monitoring was done during the day whiles the questionnaires were being administered to
the respondents. At the end of each day, all forms were examined for accuracy and uniformity.
Information with minor errors were corrected.

3.8.4 Data Collection stage
The projected number of questionnaires to be administered were supplied to the RAs on daily
basis. Daily, timely visit to the various units at the OPD (ENT, eye, dental etc.) and the various
working areas (records, vital etc.) were done to ensure strict adherence to research guidelines.
The questionnaires were checked to ensure that it was completely filled leaving no space
unfilled. Routine deliberation was done concerning any challenges the RAs were faced in terms
of the adminstration of the questionnaires. Questionnaires with errors and mistakes were
corrected by the close of every day, this ensured error free data.

3.8.5 Data Entry
Screen was created for the questionnaires using EPI Info and the responses of participants were
entered on the screen. Later the screen was transported into Microsoft Excel to ensure easy data
cleaning. Data set was imported to STATA version 15 for further analysis.

3.9 Data Processing
Editing was the first step that was employed in data processing. Editing was important because it
helped in examining the data collected in the questionnaires were free from errors and omissions,
such data were corrected. When the whole data collection were over a final and a thorough check
up was made to ensure that they were accurate as possible, consistent with other facts secured,
uniformly entered, as complete as possible, acceptable for tabulation and arranged to facilitate coding. Central Editing was done by the researcher after getting all questionnaires forms from the respondents this ensured that obvious errors were corrected. For missed data or information, the PI rejected that form or substituted data or information by reviewing information provided by likely placed respondents. A definite answer which is not appropriate was removed and no answer was entered when reasonable attempts to get the appropriate answer fail to produce results. The rejected forms did not affect the quality of the research because of the 6% non-response was added to the sample size.

3.10 Limitation of the study
Patients who arrived at the OPD before 7 am were not able to provide the correct time to the research assistants therefore they assumed their time-in at the records at 8 am since they had not reported at to take the actual measurement of time.

3.11 Data Analysis

3.11.1 Background characteristics of respondents
The characteristics of respondents were based on following variables: Their age, sex, education, marital status, occupation. Each variable was summarised with the use of a table containing frequencies, and percentages. The table was generated by STATA as documented on questionnaires at appendix III.

3.11.2 Determination of waiting time at OPD working areas
The exact time the patient enters the working area was noted and recorded as ‘time in’ on the questionnaire in section 2. The time patient finished and leaves (exited) from the working area was also recorded as ‘time out’. The time-out deducted from the time-in provided a measurement of minutes spent at each working area by each respondent. This data was entered on Microsoft
excel spreadsheet, therefore overall minutes spent by the patient were determined. Mean and median overall waiting time were calculated for each working area.

3.11.3 Determination of patient perceived reasons for waiting time at OPD working areas
By the aid of the STATA Software, a table containing frequencies, and percentages were used to determine patients’ reason for waiting at OPD.

3.11.4 Determination of patient satisfaction with waiting time
Patient satisfaction level with the waiting time at the Holy Family Hospital OPD was determined using a Likert Scale to assess the time they spent at the four working areas (i.e., Records, Vital Signs area, Consulting room and Pharmacy). For this study, the Likert scale used had three dimension scale namely; Dissatisfied (1), Satisfied (2) and Very satisfied (3) in respect of the working areas. The scores for each working area were then used to describe it. The summation of the scores of the working areas was re-classified to provide the overall satisfaction level of the waiting time at the OPD. The results were then displayed graphically (using radar chart etc.). Table 3 indicates the scale and scores of the working areas.

Table 3.3: Composite satisfaction level at the working areas

<table>
<thead>
<tr>
<th>No</th>
<th>Working areas</th>
<th>Scale dimensions</th>
<th>Score range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Records</td>
<td>1. Dissatisfied</td>
<td>Scores range is estimated by multiplying the number of questions under this working area by the number of scale dimensions.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Satisfied</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Very satisfied</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Vital signs</td>
<td>1. Dissatisfied</td>
<td>Scores range is estimated by multiplying the number of questions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Satisfied</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Very satisfied</td>
<td></td>
</tr>
</tbody>
</table>
under this working area by the number of scale dimensions.

