DETERMINANTS OF SELF REFERALS AMONG PREGNANT WOMEN SEEKING DELIVERY SERVICES AT COAST GENERAL TEACHING AND REFRRALS HOSPITAL MOMBASA, KENYA

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT FOR THE REQUIREMENT OF DEGREE OF MASTERS IN HEALTH SYSTEM MANAGEMENT OF KENYA METHODIST UNIVERSITY

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DECLARATION

This thesis is my original work and has not been presented for a Master's degree or any other award in any other university**.**

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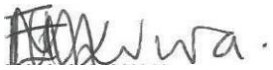

Sign……..…….. Date: 13 /7/2021

I confirm that the work reported in this thesis was carried out by the candidate under my/our supervision.

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DEDICATION

This thesis is dedicated to my family members Dan Eric Emma and Antony for their continued support and encouragement during the entire period of the study. God Bless youall.

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I would like to most sincerely thank my supervisors, Dr. Kezia Njoroge and Dr. Wanja Tenambergen for their continued support and guidance throughout this thesis. I also wish to thank Kenya Methodist University, Department of Health Sciences for providing a favorable learning environment throughout the study period. I further extend my appreciation the Coast General Teaching & referral Hospital administration for support and allowing me time to undertake this project. I also wish to extend my appreciation to all the health workers and pregnant women whom I interacted with during the data collection period. God bless you all.

ABSTRACT

The World Health organization (WHO) listed six system of health such as; health workforce, health records, governance and leadership, delivery of service and medicine that is accessible, vaccines and technologies and health financing. This study was anchored on service delivery pillar, which is a key pillar of health system across the world. The study sought to establish the predictors influencing pregnant women to refer themselves to CGTRH for delivery services. Determinants to be established included; individual, risk factor, access and institutional determinants. Study sample was 376 respondents and the sample size was reached through employing systemic sampling method. Every pregnant mother seeking maternal care services at the referral facility during the period of the study and established the criteria for inclusion was included in the investigation until the required size of sample was arrived at. In order to get specific sample size, formula of Yamane was used since all subjects possessed the required characteristics. The researcher obtained ethical approval from Kenya Methodist University College. Research permit to conduct the study was obtained from NACOSTI. Authorization for data collection was also obtained from Coast General Teaching & referral Hospital administration. A descriptive cross sectional research design was adopted. Data was collected using structured questionnaire which was administered to the pregnant women seeking delivery services at CGTRH on exit. The data collected was cleaned and coded; quantified and analyzed quantitatively using Windows statistical software SPSSv23. The outcome revealed that women who are pregnant sought CGTRH due to its 24 hour period of operation ($p < 0.05$; CI = 0.242 to 0.982; 95%; OR = 0.487) were twice expected to seek CGTRH for services of deliver. A 0.05 significance level was registered by regressing multiple variables, additionally revealing that CGTRH period of operation had considerably influenced pregnant women self- referral to CGTRH for delivery services. The results indicated that pregnant women with tertiary education [OR = 4.211; 95% CI = 1.469 to 12.072; $p < 0.05$] were 4.2 times expected to directly seek services of delivery from the Coast General Teaching & referral Hospital, by passing lower-level healthcare facilities. The study established that risk factors and institutional factors had no significant relationship with self-referrals among expectant women seeking to deliver within CGTRH. The study also established that education level of pregnant women andopening of CGTRH for 24 hours in a day had considerable influence in relation to expectant women seeking to deliver at the referral facility. Therefore, the study concludes that education level and the 24 hour period of operation at CGTRH are significant predictor of expectant women influence in referring themselves while seeking delivery services at CGTRH. Thestudy recommends the health department at the county of Mombasa need to establish mechanisms of making sure that facilities offering primary health to expectant women are operating at 24 hours so as to be attractive to more expectant women pursuing delivery care at the health institution hence reducing the number of expectant women going to CGTRH to pursue delivery services.

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ABBREVIATIONS AND ACRONYMS

BEMOC	-	Basic Emergency Obstetric Care
CEMOC	-	Comprehensive Emergency Obstetric Care.
CEMD	-	Confidential Enquiry into Maternal deaths
CGT&RH	-	Coast General Teaching & referral Hospital.
HIV	-	Human Immune Deficiency Virus
KNHSS	-	Kenya National Health Sector Strategic Plan
PHC	-	Primary Health Care
RSPHS	-	Referral System Policy Health Strategy
IBM	-	International business machine corporation
S.P.S.S	-	Statistical Package for Social Sciences
US	-	United States
UNFPA	-	United nation population fund.
UNICEF	-	United Nations International Children Fund
WHO	-	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The World Health organization (WHO) listed six system of health such as; health workforce, health records, governance and leadership, delivery of service and medicine that is accessible, vaccines and technologies and health financing (World Health Organization [WHO], 2007).This study is anchored on service delivery pillar, which is an essential health system pillar within the globe to support entire levels to facilitate that the general public has access to health care of high-quality health (Kenya National Health Sector Strategic Plan [KNHSS], 2014).

Worldwide, the reaction to the challenges faced by society and sector of health in particular, primary health care has been at best inadequate and slow. It displays an ability to marshal the requite resources and institutions to reshape health in regards to the value of basic health care. There exist an inability to either modify or counter forces that the pull the entire sector of health in various direction such as; the distribution of commercial healthcare that is unregulated, lack of integration in health systems and specialized health systems that lack a balanced focus (WHO, 2013). This has resulted in a referral system that is dysfunctional.

The referral system must work within a functioning health system, according to the Kenya draft referral system policy and health strategy. Different systems of health have a criteria within a system of referral that is functioning well as described in RSPHS 2012–2017. Geographic access to referral care facilities is needed for effective referral. Referral personnel are available if referral services are available.

The patient referral system is described as a mechanism that allows for the compression of a client's health needs through services other than those available where initial access care is provided (Ministry of Health [MOH], 2014). It connects primary care facilities, state, regional, and national hospitals, allowing patients to travel forward and backward (along with details and documentation depending on the type of treatment) based on the level of clinical knowledge and management required (WHO, 2010). The referral mechanism is critical for maintaining efficiencies in resource allocation and utilization across the health-care system's various levels, as well as ensuring continuity of care. As asserted by the Kenya Health Sector referral Implementation Guidelines (KHSRIG, 2014), there are six tiers of health care in the referral framework. Community health programs are included in:

Level 1. The cornerstone of the health-care delivery system is this. Community Health Workers (CHWs) in community units facilitate referrals at this stage. Primary health care centers are connected to community units (CU).

Level 2 Primary care is provided by health care services, which act as a connection that links the community with the rest of the health-care system. In Level 2 facilities, dispensaries are included. A small group of people, the majority of whom are nurses, run dispensaries. Dispensaries, like community hospitals, apply to level 3 facilities, and larger dispensaries which serve as receiving points for other level 3 facilities

Level 3 Primary care services are also provided at Level 3 hospitals, but with extra assistance. Health clinics, maternity and nursing homes are among the facilities. Many are also able to have in-patient care, the majority of which are related to maternity. Referral s from level 1 and 2 facilities are the most common (KHSRIG, 2014).

The first-level hospitals are Level 4 facilities, which provide services to supplement primary care. These make up the county referral clinics, along with level 5 services. Levels 2 and 3 account for the majority of referrals to this stage**.** This level of treatment includes in-patient and out-patient services, as well as broad laboratories that provide testing services not available in primary care settings.