<table>
<thead>
<tr>
<th></th>
<th>Consulting rooms</th>
<th>Dissatisfied</th>
<th>Satisfied</th>
<th>Very satisfied</th>
<th>Scores range is estimated by multiplying the number of questions under this working area by the number of scale dimensions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td>1.</td>
<td>2.</td>
<td>3.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dissatisfied</td>
<td>Satisfied</td>
<td>Very satisfied</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Pharmacy</th>
<th>Dissatisfied</th>
<th>Satisfied</th>
<th>Very satisfied</th>
<th>Scores range is estimated by multiplying the number of questions under this working area by the number of scale dimensions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td></td>
<td>1.</td>
<td>2.</td>
<td>3.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dissatisfied</td>
<td>Satisfied</td>
<td>Very satisfied</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Summation of total score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Range</th>
<th>Lowest (4) – Highest range (12)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The overall satisfaction with OPD waiting time score was derived from the total scores for the working areas. This satisfaction score was subsequently reclassified into Dissatisfied, Satisfied and Very satisfied with corresponding ranges using a tertile statistics shown in table 3.4.

Table 3.4: OPD waiting time satisfaction level score ranges

<table>
<thead>
<tr>
<th>No.</th>
<th>OPD satisfaction levels</th>
<th>Score ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dissatisfied</td>
<td>4 – 6</td>
</tr>
<tr>
<td>2</td>
<td>Satisfied</td>
<td>7 – 9</td>
</tr>
<tr>
<td>3</td>
<td>Very satisfied</td>
<td>10 – 12</td>
</tr>
</tbody>
</table>
3.12 Ethical Consideration/Issues

3.12.1 Ethical clearance
Ethical clearance was sought from Ghana Health Service Ethics Review Committee of the research department of the Ghana Health Service. (Approval No GHS-ERC: 017/07/18).

3.12.2 Approval and Permission
Approval from the Catholic Diocesan Health Service, Techiman was sought for before the commencement of this study. Permission from the Management of the Holy Family Hospital was also sought to collect data from the facility. All the In-charges and head of departments of the various units involved in this study were given prior notice.

3.12.3 Purpose of the study
The aim of this study was to assess the satisfaction level with waiting time at the OPD, Holy Family Hospital, therefore the subjects involved were patients.

3.12.4 Potential risk and benefits of the study
There was no foreseeable risk to the patients who were selected to participate in the study, the patients had their normal/usual healthcare services when they visited the OPD. When the research was completed, it had positive consequences for healthcare delivery in the facility because the management of the hospital got to know whether the patients were satisfied or not with the waiting time when they visited the OPD. The patients benefited minimally from this research because it gave them the opportunity to express their view concerning waiting.

3.12.5 Anonymity
All information collected in this study was given code numbers. No name was recorded. No name or identifier were used in any publication or reports from this study. Strict anonymity were complied throughout this study because the questionnaire did not bear the names of the patients.
3.12.6 Privacy and confidentiality
Respondents were provided with total privacy because the questions did not demand sensitive answers, however patients had the right not to answer any questions that were deemed to be sensitive to their personal opinions.

3.12.7 Informed consent
From the study procedure, the aim and objectives were explained in details on the consent form by the research assistants, and participant leaflet form were given to the patient to sign or thumb print indicating their understanding of the study’s. This was explained in the language they understood. Those who were willing to participate were made to sign the consent form. A copy of the participant leaflet form and the signed form were attached to the questionnaire. Also the RA’s signed indicating that they had given all the necessary information concerning the studies to the respondents.

3.12.8 Data Security, Storage and Usage
Data collected for the study was used solely for the purpose indicated for the study. Data files were password protected. Hard copy and electronic data were stored securely in locked file cabinets without the names of the participants, and access was limited to the principal investigator and the supervisors of the study. The data collected would be destroyed after a minimum of three years as per research protocol.

3.12.9 Voluntary withdrawal
The respondents were informed about their right to decline from the research at any time without having to give any explanation, they also had the chance not to answer any question they found uncomfortable or private.
There were no consequence, loss of benefit or care to the respondents if they chose to withdraw from the study. The research team promised to make good faith and effort to comply with the wishes of the respondents as much as practicable.

3.12.10 Compensation
The study was absolutely voluntary and respondents were not given any compensation or participation.

3.12.11 Conflict of interest
The Principal Investigator hereby declare no conflict of interest with respect to this research, authorship and publication.

3.12.12 Funding information
The study was solely funded by the principal investigator, there was no sponsorship from any organization, body, department, institution etc.

3.12.13 Protocol Amendment
In case there were any form of changes and modifications which would have affected the conduct of the study such as the objectives, study design, sample size, data collection techniques etc., a formal protocol amendment application would have been made to the GHS-ERC. Any administrative updates like addresses, emails, would have been communicated to the ethical review committee.
CHAPTER FOUR

RESULTS

4.1. Introduction
This chapter presents a summary of the findings obtained from respondents. The results focus on the objectives of the research that guided the study; socio-demography, determination of waiting time at the OPD working areas, determination of perceived reasons for waiting time and determination of satisfaction with waiting time.

4.2 Background characteristics of respondents
Table 4.1 shows the background characteristics of the respondents with a response rate of 97%. Most of the respondents (23.9%) were aged 31–40 with the mean age of 42.7 years (95% CI: 41–44). Majority of the respondents were females 65.7% (253%). About 31.4% (121) had no education and 61% (235) were married. Furthermore, 56.6% (218) were employed.

Table 4.1: Background characteristic of respondents

<table>
<thead>
<tr>
<th>Respondents characteristics</th>
<th>Number</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td></td>
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</tr>
<tr>
<td>&lt; - 19</td>
<td>22</td>
<td>5.7</td>
</tr>
<tr>
<td>20 - 30</td>
<td>81</td>
<td>21.0</td>
</tr>
<tr>
<td>31 - 40</td>
<td>92</td>
<td>23.9</td>
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<tr>
<td>41 - 50</td>
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</tr>
<tr>
<td>51 - 60</td>
<td>57</td>
<td>14.8</td>
</tr>
<tr>
<td>61 +</td>
<td>67</td>
<td>17.4</td>
</tr>
<tr>
<td>Mean age 42.7</td>
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</table>
### Educational status

<table>
<thead>
<tr>
<th>Status</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No education</td>
<td>121</td>
<td>31.4</td>
</tr>
<tr>
<td>Primary</td>
<td>48</td>
<td>12.5</td>
</tr>
<tr>
<td>Middle/JSS</td>
<td>86</td>
<td>22.3</td>
</tr>
<tr>
<td>Secondary</td>
<td>66</td>
<td>17.1</td>
</tr>
<tr>
<td>Tertiary</td>
<td>64</td>
<td>16.6</td>
</tr>
</tbody>
</table>

### Marital status

<table>
<thead>
<tr>
<th>Status</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>235</td>
<td>61.0</td>
</tr>
<tr>
<td>Not married</td>
<td>126</td>
<td>32.7</td>
</tr>
<tr>
<td>Divorced</td>
<td>24</td>
<td>6.23</td>
</tr>
</tbody>
</table>

### Occupational status

<table>
<thead>
<tr>
<th>Status</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployed</td>
<td>131</td>
<td>34.0</td>
</tr>
<tr>
<td>Employed</td>
<td>218</td>
<td>56.6</td>
</tr>
<tr>
<td>Student</td>
<td>36</td>
<td>9.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>385</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

### 4.3 Waiting time at OPD working areas (minutes).

Figure 4.1 shows that the mean waiting time at the Records section was the highest 74.5 minutes (SD: 66.1 minutes) whilst the Vital signs section recorded the lowest waiting time of 13.3 minutes (SD: 12.6 minutes).
Figure 4.1: Waiting times at the working areas at Holy Family Hospital.

Further analysis shows that the aged (61+ years) recorded the highest mean waiting time of 203.7 minutes (Median time of 207 minutes, SD: 97.4 minutes). Also females had a mean waiting time of 183.1 minutes (Median time of 149 minutes, SD: 107.1 minutes). In relation to educational status, those with primary status recorded the highest mean waiting time of 215 minutes (Median time of 230.5 minutes, SD: 111.4 minutes). Married respondents recorded 178 minutes as the mean waiting time (Median time of 146 minutes, SD: 106.58). Respondents who were employed recorded the highest mean waiting of 179 minutes (Median time 148 minutes, SD: 106.6 minutes) as shown in table 4.2.
Table 4.2: Distribution of waiting times (minutes) by respondent’s characteristics