Level 5 Facilities have specialist who give curative care and act as second level referrals. At this stage, facilities can provide advanced curative and diagnostic services as well as advanced services and skills. The majority of referral s come from level 4 facilities, with some lower level facilities being used in emergency situations (KHSRIG, 2014).

Level 6 includes tertiary hospitals with highly specialized facilities. The ultimate referral points, which are usually national teaching referral hospitals, are listed here. The Kenyan health system's entire referral chain and network has reached this stage, where highly specialized skills, knowledge, and resources are available, as well as the link to facilities, university that are foreign (KHSRIG, 2014).

Kenya's referral service framework (KHSRIG, 2014) allows for the distribution of 4 types of elements.

i) Movement by Client - A family or a client member requires an acceptable standard of treatment in which considering the different facility choices available, his or her health needs should be fulfilled in the most fruitful and efficient manner possible

ii) Movement by Expertise - Services that would otherwise be unavailable are made available to underprivileged areas. Rather than transporting clients to various levels of Services, a specialized service provider comes to them. Service can be delivered in a variety of ways, including direct outreach to customers, screening in medical camps, and conducting surgeries within rural areas. Expert professionals are moving from a higher to a lower degree of expertise.

iii) Specimen movement - Laboratory specimens are typically sent to specialized facilities for diagnosis, avoiding the need for the client to be transported via the health-caresystem.

iv) Parameter client movement - Client data may be submitted to the suitable level of the system of health care for management and supportive diagnosis. The adoption of cutting-edge information and communication technology (ICT) in health care, especially in the context of e-health, will make the referral type of care more accessible.

1.2 Statement of the Problem

The county of Mombasa as opined by Data Health Information system (DHIS, 2018), has within it a hundred and five facilities which are registered that are owned by the government and privately. The total number of normal deliveries within this county is reported to be 26987 out ofthe total number of 34453. Out of a total of the 9017 deliveries reported at Coast General Teaching & referral Hospital (CGTRH), normal deliveries account for 6420 of which cases of caesarean section account for 2510. The hospital is categorized as a referral facility within the region. CHTRH receives pregnant mothers who refer themselves to the facility for services of

delivery. They overlook facilities offering primary care of health hence over congesting the health facility leading to the care of health being compromised.

A referral facility is intended to supplement the Primary Health Care (PHC) concept of attending to patients within proximity to their homes by providing care to the lowest level but with the highest expertise level. This suggested backup role is especially important during pregnancy and childbirth. This is due to the fact that a variety of potentially life-threatening complications necessitate management and expertise which in most cases is found at high care level (WHO, 2011)

The aim of a referral facility is to provide complimentary services to those provided at the primary health care (PHC) level of providing patients with care with close proximity to where they live by offering care at the lowest level but with the highest expertise level. During pregnancy and childbirth, this suggested backup function is particularly significant. This is as a result of the multitude of likely complication that threaten lives therefore necessitates the care of a patient. Because of the high numbers, lack of clear guidelines that offer direction on how to execute referrals, the result is patients being provided with quality of services that are compromised (Abodunrin et al., 2010). A referral Patients should be referred officially from a lower facility of health and receive a detailed letter showing their medical history of their issues of health as well as the referral institution. Unfortunately, this is not the followed procedure; majority of the sick forego healthcare facilities at the lower levels in favor of CGTRH therapy.

Despite the government's efforts to develop the referral framework within Kenya so as toenhance the quality of the system of health together with outcomes, no government or academic investigation has been conducted to establish the predictors influencing pregnant mothers to refer

themselves to seek services of delivery within the county of Mombasa. As a result, the aim of this study was to close gap in the knowledge by developing analysis of determinants of self- directed referrals by pregnant women pursuing delivery within coast general hospital in Mombasa County.

1.3 Purpose of the Study

This study's purpose was to determine the predictors that influence pregnant women to refer themselves to health facilities when seeking delivery services higher facilities by-passing lower facilities. The study sought to understand the health seeking behavior of pregnant women and in particular why they select the facility where they deliver. The study will contribute to the improvement of access to health services for pregnant women. It will also inform the county health management teams on areas that need improvement in order to strengthen the referral system for health services from lower to higher tier health facilities for more efficient and effective service provision.

1.4 Study Objectives

i) To investigate how individual elements, influence expectant women to refer themselveswhile seeking delivery at CGTRH.
ii) To determine the influence of risk factor influencing expectant women to self-refer themselves will seeking deliver at CGTRH.
iii) To determine the how accessibility is a predictor on expectant women seeking to deliver at CGTRH
iv) To establish the influence of institutional determinants on self-referral among expectant women seeking delivery service in CGTRH

1.5 Research Questions

i) What influence do the individual predictors have on expectant women self-referrals while seeking deliver at CGTRH?

ii) What influence do the risk factor determinants have on expectant women self-referrals while seeking delivery at CGTRH?

iii) What influence does the access determinant have expectant women seeking to deliver at CGTRH?

iv) What influence do the institutional determinants have on self-referral among expectant women while seeking delivery at CGTRH?

1.6 Justification of the Study

CGTRH is of the regional referral level 5 hospitals which were among the former provincial hospitals before devolution of the government services in 2013. It has a maternity unit which has 10 labour ward delivery beds, 8 beds high dependency beds, 40 beds antenatal bed and 40 bed postnatal beds and 45 capacity New Born Unit (NBU) (DHIS, 2018). According to Mombasa, there is a high degree of overcrowding at the maternity unit, with mothers sharing beds, causing delays in receiving treatment. Inappropriate referrals at the unit, which result in lower primary health care facilities being bypassed, may be to blame for the congestion to opt to seek delivery services at CGTRH. It is important to protect CGTRH from conducting normal deliveries which could be done in the lower facilities. Mothers having obstetrical emergencies and require specialized care could be attended at the hospital without delay. It is essential to tackle the matter of self-referral within CGTRH to make sure that CGTRH focuses on it mandate of referral and teaching and it is not made to operate roles of Primary Health Care facilities. This study sheds light on the determinant of self-referral among mothers seeking delivery service at CGTRH.

1.7 Limitations of the Study

A cross-sectional survey could not identify long-term predictors that influence pregnant women to refer themselves to CGTRH. A longitudinal survey could to be conducted at the facility. Additionally, the study used a self-report instrument in collecting data which could have exposed the data to bias from both the researcher and the respondents. The participants were briefed about the study's intent and were encouraged to respond to the questionnaire objectively. Respondents were also unable to provide information for fear of it being used against them. To overcome this constraint, the participants were assured by the researcher that the provided information would be kept private and would only be used for research purposes and that their personal information will not be shared with someone else. In addition, the COVID 19 pandemic occurred during the data collection months of July and August 2020. As a result, a true image of the characteristics of pregnant mothers in regards to self-referral would not have been likely.

1.8 Delimitations of the Study

The study was conducted between July and August 2018, and adopted a descriptive cross- sectional research design focusing at obtaining views from 376 pregnant women. The study was conducted in CGTRH in Mombasa County and involved only pregnant women who wereseeking delivery services at the maternity unit of the facility during the aforementioned period and were willing to be engaged. The study also focused only on four categories of self-referral determinants including individual determinants, risk factor determinants, access determinants and institutional determinants.

1.9 Significance of the Study

This study’s outcomes could assist the health department in County Government of Mombasa and the CGTRH management in understanding why the facility is always congested. The study

could be used as a reference by the policy makers, planners and programme managers in health care. It could be used by health care workers who need to develop guidelines on care regarding maternity.

This study's results will be regarded as a value addition to the platform of knowledge with the academic circle. This study may be used to help in pinpointing the elements that add to mothers self-referring to level 5. Such knowledge can be of help in terms of strengthening the referral system, ensuring that mothers are treated in the appropriate of level of care and improve the cost efficiently of PHC operations

1.10Assumption of the Study

The presumption of this investigation was that the respondents gave the appropriate and honest responses.

1.11 Operational Definition of Terms

Self-referral: It is described as an act of self- referral for appointment by the Oxford Dictionary (2010). The word "self-referral" is used in this survey to describe all pregnant females who seek delivery services in a hospital first getting a letter of referral.

Referral system: According to Oxford Dictionary, it is a framework for the act of recommending (2010). The term "referral networks" within this survey is referring to the Department of Health's health system for moving the sick from units of health at the lowest level to facilities of health at the highest level to provide healthcare.

Primary health care: It is characterized as non-specialized services of health which are recognized as first-line health care services (Sines, 2005). In this report, it refers to all community health units, dispensaries, and health centers.

Individual determinants: This includes bio-information including level of education, age, occupation, and status of marriage, as well as obstetric history factors such as the number of pregnancies, children, delivery location, and delivery method.

Risk factor determinants: This refers to conditions or causes which are associated with reduced chances of positive results and high chances of results that are negative during childbirth, such as prior miscarriage, previous birth with defects, severe bleeding during previous delivery, previous surgery, previous assisted delivery and pre-existing chronic medical condition.

Access determinants: This refers to factors that facilitate usage of health care facilities such as proximity of health facility, plentiful drugs, quality of service, availability of laboratory services and facility operating hours.

Institutional determinants: This refers to factors that facilitate delivery of health services such as waiting time, staff attitude, staff adequacy, staff competency, and availability of consultants.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The section outlines a literature available on the determinant that influence pregnant women to pursue self-referral when seeking delivery services in health facilities. This chapter captures literature on individual determinant, risk factors determinant, access determinant, institutional determinant and conceptual framework

The structure of referral is one that is most essential in any facility providing health-care, particularly in cases of newborn and obstetric cases. Referral is described by the World Health Organization as being process where providers of health at lower health facilities who lack resources (skills, equipment's or drugs) to treat a clinical issue receives help from a higher facility of health. The facility that initiates the process together with the facility receiving the patient, the system of health and supervising and capacity building the four main components of the referral framework (WHO, 2015).

When a patient arrives, the initiating facility administers adequate care and stabilizes the patient's condition in accordance with the care procedure. When referral is required, the facility that initiates the process may offer a reference form, coordinate with the health institution to arrange for the referral, and advise patients and their families concerning the referral. The facility that receives the patients prepares for the patient's arrival and greets them with their referral documents. The facility that receives the patient then takes care of the patient and follows up with them. The primary health care system, as well as all other tiers of the health system, must work properly. They must be transparent about their duties, responsibilities, and limitations, as well as provide a protocol of treatment for level of service conditions readily accessible (Cervantes et al., 2003).

2.1.1 Maternal referral System

The purpose of a proposed structure is to offer complementing functions to Primary Health Care (PHC), which seeks to treat the sick as near as possible to where they live by providing the lowest care level yet providing suitable expertise level. This backup role is especially important when giving birth and when pregnant, when a variety likely complication that are threatening to life necessitate skills and management.

For specific emergency obstetric and new born treatment (BEMOC), seven indicating operations are: parenteral antibiotic administration, uterotonic medications, such as oxytocin,anticonvulsants, such as magnesium sulphate, physically removing of the retained placenta, removing of other retained products of pregnancy, undertaking assisted vacuum vaginal birth, and performing assisted vacuum vaginal birth. Blood transfusion and caesarean section are two additional services suggested for hospitals where extensive EMONC services should be available (WHO, United Nations Population Fund. [UNFPA], & United Nations Children's Fund [UNICEF], 2010). The WHO's third level for enhancing maternal and newborn care quality. All pregnant women should be properly evaluated upon arrival in health facilities to determine whether they can be treated and, if not, should be referred using standard procedure (Ethiopia, MOH, 2010).

2.1.2 Proportion of Pregnant Women with Self-Referral Determinant

A study done in Kenya by Mahindra (2013) revealed that, a bigger section (72.3 percent) of the sick who require services of healthcare within hospitals don’t directly pursue services related to their health within KNH though they are sent to seek healthcare within facilities in lower levels. This is contrary to a study done in Nigeria referral hospital where Akande et al. (2010) showed that bigger section of the sick who got services at tertiary facilities of health were not as a result

of referral, 92.9% had indicated to have showed up to health institutions without having a referral letter or note. According to Dlakavu et al. (2013), women self-referral in labor at Chris Baragwanath health facility presiding the implementation of a triage within a system of referral revealed that a considerable section of those unwell were passed over from low levels oftreatment due to a lack of information concerning the structure of referral.

According to a study Mashishi et al. (2014) the majority (85 percent) of three hundred and ninety-four females who gave birth in 2008 at a South African hospital referred themselves there.This means that they never started at a facility offering PHC and went straight health institutions to seek delivery services without getting the referral. 49 percent of the females who referred themselves to the health institution had pregnancies with a low risk that could have beendelivered at any time.

2.2 Self-referral

Patient who has self-referred themselves means they ought to bypass the lower level of health and sought direct medical assistance from higher level of health, while for the case of referred patients they were given referral by physicians in the lower level of health as their cases were critical. An ideal referral should only happen when the low-level facilities cannot help the patient technically or in instances that the level does not have the required capacity to assist the patient. In most instances the function of the lower-level facilities could be practiced by normal practioners (Cervantes et al., 2003). Patients' self-referral to hospitals can suggest a lack of trust in PHC for complicated deliveries (Majoko et al., 2005).

2.2.1 Attitude of Mothers toward referral System.

In a study in Nigeria on comprehending the system of self-referral within health care within the state of Niger, Francis et al. (2018) explained a reason behind the lack of confidence by users of services within health care provider at PHC facility as being associated with the medical decision held by community health worker and nurse who are key players in providing health care at their level as being inadequate. When pregnant women are treated in humanely by healthcare staff, they may deliberately change their delivery location and make referral to other places. WHO (2014) reaffirms that majority of the "women around the world receive disrespectful, violent, or neglectful care in a declaration on the elimination and prevention of abuse and disrespectful treatment when undergoing childbirth at these facilities? In a survey by Magoro et al. (2015) at Dilokong Hospital in South Africa, the majority (93.1%) believed that midwives were rude towards them at the clinic level, which made them to self-refer.

2.2.2 Knowledge of referral Policy

In research in Nigeria on understanding healthcare self-referral in Niger state by Francis et al. (2018) the majority of service users lacked information about the health-care delivery system. In a survey carried out within Kwa Zulu Natal, South Africa, the majority of patients, 98.8% of referred patients and 95.70 percent of self-referred patients, were aware of their assigned clinic. More than a quarter of patients in both groups were aware that attendance at the hospital on the first visit is expected. In a survey of maternity patients conducted by Dlakavu,(2013), it was discovered that a significant proportion of sectional study In the South African province of Kwa Zulu Natal, it was discovered that seventy six percent of the unwell were cognizant of the current referral scheme between the health institution and the local clinic (Ntleko, 2010).