<table>
<thead>
<tr>
<th>Respondent characteristics</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age(years)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; - 19</td>
<td>167.8</td>
<td>36.0</td>
<td>385.0</td>
<td>111.2</td>
</tr>
<tr>
<td>20 - 30</td>
<td>128.2</td>
<td>31.0</td>
<td>433.0</td>
<td>90.3</td>
</tr>
<tr>
<td>31 - 40</td>
<td>156.2</td>
<td>9.0</td>
<td>445.0</td>
<td>100.4</td>
</tr>
<tr>
<td>41 - 50</td>
<td>189.1</td>
<td>35.0</td>
<td>432.0</td>
<td>108.4</td>
</tr>
<tr>
<td>51 - 60</td>
<td>193.4</td>
<td>28.0</td>
<td>489.0</td>
<td>117.6</td>
</tr>
<tr>
<td>61 +</td>
<td>203.7</td>
<td>42</td>
<td>391.0</td>
<td>97.4</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>146.1</td>
<td>9.0</td>
<td>432.0</td>
<td>98.6</td>
</tr>
<tr>
<td>Female</td>
<td>183.1</td>
<td>25.0</td>
<td>489.0</td>
<td>107.1</td>
</tr>
<tr>
<td><strong>Educational status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No education</td>
<td>184.4</td>
<td>25.0</td>
<td>434.0</td>
<td>103.7</td>
</tr>
<tr>
<td>Primary</td>
<td>215.0</td>
<td>9.0</td>
<td>489.0</td>
<td>111.4</td>
</tr>
<tr>
<td>Middle/JSS</td>
<td>182.3</td>
<td>28.0</td>
<td>438.0</td>
<td>113.6</td>
</tr>
<tr>
<td>Secondary</td>
<td>154.6</td>
<td>31.0</td>
<td>445.0</td>
<td>97.7</td>
</tr>
<tr>
<td>Tertiary</td>
<td>110.8</td>
<td>31.0</td>
<td>409.0</td>
<td>71.1</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>178.99</td>
<td>25.00</td>
<td>489.00</td>
<td>106.58</td>
</tr>
<tr>
<td>Not married</td>
<td>156.87</td>
<td>9.00</td>
<td>434.00</td>
<td>106.81</td>
</tr>
<tr>
<td>Divorced</td>
<td>157.38</td>
<td>66.00</td>
<td>320.00</td>
<td>81.98</td>
</tr>
<tr>
<td><strong>Occupational status</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>169.6</td>
<td>25.0</td>
<td>445.0</td>
<td>103.9</td>
</tr>
<tr>
<td>Employed</td>
<td>179.9</td>
<td>28.0</td>
<td>445.0</td>
<td>106.6</td>
</tr>
<tr>
<td>Student</td>
<td>112.9</td>
<td>9.0</td>
<td>385.0</td>
<td>87.9</td>
</tr>
</tbody>
</table>

Again, further analysis revealed that 52.5% of the respondents recorded mean waiting time of less than 120 minutes (2 hours) the standard Ghana Health Services recommend time of attending to patients at OPD, whilst 47.5% spent more than 120 minutes.
4.3.1 Total waiting time (minutes) according to diagnosis of respondents

Patients with hypertension tend to wait more with median waiting time of 274 minutes (IQR: 190–320) while those with otitis media had the lowest median time of 78.5 minutes (IQR: 51–103).

Table 4.4: Distribution of waiting time by diagnosis

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Median (IQR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaria</td>
<td>125, 86-276</td>
</tr>
<tr>
<td>Respiratory tract infection</td>
<td>111.5, 87-125</td>
</tr>
<tr>
<td>Hypertension</td>
<td>274, 190-320</td>
</tr>
<tr>
<td>Diabetes Mellitus</td>
<td>201, 93-264</td>
</tr>
<tr>
<td>Otitis media</td>
<td>78.5, 51-103</td>
</tr>
<tr>
<td>Others</td>
<td>98, 75-169</td>
</tr>
<tr>
<td>Specified diagnosis (UTI,RVI,etc)</td>
<td>127, 91-233</td>
</tr>
</tbody>
</table>

4.4 Patient’s perceived reasons for waiting at OPD working areas

Figure 4.2 shows that high workload recorded the highest reason across all the working areas with the following distributions; Pharmacy 38.7% (149), Consulting rooms 36.1% (139), Records 28.3% (111) and Vital signs 15.2% (59). The next reason was patient flow: Vital signs – 25.2% (97), Records – 24.2% (93), Pharmacy – 19.2% (74) and Consulting rooms – 17.7% (86%). Late arrival time of patients also followed with Vital signs recording 30.9% (119), Pharmacy 17.4% (67), Consulting rooms 8.8% (34) and Records 5.7% (22). Other reasons recorded the lowest number of 15 (4%) at the working areas.
Figure 4.2: Patient’s perceive reason for time spent at the various working areas

4.5 Satisfaction level with waiting time at the various working areas

Figure 4.3 shows the satisfaction level of respondents at the working areas. At the Records, 36.4% were satisfied while 4.2% were very satisfied. At the Vital signs, 4.9% of the respondents were dissatisfied and 63.9% were satisfied. With the Consulting rooms the satisfied patients were 63.1% and the very satisfied ones were 15.3%, a large number of 21.6% interviewee were dissatisfied with the waiting time. For the Pharmacy only 5.2% patients were very satisfied, while the satisfied patients were 66.5% respondents. Concerning the overall satisfaction level at the OPD, among the respondents 22.8% were dissatisfied, 63.2% of them were satisfied and 14% were very satisfied as shown in figure 4.4.
Figure 4.3: Satisfaction level at the working areas
Figure 4.4: Composite satisfaction level at OPD with waiting time
CHAPTER FIVE

DISCUSSION

5.1 Introduction

The key findings of this study were: (i) mean OPD waiting time of 2 hours 50 minutes was measured at the OPD, (ii) high workload, patient flow and late arrival of patients were found to be the main reasons for waiting at the OPD, (iii) overall patients were satisfied with waiting time. The discussion will contextualize the findings in relation to the literature presented in previous chapters within the dissertation.

5.2 Waiting time at OPD working areas

This study revealed that a patient seeking healthcare at the OPD spends an average of 2 hours 50 minutes just to receive services which is more than the recommended hours of less than 2 hours a patient must wait to receive service at the OPD according to the standards for Ghana Health Services (Offei et al., 2004). However, this average waiting is consistent with the some studies already carried out in similar developing countries in the sub-Saharan regions of Africa which showed that waiting time is more than 2 hours. According Wanyenze et al, (2010) an average waiting time of up to 4 hours 6 minutes was reported in a study of patient flow and efficiency in three HIV healthcare centers in Uganda. Again, the average total a patient spend at the Jos University Hospital whiles receiving outpatient services is 248 minutes (4 hours 8 minutes) and 149 minutes (2 hours 29 minutes) in Felege Hiwot Hospital, Ethiopia. Finally, Abdulsalam (2017), Thacher (2005) and Belaynel et al. (2017) revealed in their studies that 2 hours and 2
hours 48 minutes were respectively recorded as the mean waiting at the OPD of two hospitals in Ziare (North-Western Nigeria) and Sokoto.

The proportion of patients who waited more than 2 hours to receive service at the OPD was very high (52.5%) as compared to Ghana Health Service indicator for proportion of patient who are seen promptly on satisfaction with waiting which is at least 30%. (Offei et al., 2004). Only 1% of the respondents were seen in less than 30 minutes in this study. These waiting time are undoubtedly very high and could ‘scare’ patients to receive primary healthcare at the hospitals. Patel et al (2017) discovered an average waiting time of 12.1 minutes at the OPD at Gujarat Medical Center, India with 62% waiting for less than 10 minutes, which is in contrast with the findings of this study.

The highest waiting at the Holy Family Hospital was reported at the records 2 hours 15 minutes where patients seek services of registration, the time spent at the vital signs was 13.3 minutes which was the lowest at all the working areas. The whole service point would be affected in terms of the waiting if the records delays in registering the patients. It is quite serious challenge if a patient would have to sit and wait for this number of hours to get a folder to progress to the other service point. Waiting time and educational status have significant correlation as Musinguzi (2013) pointed out in his study that the mean waiting time for tertiary educational status was 79.1 minutes, lower than those with no formal education. This study also follow the same pattern with no education status having the highest mean waiting as compared to those who had some levels of formal education. Diagnosis also affect waiting time, patients with chronic diseases such hypertension, diabetes etc. which is mostly associated with 50 years and over tend to spend more time waiting for services than other minor diagnosis such as malaria and otitis
media as shown in this study. Looking at the distribution of waiting by the respondents background characteristics both the age groupings and diagnosis mean waiting times conforms to what Musinguzi (2013) discovered in his study which recorded 167 minutes for Neuro-disorders (a chronic disease) as compared to malaria which was lower and 50 years and above ages having higher mean waiting time as compared to below 18 years respondents. Other specified diagnosis such as HIV/AIDS had a higher waiting time and these patients go to the specialist OPD for services.

5.3 Patient’s perceive reasons for waiting time at OPD working areas

From the study is was realized from the perspective of the patients that the top three reasons causing delays at the OPD was high workload, patient flow and late arrival time of patients with high workload been the prominent reason for waiting time at the OPD. If staffs are over worked and stressed out, it causes patients to wait too long when seeking services at the working areas. (Musinguzi, 2013). According to Johanne (2015), there is association between staff workload and patient safety and quality (satisfaction) because patient queue at facility especially at the pharmacy to be served due to staff workload. In contradiction to this study.

This study found out that protocols by staffs at the Records, Consulting rooms and Pharmacy are other reasons which affected waiting time. Lateness of staffs at the records and software (internet connection) problems at the Pharmacy emerged also as one other reasons.

5.4 Patient satisfaction with waiting time

A study in Kedah, Malaysia found that patients who waited less than 2 hours were more satisfied with the outpatient service compared to those who waited for more than 2 hours. (Ahmed et al, 2017). A study done at Nigeria, , the Usmanu Danfodiyo University hospital, showed that,
majority of patients waited beyond one hour to be attended to by the doctors while only 118 (31%) of patients waited less than one hour. Out those who waited less than one hour, 83 (70%) of them were satisfied. The study however revealed that majority of patients who constituted 173 (45%) were dissatisfied with the healthcare services delivery at the OPDs as a result of the long waiting time (Umar et al., 2011). This revelation shows that waiting time is a major component of patient satisfaction of which this study also confirms.