2.3 Individual Determinants

According to Ravi et al. (2014) pregnant women's decision to the distribution location is determined by social demographic factors. The primary explanation for distribution at home seems to be family practice and the family's low socio-demographic situation. In relation to a survey conducted in South Africa by Mashishi et al. (2012) women have a say in where they deliver and have a choice to pick where to give birth. Demographic factors such as maternal age, schooling, and occupation do affect the choice of delivery place, in relation to a survey undertaken within South Africa by Sedibeing & Mthethwa (2006).

2.3.1 Maternal Age

Expectant females of years 15 to 19 are five times more expected than those aged 35 and up to prefer to give birth within a facility of health in Ethiopia (Tererra et al., 2012). This outcome aligns with other investigations undertaken in Ethiopia, which discovered that young women are more likely than older women deliver in a facility of health (Bayu et al., 2015). In a research on unbooked women who are expectant at Jos Hospital within Nigeria, Mutihir et al. (2007) found that unbooked women who are expectant are mostly young (age of 26.7 as a mean). In a survey undertaken in Ethiopia by Bayu et al. (2015) a pregnant woman's marital status affects her choiceof delivery facility. In many instances, he argues, the spouse choses where the expectant partner can give birth.

2.3.2 Education

According to Bayu et al. (2015) in an Ethiopian survey, 234 (80.1%) of the two hundred and ninety-two pregnant females who planned to give birth within a facility of health basically did so. Pregnant women with less training increased the women numbers who did not give birth in facilities of health. Patients are referred regardless of their health status, according to a report

conducted in Nigeria, Akande (2004), found that women with a secondary school or higher education were found to be more likely than those just having a O level education to give birth in a health facility (Magoro et al., 2015). She claimed in another article that education has no impact on the choice of delivery facility, claiming that women who presented themselves at Dilokong hospital, regardless of their educational level, were treated with dignity.

2.3.3 Occupation

In different settings, status of work or job has shown have a key role in the decision to utilize facilities of health Marcassa et al. (2012) and in research conducted in South Africa by Visser et al. (2015) patients in jobs mostly expected to overlook their facilities offering PHC and seek services to more specialized facilities. Another survey by Tsai et al. (2010) discovered that patients who worked for the government had higher rates of self-referral to tertiary facilities.

2.3.4 Obstetric history

In a survey undertaken within South Africa by Mogero et al. (2015) who revealed that 40.3% of the participants are prim gravida therefore required to be taken to a health institution. Konde et al. (2010) noted that any woman should be able to make an educated decision about when she will give birth and recognize complications or illness. She requires sufficient knowledge. Women can avoid low-cost facilities due to a lack of exerting the power, resulting in underutilization of PHC.

2.4 Risk Factor Determinants

Various types of symptoms and the most common diagnoses are obstetric and gynecological cases, which are reported to enable the sick to pursue services at referral institutions (Aliu et al., 2014). Another research (Alysasin et al. 2014) reported stomach pains as a common complaint,

whereas Vasser et al. (2014) identified pregnancy-related complications as the main medical issues.

2.4.1 Obstetrical Emergencies

According to a study done by Goh et al. (2015) highlighted that the comment reason for referral to tertiary facilities include preterm labour, ante partum hemorrhage, poor progress of labour, induced hypertension and premature rupture of membranes. According to a report looking into the characteristics of "un-booked mothers," obstetric risk factors that necessitate admission to a referral health facility include hypertension disorders and infections such as urinary tract infections (Dattaray et al., 2013).

According to a survey undertaken in Tanzania by Sorbye et al. (2011) females who chose to give birth within facilities of health have a higher caesarean section rate and a lower neonataloutcome than women who refer themselves, implying the scheme for referring patients formally was effectively acknowledging mothers at a higher risk.

Patients in need of specialized treatment from higher levels were less expected to seek initial care within facilities at lower levels, according to a study conducted within Ethiopia (Abdi et al., 2015) on the degree and predictor of patients referring themselves to the Ethiopian general health institution.

2.4.2 Symptoms and Diagnosis

According to a survey undertaken in Kenya, Mahinda (2013) on the predictors of self-referral among patients with severe illnesses who sought health facilities at Kenyatta National Hospital were revealed to be statically considerable compared to patients who self-referred. If their health problem is wanting, they can obtain special health services from facilities of health in high

levels, bypassing their local health facility. Premature labor, hypertension, blood transfusion venous thromboembolism, and postpartum depression were all found to be more common in HIV pregnant women in the United States (Arab et al., 2016).

2.5 Access Determinants

2.5.1 Availability of Healthcare Facilities/Equipment

Patients' perceptions of quality of treatment tend to be influenced by the belief that better at referral facilities, services are readily available (DeValk et al., 2014; Maharaj et al., 2013; Sharafet al., 2013). The possibility of being capable of obtaining an examination including an x-ray and facilities of testing of the blood rather than being unable to do so at PHC facilities. Aside from a lack of diagnostic facilities, parents of children under the age of five face a number of challenges. In other research, a lack of drug stock within the lowest care level has been identified as a reason for people avoiding these facilities (Visser et al., 2015; Young et al., 2015). In a survey undertaken at Grenadines and Saint Vincent, it was revealed discovered that patients were forcedto look for facilities of health for reference not only because of the cost, but also because of the reputation of the facility.

Medicine being available within the pharmacy was noted as an essential element affecting self-referral of either patient self-referring themselves or being referred. The prescription availabilityat the pharmacy was established as a major predictor in patients referring themselves or being referred in a South African study (Ishandree et al., 2019). Frustration with the facility's lack of medication has an impact on health-seeking behavior, according to a study conducted in Kenya (Abeno et al., 2014). Another Limpopo study by Visser et al. (2015) discovered that local clinics often suffer from lack of stock in their pharmacies. It was discovered in Ethiopia that 38% of self-referral patients obtained drugs from a lower-level health facility.

2.5.2 Location of the Health Facility

Women who were self-referring themselves are argued by Mashishi et al. (2012) to be more likely to live near Dilokong Hospital than those who were referred. Non-medical considerations including price and geographical location between home and the facility of health were found to be important in determining whether or not to deliver in their study regarding the productivity of emergency maternity services within nations that are developing (Hussein et al., 2012).

2.5.3 Transport

In terms of maternal health, transportation from home to the preferred delivery facility is critical. According to Pembe et al. (2010) transportation approaches and expense were a key factors in non-compliance with the referral scheme. In light of the role of the transportation system in the suggested chain, Sahoo et al. (2015) suggested a 30-minute to respond, that the vehicle for transportation will get the newborn or the woman to the referral location in under an hour, and that the mode of transportation is ideally an ambulance service that is free during their period of need. The South African Confidential Enquiry into Maternal Deaths (CEMD) discovered that thecause of 35 percent of maternal deaths was unexplained (Moodley et al., 2014).

According to a study conducted in Ethiopia, Edosa et al. (2017) showed that the location and accessibility of a health facility's transportation is strongly linked to patient self-referral. In a study conducted in Kenya on the determinants of self-referral to Kenyatta National Hospital (KNH), Mahindra et al. (2013) discovered that the location of the health facility is one of the institutional determinants cited by patients as a justification for referring to the hospital.