Patel et al. (2017) also found a significant statistical link between less waiting time and satisfaction expressed about services provided at OPD. Long waiting at OPD causes a bad impact on patient satisfaction. There was a study by medical practitioners and health institute (IOM) and they appreciated that long waiting results to patients dissatisfaction and therefore advises that majority of patients (not less than 90%) should be seen within 30 minutes of their schedule appointment but in developing countries such Ghana, this study showed that only 1% were seen within 30 minutes which reveals a very wide gap between developing and the already developed countries.

Some studies in India at three different hospitals also revealed that the waiting time score for satisfaction were reported as follows 65.3%, 73% and 50.9% (Nandkeshaw et al, 2014 & Patavegar et al, 2012). These scores reported is in line with this study with a composite satisfaction score of 63.2% for satisfaction. The working area with the highest satisfaction score of 63.2% and lowest dissatisfaction score of 4.9% was vital signs implying that the patients were contend with the time they wait to receive services at that point. Among all the working areas the dissatisfied level at the records was high, 36.4% as compared with consulting rooms, vital signs and pharmacy with only 4.2% scoring as very satisfied. It clearly shows that the patients were
not very happy with the number of hours they had to wait to be registered and to retrieve their folders. All though satisfaction with waiting time is key, other researchers suggest otherwise. Shamal et al (2015) have shown that satisfaction scores of 94.07% and 98.5% for cost of treatment, behaviors of staffs, neatness of the hospital environment etc. This indicate that other indicators for satisfaction at the OPD are very necessary.

5.5 Limitations

The study focused more on respondents who have attended the hospital before (old patients) and were having folder already at the hospital. New patients i.e. new registrants were very minimal (33%) in this study therefore the waiting time reflects much on old patients. Another limitations was that because patients do not want to delay when they attend hospitals, they may be in a haste to provide answers without thinking through very well especially for the perceive reasons for waiting.
CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1 Introduction
This chapter shows the conclusions aspect of the study and some recommendations for the working areas. Some suggestions are also made to policy makers to enable patient have prompt services when seeking healthcare at the OPD.

6.2 Conclusions
Generally, the average waiting at the OPD working areas was high, of which majority (52.5%) of the patients waited for more than 2 hours. Patient with chronic conditions spent more time compare to acute conditions. The main perceived reasons were high workload, patient flow and late arrival of patients to the facility. However, patients were satisfied with the time they wait for treatment at the Holy Family Hospital, Techiman.

6.3 Recommendations
The recommendations are:

1) To improve satisfaction level of patient with waiting time at the working areas, for example at the Pharmacy, software and connection problems should be resolved to reduce the time spent there. At the Records and Vital signs working areas, customer care training should be provided to the staffs. If resources permits more medical doctors and physician assistants should be employed to cater for the patients, this could reduce the high workload in the Consulting rooms.
2) Future studies on waiting time should be carried out in other public, quasi-government and private health facilities to provide more waiting time evidence to improve quality of healthcare in the country.
REFERENCES


Ibanga AA, Nkanga DG, Asana UE, Duke RE, Etim BA, Nkanga ED, Utam UA, Agweye CT, Udofoa OO. Patients’ satisfaction with eye care services in University of Calabar Teaching Hospital. IAIM, 2017; 4(9): 110-118.


APPENDICES

Appendix I: Participant Information Leaflet

This leaflet must be given to all patients who willing to participate to enable them gain much knowledge and understanding about the study before choosing to or not to participate.

**Title of research:** Patient satisfaction with waiting time at the out-patient department, Holy Family Hospital, Techiman.

This study is being conducted by Kwabena Appiah, a student at the University of Ghana, School of Public Health, as part of the requirement in pursing an MPH programme.

This study seeks to assess the patient’s satisfaction with waiting time when they attend the OPD to seek healthcare at the Holy Family Hospital. A structured closed-ended questionnaire covering all aspects of the objectives of the study will be used for data collection. The time spent at each working area at the OPD will be measured and computed for all the patients who will be sampled to take part in answering the questionnaires, patients will be interviewed at the exit to assess their satisfaction with waiting time. 408 patients will be sampled to participate in this study and it can take a maximum of 30 minutes to answer the questionnaires, this can take a little of your time.