2.6 Institutional Determinants

2.6.1 Waiting Time

In a study conducted in South Africa by Visser et al. (2015) the time it takes to obtain medical treatment at a facility was found to be highly significant among self-referral patients. According to BecKer et al. (2012) passing behavior facilitated increased waiting time at the local hospital. According to a study by Ntleko et al. (2010), self-referral patients indicated that facility waiting time was more appropriate than waiting at the local clinic.

2.6.2 Perceived Quality of Service

Edosa et al. (2019) reported that 65.8% of self-referred patients felt their proximal health facility's standard of care was poor, and they preferred self-referral to level 5 hospitals. As a result, patients who self-refer were thrice expected to refer themselves if they felt the quality of health care at their nearest health institution was poor.

The quality of health was identified as one of the institutional determinants of patients' self- referral to a health facility in a study conducted in Kenya (Teresita et al., 2014). Service. In another study carried out in Honduras, Kumiko et al. (1998) showed that patients' who knew the other health care provider did not provide a specific service quality they needed had a (13.3) higher probability.

In Kwa Zulu Natal, a survey was undertaken by Pillay and Mahomed (2019) that established that the most important institutional reasons for patient self-referrals were the availability of drugs, medical testing, doctor services, operating hours, and satisfaction with services rendered. They discovered that waiting times, diagnostic test availability, and drug availability were all significantly linked to self-referencing.

2.6.3 Human Resource

According to a study conducted in India Nath et al. (2008) indicated that respondents' trust in doctors and health facilities at the secondary and tertiary levels are factors in tertiary and secondary referral health institutions (81 percent) and availability of specialists at tertiary and secondary health institutions (81 percent) (54.5 percent). According to a study conducted in the Midwest, the explanation for patient self-referral (37.5%) noted their preference to direct contact with a specialist as saving them time or allowing them to pick a specialist on their own.

According to a survey conducted in Ethiopia Edosa et al. (2019) stated that 72.1 percent of self-referral patients were confident in getting all types of health care providers they needed to see for their health issue at referral health facilities rather than the nearest health facility, and 87 percent of self-referral patients wished to see medical doctors first for any health condition not addressed by other health care providers.

In study done Zimbabwe Floyd et al. (2014) showed that despite the presence of a functional referral framework, health workers refused to follow prescribed guidelines reducing higher levels of care efficacy and performance after referring women who were pregnant there (Majoko et al., 2005). Moreover, the emotional support provided by health care providers influences facility selection. Previous obstetric health care experience, as well as the pregnant woman's and staff's expectations of the delivery location, affect the decision of where to deliver. In Ghana, D'Ambruoso et al. (2005) discovered that women demand humane, competent, and courteous treatment from healthcare staff, as well as a fair standard of physical setting**.**

2.7 Theoretical Foundation of the Study 2.7.1The

Andersen Healthcare Utilization Model

The Andersen Healthcare Utilization Model is a computer model that depicts the variables that influence health-care utilization. Predisposing factors, encouraging factors, and need are the three mechanisms that determine the use of health services such as inpatient treatment, physician visits, and dental care, according to the model. Race, age, and healing all have the potential to be predisposing factors. Characteristics like race, age, and health beliefs may all be risk factors. Someone who believes that health services are an effective cure for an illness, for example, is more likely to seek care. Enabling factors include things like family support, health care, and one's culture. The term "need" applies to both perceived and actual health-care requirements (Andersen et al., 2015)

The creation of the model was primarily motivated by the need to have access steps. Potential access refers to the availability of enabling services that enable a person to seek help if necessary. The actual use of treatment, as seen as the outcome of interest in previous models, is known as realized access. In addition, the Andersen system distinguishes between equal and inequitable access. Inequitable access is a function of social structure, health values, and supporting services, while equal access is a result of demographic characteristics and need. The initial behavior model was created to determine whether or not a family might seek medical assistance. Because of the heterogeneous nature of the members of the family, the focus of the model was on particular individuals instead of the entire family in this research. Andersen is a well-known author.

Andersen et al. (2015) conceptual frameworks sixth focuses on the participant as the unit of study and progresses from there. This model is distinguished from its predecessors by the use ofa feedback loop to show how health outcomes can influence factors including need and belief in

health. It included susceptibility of the genes as a risk factor and quality of life as a result (True et al., 1997).

The model has been chastised for not paying enough attention to community and social interaction, but Andersen argues that this is an oversimplification. Another critique was that the emphasis was too much on need, at the cost of health values and social structure (Portes et al., 1992).

2.7.2 System Thinking Theory

The area of systems theory has been a most important breakthrough in comprehending the changing globalization of institutions. The field examines systems with the perspective of a system as a whole, its various subsystems and recurrent trends in subsystem relationships. How we interpret and change organizations has been profoundly influenced by systems theory. Systems analysis is the name given to the implementation of this theory. Systems thought is among the major key techniques with the analysis of systems. Essentially, systems thinking is a method of assisting a person in seeing systems from a different perception, which includes seeing overarching mechanisms, cycles and patterns of a system instead of emphasizing solely on individual components. This perspective is very broad and will assist you in rapidly pinpointing the actual cause of the challenges within organizations and understand better ways on how to solve them. A variety of concepts and methods for analyzing and modifying processes have emerged as a result of systems thought. Consultants can endeavor to seek remedies to these matters by focusing on the system as a whole.

The holistic structure thinking method takes a step back and attempts to see the big picture. Rwashsna et al. (2014) discussed the relationship between technological, policy, behavior, and cultural issues that the health system must deal with. A positive relationship donated adequate