Respondent will gain the opportunity to express their views on the reasons for waiting time at the various working areas at OPD at the hospital, and also rate their satisfaction level either very satisfied, satisfied or dissatisfied. This will inform management of the Hospital about the intervention to put in place to reduce waiting time at the OPD.
All information collected in this study from the respondents will be given code numbers. There will be recording of no name. Data collected cannot be linked in any way to any participant. No name or identifier will be used in any publication or reports from this study. Patients attending OPD will participate in the study willingly and not obligatorily. If a patient chooses not to participate, this will not affect the quality of service(s) offered the patient in this hospital in any way. A respondent may also choose not to answer any question he/she find uncomfortable about. A respondent may also choose to stop the interview at any time. There will be no consequence, loss of benefit or care if a respondent chooses to withdraw from the study.

If you have any question concerning the conduct of this study, please do not hesitate to contact Kwabena Appiah (P.I) on 0240569228, email: kwaby86@gmail.com. Name and contact of GHS-ERC Administrator, Hannah Frimpong, Tel: 0302681109/0243235225, Email: Hannah.Frimpong@ghsmail.org
Appendix II: Consent Form

Statement of person obtaining informed consent:

I have fully explained this research to ____________________________ and have given sufficient information about the study, including that on procedures, risks and benefits, to enable the prospective participant make an informed decision to or not to participate.

DATE: _____________________ NAME: _________________________________

Statement of person providing consent:

I have read the information on this study/research or have had it translated into a language I understand. I have also talked it over with the interviewer to my satisfaction. I understand that my participation is voluntary (not compulsory). I know enough about the purpose, methods, risks and benefits of the research study to decide that. I want to take part in it. I understand that I may freely stop being part of this study at any time without having to explain myself.

I have received a copy of the information leaflet and consent form to keep for myself.

NAME: ______________________________

DATE: ____________ SIGNATURE/THUMB PRINT: ___________________

Statement of person serving as a witness to consent (For illiterate participants):

I (Name of Witness) certify that information provided to (Name of Participant), in the language in which I understand, is a true reflection of what I have read from the study Participant Information Leaflet, attached. WITNESS’ SIGNATURE (maintain if participant is non-literate): __________________________________________________________
Appendix III: Questionnaire

Topic: Patient satisfaction with waiting time at the out−patient department, Holy Family Hospital, Techiman

Dear respondent,

This is a research carried out at the OPD of the above mentioned hospital and patients seeking healthcare at this facility will be interviewed. I will therefore plead with you to take some minutes (about 30 minutes) of your valuable time to answer these questions. You are assured that the answers you give will be strictly confidential and your name will not be mentioned in my response report. Thank you.

<table>
<thead>
<tr>
<th>Qns No.</th>
<th>Questions</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Respondents ID</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. Male</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Female</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>What is your highest level of education attained?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. No education</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Primary</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Middle/JSS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Secondary</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Tertiary</td>
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</tr>
<tr>
<td>4</td>
<td>What is your current marital status?</td>
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<tr>
<td></td>
<td>1. Married</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Not married</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Divorced</td>
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<td>5</td>
<td>Occupational status</td>
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</tr>
<tr>
<td></td>
<td>1. Unemployed</td>
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</table>

University of Ghana http://ugspace.ug.edu.gh
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Employed</td>
</tr>
<tr>
<td>3.</td>
<td>Student</td>
</tr>
</tbody>
</table>

**Section 2  Waiting time (record in minutes)**

6  Records:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Time –in</td>
<td>________</td>
</tr>
<tr>
<td>Time –out</td>
<td>________</td>
</tr>
<tr>
<td>Waiting time</td>
<td>[<em><strong>][</strong></em>]</td>
</tr>
</tbody>
</table>

7  Vital signs area:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Time –in</td>
<td>________</td>
</tr>
<tr>
<td>Time –out</td>
<td>________</td>
</tr>
<tr>
<td>Waiting time</td>
<td>[<em><strong>][</strong></em>]</td>
</tr>
</tbody>
</table>

8  Consulting room:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Time –in</td>
<td>________</td>
</tr>
<tr>
<td>Time –out</td>
<td>________</td>
</tr>
<tr>
<td>Waiting time</td>
<td>[<em><strong>][</strong></em>]</td>
</tr>
</tbody>
</table>

9  Pharmacy:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Time –in</td>
<td>________</td>
</tr>
<tr>
<td>Time –out</td>
<td>________</td>
</tr>
<tr>
<td>Waiting time</td>
<td>[<em><strong>][</strong></em>]</td>
</tr>
</tbody>
</table>

10  Total waiting time at OPD (sum Question 6, 7, 8 & 9) [___][___]

**Section 3  Morbidity**

10  How long have you been sick before attending the hospital? (in days) [___][___]

11  What is your diagnosis according to the doctor? (to be obtain from patient’s folder) [___]

1. Malaria
2. RTI
3. HPT
4. DM
5. Otitis media
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6.</td>
<td>Others (specify) __________________________</td>
</tr>
<tr>
<td>7.</td>
<td>Don’t know</td>
</tr>
</tbody>
</table>

**Section 4  Reasons for waiting**

<table>
<thead>
<tr>
<th>12</th>
<th>In your opinion, what is the main reason for waiting time at the Records?</th>
</tr>
</thead>
</table>
|    | 1. Patient flow  
|    | 2. Physical design  
|    | 3. High workload  
|    | 4. Patient turn up in batches  
|    | 5. Logistical problems  
|    | 6. Flow problems  
|    | 7. Queuing problems  
|    | 8. Arrival time of patients  
|    | 9. Other (specify) __________________________ |

<table>
<thead>
<tr>
<th>13</th>
<th>In your opinion, what is the main reason for waiting time at the Vital Signs area?</th>
</tr>
</thead>
</table>
|    | 1. Patient flow  
|    | 2. Physical design  
|    | 3. High workload  
|    | 4. Patient turn up in batches  
|    | 5. Logistical problems  
|    | 6. Flow problems  
|    | 7. Queuing problems  
|    | 8. Arrival time of patients  
|    | 9. Others(specify) __________________________ |

<table>
<thead>
<tr>
<th>14</th>
<th>In your opinion, what is the main reason for waiting time at the Consulting room?</th>
</tr>
</thead>
</table>
|    | 1. Patient flow  
|    | 2. Physical design  
|    | 3. High workload  
|    | 4. Patient turn up in batches  
|    | 5. Logistical problems  
|    | 6. Flow problems  
|    | 7. Queuing problems  
|    | 8. Arrival time of patients  
<p>|    | 9. Other(specify) __________________________ |</p>
<table>
<thead>
<tr>
<th>15</th>
<th>In your opinion, what is the main reason for waiting time at the Pharmacy?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Patient flow</td>
</tr>
<tr>
<td></td>
<td>2. Physical design</td>
</tr>
<tr>
<td></td>
<td>3. High workload</td>
</tr>
<tr>
<td></td>
<td>4. Patient turn up in batches</td>
</tr>
<tr>
<td></td>
<td>5. Logistical problems</td>
</tr>
<tr>
<td></td>
<td>6. Flow problems</td>
</tr>
<tr>
<td></td>
<td>7. Queuing problems</td>
</tr>
<tr>
<td></td>
<td>8. Arrival time of patients</td>
</tr>
<tr>
<td></td>
<td>9. Other (specify) __________________________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>16</th>
<th>Overall, in your opinion, which working areas did you spend more time?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Records</td>
</tr>
<tr>
<td></td>
<td>2. Vital signs</td>
</tr>
<tr>
<td></td>
<td>3. Consulting room</td>
</tr>
<tr>
<td></td>
<td>4. Pharmacy</td>
</tr>
</tbody>
</table>

**Section 5  Satisfaction level**

Please indicate your satisfaction level that is whether dissatisfied or satisfied with the waiting times at the following working areas.

<table>
<thead>
<tr>
<th>17</th>
<th>Were you dissatisfied, satisfied or very satisfied with the waiting time at the Records?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Dissatisfied</td>
</tr>
<tr>
<td></td>
<td>2. Satisfied</td>
</tr>
<tr>
<td></td>
<td>3. Very satisfied</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>18</th>
<th>Were you dissatisfied, satisfied or very satisfied with the waiting time at the Vital Signs area?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Dissatisfied</td>
</tr>
<tr>
<td></td>
<td>2. Satisfied</td>
</tr>
<tr>
<td></td>
<td>3. Very satisfied</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>19</th>
<th>Were you dissatisfied, satisfied or very satisfied with the waiting time at the Consulting room?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Dissatisfied</td>
</tr>
<tr>
<td></td>
<td>2. Satisfied</td>
</tr>
<tr>
<td></td>
<td>3. Very satisfied</td>
</tr>
</tbody>
</table>

| 20 | Were you dissatisfied, satisfied or very satisfied with the | |
|----|----------------------------------------------------------------|


<table>
<thead>
<tr>
<th>waiting time at the Pharmacy?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Dissatisfied</td>
</tr>
<tr>
<td>2. Satisfied</td>
</tr>
<tr>
<td>3. Very satisfied</td>
</tr>
</tbody>
</table>

THANK YOU
Appendix IV: Ethical Approval Certificate