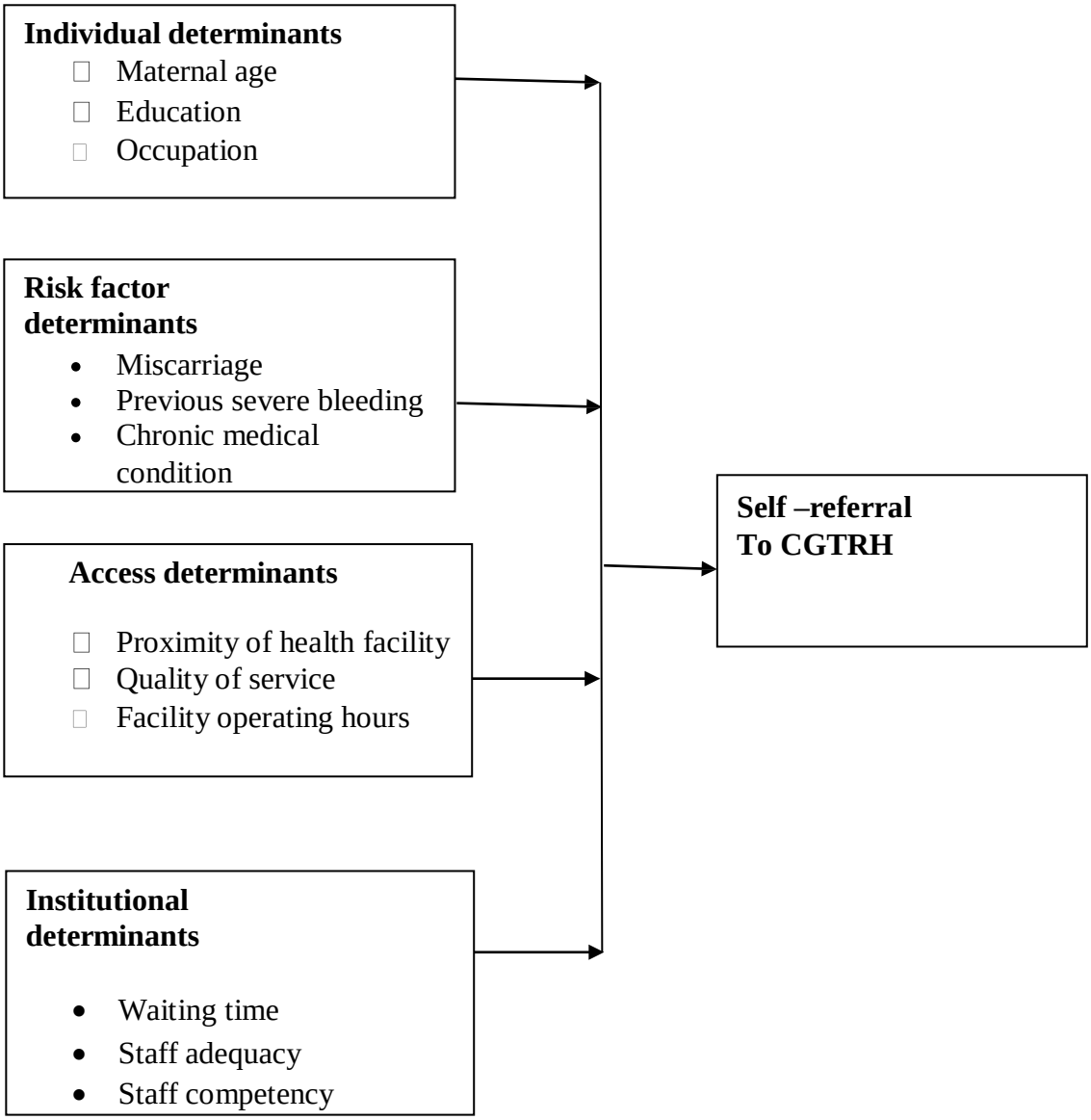
and timely referral between units of health units and maternal and new-born heath care service delivery Rwashsna et al. *(*2014) state that enhanced the pathway of referral resulting in improvement of neonatal and maternal care.

2.8 Conceptual Framework

Conceptual framework was guided by theories discussed above. According to the Andersen Healthcare Use Model, variables such as predisposing, allowing, and need decide how people use health services. In this study, predisposing factors are the individual determinants, enabling factors and the access determinants and institutional determinants while need factors are the risk factor determinants. Therefore, Andersen behavioral model is useful to assess the association of self-referrals with Individual determinants (age, education level, occupation, marital status, number of pregnancies, number of children, place of previous delivery and form of last delivery), risk factor determinants (miscarriage, birth defects, severe bleeding, surgery, assisted delivery and chronic medical conditions), access determinants (Institutional factors (waiting time, staff attitude, staff adequacy, staff competency, and availability of consultants) as well as geographic factors (proximity of health facility, availability of medications, quality of service, availability of laboratory services, and facility operating hours. Additionally, the holistic system thinking approach is useful to assess the combined influence of the aforementioned factors on self- referrals at CGTRH in order to obtain a broad picture of the situation at the facility.

Figure 2.1

Conceptual Framework



Independent variables ***Dependent variable***

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This study utilized a particular methodology which is described in this chapter. The research design, study site, target population, sampling process, data collection methods and instruments, operation description of variables and data analysis methods, legal and ethical considerations are all concepts covered in this section.

3.2 Research Design

Adopted in this study is descriptive cross-sectional research, where the respondents were asked to complete already prepared questionnaire as well as review of health records. The design involving quantitative approaches to acquisition of data and evaluation (Mugenda & Mugenda 2003). Primary data was acquired from pregnant women who were seeking delivery service in CGTRH hospital during the period of the study.

3.3 Location of the Study

Coast General Teaching & referral Hospital in Mombasa County formed the locale of the study. The hospital serves as a regional referral facility for Kwale County, Lamu County, Taita Taveta County and TanaRiver County and for Mombasa County facilities. The Mombasa County has been divided into six sub counties namely: Changamwe, Mvita, Likoni, Jomvu, Kisauni and Nyali. The county has a population of over one million (1,135,932) people residing within anarea of 14.1KM^2 from 33,160 households (Kenya National Bureau of Statistics [KNBS], 2009). Specifically, the study was carried within the maternity unit of Coast General Teaching & Referral Hospital.

3.4 Target Population

According to Creswell and Creswell (2017) a population refers to the entire People, facilities, elements, and incidents that are being examined, as well as a community of items or households. The target population is the group of people for whom information is sought (Mugenda & Mugenda, 2003). Therefore, populated targeted were all expectant women pursuing to give birth at the maternity unit of the Coast General Teaching & Referral Hospital. To obtain the target population, the number of women who had normal delivery in the facility in the year 2018 was obtained. According to statistical records 6,420 women in the year 2018 (DHIS) had delivered normally in the institution. Hence 6420 was settled as the frame for sampling in this study where all expectant women were sampled. The research proposal was developed in 2019 hence; statistical records of 2018 were used.

3.5 Sample Size Determination and Sampling Techniques

3.5.1 Sample Size Determination

This study employed Yamane (1967: 886) formula for calculating sample size for small population (< 10,000). A sample of 376 pregnant women was calculated as follows:

Formula: $\mathbf{n} = \dfrac{\mathbf{N}}{\mathbf{1 + N (e)^2}}$

Where: **n** – Represents sample size

N – Represents Population size

e – Is the level of precision or sampling error at 5%

Hence; $\mathbf{n} = \dfrac{6420}{1 + (6420\ (5\%)^{\ 2})}$

28

n= 376 respondents

3.5.2 Sampling Techniques

A sampling technique is a collection of instructions for extracting a sample from a group of people. Systematic random sampling utilized in the settling of a sample which were expectant women. The target population was divided by the required sample size to obtain the "skip number" (6420/376 = 17) to be used in selecting the pregnant women for inclusion in the sample. A random number from between 1 and 17was randomly picked from a box containing folded papers with the numbers written on, which would be the first person selected. Thus, the first respondent was randomly selected between the 1st and 17th pregnant woman seeking delivery services at the maternity unit of CGTRH, and then every 17th pregnant woman who met the criteria for inclusion and was systematically included within this study so as to settle at arequired sample size.

3.6 Inclusion and Exclusion Criteria

3.6.1 Inclusion Criteria

The study included pregnant women over the age of 18 who were pursuing maternal health services during the study period and were able to provide a consent either verbally or in writingto be engaged in this study.

3.6.2 Exclusion Criteria

The research excluded the following classes of pregnant women: Women who were unable to respond to interviewers because they were sick or weak. Patients under the age of eighteen are referred to as "young patients" (minors) psychotic patient.

3.7 Data Collection Instruments

In this study, data was gathered using a standardized questionnaire (Appendix II) designed to address the study's goals. In this analysis, a standardized questionnaire was chosen because it provides an efficient means of gathering information from large samples in a short amount of time and at a low cost, as well as improved chances of a higher response rate. A questionnaire makes coding and interpretation of data much easy (Kombo & Tromp, 2006). A few open-ended questions were adopted for more in-depth responses, and to allow respondent to give insights into their feelings, hidden motivates, interests, background and decisions (Mugenda & Mugenda,2003). The questionnaire had five sections; Section i) had questions on individual determinants, section ii) was on risk factor determinants, section iii) was on access determinants, and section iv) was on institutional determinants of self-referrals. Questions on the dependent variable (self-referral) were captured in section 5.

3.8 Validity and Reliability of the Research Instruments

3.8.1 Validity of the Instrument

The validity of the instrument is used in checking whether the questionnaire measures what it purports to measure (Ghauri, 2005; Field, 2005) stressed that validity should be done in order to establish the strength of inferences or conclusions. To validate the instrument, construct validity, and face validity and content validity was used. Content validity was performed by giving the questionnaire to experts (supervisors) to check whether it was relevant and measuring what it purported to measure. Experts/Supervisors checked whether the language used would be understood by the respondents. Pre testing of the questionnaire was done and the observation detected addressed to improve on content validity. Face validity was performed by the researcher by perusing the questions in the questionnaire and confirming that the questions were relevant and were good measure of the study variable.

Construct validity was tested for Likert scale using factor analysis which is considered the most reliable test for questionnaire. Seventeen questions relating to reasons for self-referral were factor analyzed using principal component analysis with Varimax (orthogonal) rotation. Kaiser- Meyer-Olkin Measure of Sampling Adequacy (KMO = 0.764) verified the sampling adequacy for the analysis and Bartlett's Test of Sphericity (^{2} (136) =1762.677, $p < 0.001$) indicated that correlation structure was adequate for factor analyses.

Table 3.1

Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.764
Bartlett's Test of Sphericity	Approx. Chi-Square	1762.677
	Df	136
	Sig.	.000

The factor analysis with a cut-off point of .40 and the Kaiser's criterion of eigenvalues greater than 1 yielded a three-factor solution as the best fit for the data, accounting for 57.4% of the variance. Factor 1 (access determinants) was comprised of 5 items reported on a 4-point Likert scale that explained 30.97% of the variance with factor loadings from 0.567 to 0.892. Factor 2 (institutional determinants) was comprised of 7 items reported on a 4-point Likert scale that explained 15.80% of the variance with factor loadings from 0.509 to 0.882. Factor 3 (opinion towards referral system) was comprised of 5 items reported on a 4-point Likert scale thatexplained 10.65% of the variance with factor loadings from 0.543 to 0.891. The results indicate that all the items had factor loadings >0.5 which indicate that the items had strong association with the respective latent variables, indicating that the items measured the same construct. Table
3.2 presents the results.

Table 3.2

Factor Analysis Table for Reasons for Self-Referral

Factor / Component	No. of Items	Eigen value	% of Variance	Cumulative %	Factor Loadings
Factor 1: Access Reasons / Determinants	5	5.575	30.974	30.974	.567 to .892
Factor 2: Institutional Reasons / Determinants	7	2.844	15.798	46.772	.509 to .882
Factor 3: Opinion towards Referral System	5	1.916	10.647	57.419	.543 to .891

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

3.8.2 Reliability of the Instrument

The instrument's reliability refers to its ability to produce consistent results over time (Orodho & Kombo, 2002). Furthermore, reliability is described by Cronbach (1999) as the level at which a tool of research calculates in a similar manner every time it is utilized within the same situations with similar objectives or the accuracy of the researcher's calculation. According to William, et al. (2011), a pretesting study with 10% of survey respondents is referral. (Who will not be included in the main analysis for control purposes) was chosen at random to fill out questionnaires to measure its reliability as part of pilot testing. The internal accuracy of the questionnaire items was measured using Cronbach's alpha to determine the questionnaire's reliability. Cronbach index is a number between 0 and 1 that expresses the accuracy or reliability of a test scale (Cronbach, 1999). Any instrument with a reliability of 0.7 or higher is considered to have a satisfactory degree of reliability (Sekaran & Bougie, 2016). As shown in Table 3.3, the Reliability test yielded an alpha index of 0.833. As a result, the questionnaire was considered trustworthy.

Table 3.3

Factor Analysis Table for Reasons for Self-Referral

Variables	No. of Items	Cronbach's Alpha
Individual Determinants	8	0.774
Risk Factor Determinants	7	0.825
Access Determinants	5	0.772
Institutional Determinants	7	0.768
Self-Referral	9	0.785
Overall	**36**	**0.833**

3.9 Pre-Testing of Research Instrument

The developed research instrument was pre-tested in the maternity unit at Port Reitz County Hospital. A total of 37 questionnaires were administered which was 10% of the sample size in line with Kothari (2004) recommendations. The questionnaires copies were personally administered and picked by the researcher. The responses from the pre-testing study were used toadjust the questionnaire accordingly before the final study.

3.10 Methods of Data Collection

The questionnaires were administered to the pregnant women seeking delivery services at CGTRH between 13th July 2020 and 28th August 2020. The sixth pregnant woman (selectedusing simple random sampling from a box containing folded papers numbered 1 to 17) to seek health care services at the maternity unit at CGTRH on 13th July was selected as the first respondent. Thereafter, every seventeenth pregnant woman was selected and the questionnaire administered. The questionnaire was administered to 8 pregnant women per day. The questionnaire was administered through the assistance of a research assistants who were trained nurses, and were informed on the objectives of the study and the research protocol and ethical issues to be considered. The questionnaire was administered in both English and Kiswahili.

3.11 Methods of Data Analysis

The data was cleaned and coded before being quantified and evaluated quantitatively. Quantitative data was analyzed with Windows statistical package for social sciences (SPSSV23). Univariate analysis was undertaken through the utilization of descriptive statistics (percentages and frequencies) so as to provide data summaries and the outcome provided through tables, graphs and charts. Bivariable analysis was conducted using bivariable logistic regression (at a significance level of alpha = 0.05) was conducted in order to screen the independent variables to be included in the multivariable logistic regression.

Finally, multivariable analysis was performed using multivariable logistic regression (at a significance level of alpha = 0.05) to determine the influence of the various elements relating to pregnant women referring themselves to CGTRH. Inferences were drawn based on the study findings at 95% level of significance.

3.12 Ethical Considerations

The study took into consideration all the legal and ethical issues that pertain to research. According to Creswell (2009) Confidentiality and anonymity of respondents, as well as their approval, are ethical concerns, while intellectual property and privacy are legal concerns (Johnson & Christensen, 2008). The researcher obtained ethical approval from Kenya Methodist University (Appendix IV). The National Council for Science, Technology, and Innovations (NACOSTI) granted the study a research permit (Appendix V). Coast General Teaching & Referral Hospital administration also gave their permission for data collection. (Appendix VI). The researcher also obtained informed consent from the participants by signing an informed consent form (Appendix I) attached to the questionnaire, whereby the purpose and nature of the study was explained. The questionnaire concealed the identity of the respondents for their safety, dignity and privacy. Finally, assurance was made to the respondent that the acquired data would

be used for the purpose of the study only. Protection would be provided on the raw data to deter persons from unauthorized access, sharing as well as data being associated with individuals. No women were denied maternal services in the facility for refusal to participate in the study.

3.13 Operational Definition of Variables

The main variables that are to be captured in the study are being elaborated hereunder are the independent and dependent variables, which were captured in the research objectives. The independent variables were individual determinants, risk factor determinants, access determinants and institutional determinant and dependent variable was self-referral.

Table 3.4

Operationalization of Variables

Variable	Indicators	Measuring Scale	Data Collection Tool	Data Analysis
Individual Determinants	Age, education level, occupation, marital status, number of pregnancies, number of children, place of previous delivery and form of last delivery.	Ordinal	Questionnaire	Frequencies Percentages Cross Tabulation Logistic Regression
Risk factor Determinants	Miscarriage, birth Defects, severe Bleeding, surgery, Assisted delivery and chronic medical conditions	Ordinal	Questionnaire	Frequencies Percentages Cross tabulation Logistic Regression
Access Determinants	Proximity of health facility, availability of drugs, quality of service, availability of laboratory services and facility operating hours	Ordinal	Questionnaire	Frequencies Percentages Cross tabulation Logistic regression
Institutional Determinants	Waiting time, staff attitude, staff adequacy, staff competency, and availability of consultants	Ordinal	Questionnaire	Frequencies Percentages Cross tabulation Logistic regression
Self-referral	Possession of referral letter	Ordinal	Questionnaire	Frequencies Percentages Cross tabulation Logistic regression

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

Discussions of results findings, elaboration on the predictor influencing expectant women to who sought services of maternity through referral at the CGTRH. The study was conducted between June and July 2020 and data analyzed. The researcher used the social science package for statistics (SPSS) version 23 of the (IBM Corp., 2015). The results are displayed in tables and charts, and organized in relation to the study's objectives.

4.2 Response Rate

The research questionnaire had been assigned to a sample of 376 expectant women pursuing services of delivering with CGTRH. After data cleaning and coding, a response rate of 100% for the study was obtained after a total of 376 questionnaires were analyzed.

4.3 Self-Referrals among Pregnant Women at CGTRH

The investigation desired to determine the proportion of pregnant women who had had referral themselves rather than seeking health first from lower levels and went directly to seek help from the Coast General Teaching & referral Hospital directly. The findings revealed that out of 376 respondents a high proportion of 232 (61%) confirmed to have sought directly services of delivery at the CGTRH, overlooking facilities of health at the lower level. The findings differ with the findings of Mahindra (2013), which revealed (72.3%) of patient from KNH adhered to being referral from low level facilities before they sought Health in the level five facilities.

However, Akande et al. (2010) asserted that a large group of pregnant patients at the level five hospital had not been referral, his study was therefore consistent with the findings. In South Africa as revealed by Mashishi et al. (2014) of the (85%) of women who sought delivery help from Dilokong hospital had not been referral from the primary health care facility but had doneso directly.

Respondents also indicated their opinion on the referral system from the lower primary facilities to referral facility. The outcome obtained as percentages/frequencies to rate their perceptions. From the findings, the staff at the PHC gave information of referral system and that the patient who referred themselves were aware of the referral system policy. This result concurred with the result of a study conducted in Kwa Zulu Natal, South Africa, the majority of patients, 98.8% of referred patients and 95.70 percent of Self-referred patients, were aware of their assigned clinic. More than a quarter of patients in both groups were aware that attendance at the hospital on the first visit is expected. In a survey conducted by Dlakavu (2013) majority disagreed that the formal referral system was slow and expensive, that they had never heard of the referral system, and that the referral system did not function effectively. These studies differed with those of Ntleko (2010) who discovered that 76% of those who were unwell were cognizant of the current referral scheme between the local clinics and referral hospital.

These findings indicate that the pregnant women were aware of the referral system. See Table 4.1. The designated clinics in Kwa zulu natal in South Africa were familiar to both the self- referral and the referral patient as indicated in Ntleko (2010) study. However, the outcome was inconsistent with the outcome from Francis et al. (2018) and Dlakavu (2013) as they asserted that

when a larger proportion of patients bypassed the primary health facilities, they did so out of lack of awareness in regard to the referral system.

Table 4.1

Opinion on expectant women seeking to deliver at CGTRH on the Referral System

Opinion on referral System	n	Disagree		Agree	
		F	%	F	%
I am aware of the referral system policy	232	102	44	130	56
The staff at the PHC give information of referral system	232	102	44	130	56
The formal referral system is slow and expensive	232	151	65	81	35
I have never heard of the referral system	232	174	75	58	25
The referral system does not function effectively	232	174	75	58	25

This study also established that respondents were of the opinion that the referral system is functional, but as Floyd et al. (2014) noted, a myriad of factors such as socio-demographic factors of service seekers, obstetrical history of patients, risk factors, availability and service quality at the lower facilities, availability and qualification of staff, location and accessibility of facilities, availability of medication, availability of laboratory services, among others.

4.4 Individual Determinants of Self-Referrals among Pregnant Women at CGTRH

The first variable investigated self-referrals individual determinants among pregnant women seeking delivery services at CGT&RH. The particular predictors examined within this investigation included the expectant women's' obstetric history and characteristics related to demographic and social aspects. The outcome from socio-demographic noted that 26 women who self-referred themselves were aged between 18-20 years, 136 women were aged between 21-30 years. The result also showed that, 65 were aged between 31-40 years, 5 women wereaged between 41-50 years. The result concurred with pregnant women aged 15 to 19 years are 5

times more likely than those aged 35 and up to prefer making delivery within a health institution, according to an investigation undertaken in Ethiopia (Tererra et al., 2012). This is a consistent outcome compared with other Ethiopian studies, which discovered that young women are more likely than older women to give birth in a health facility (Bayu et al., 2015).Another research on unbooked women who are expectant in Nigerias Jos Hospital (Mutihir et al., 2007) found that unbooked expectant women were mostly young (mean age 26.7 years).

The result also showed that 12 women attained no level of education, 90 attained primary education level, 74 attained secondary level of education, 56 attained tertiary level of education. The results were in line with those of Akande (2004), who asserted that women with a secondaryschool or higher education were found to be more likely than the ones with mere A level education to give birth in a health facility (Magoro et al., 2015). The result also showed that 142 women were unemployed, 53 women were employed while 37 were self-employed. This result concurred with Marcassa (2012) who argued that in different settings, occupation or work status has been shown to considerably play a key part in the decision to use health care facilities, the result how differed with those of Visser et al. (2015) who argued that patients in jobs had a likelihood of overlooking their PHC institutions as the result also indicated that 42 women were single, 185 were married, while 5 were divorced. See Table 4.2.

Table 4.2

Demographic & social elements relating to expectant women seeking to deliver at CGTRH

Socio-Demographic Factors		n	F	%
Age Group (Years)	18-20	232	26	11
	21–30		136	59
	31–40		65	28
	41–50		5	2
Educational Status	No education	232	12	5
	Primary education		90	39
	Secondary education		74	32
	Tertiary education		56	24
Occupation	Unemployed	232	142	61
	Employed		53	23
	Self-employed		37	16
Marital Status	Single	232	42	18
	Married		185	80
	Divorced/separated/widowed		5	2

The outcome concerning their history on obstetrics noted that 223(96%) of the expectant women have been expectant for not more than five times, yet 225(97%) had delivered fewer than five children. The outcome also revealed that out of the previous deliveries totaling 232, only188(81%) had their deliveries in a public health institution, while 165(71%) had given birth normally to the last child they have. In the 232 expectant women, 51(22%) were primigravida's, were having their first pregnancy. Hence no history existed on prior delivery or places of delivery. This result concurred with Magoro et al. (2015) who conducted an investigation within South Africa and revealed that 40.3% of the participants were primigravida therefore needed to give birth within a health institution. Konde et al. (2010) noted that any woman should be able tomake an educated decision about when she will give birth and recognize complications or illness. She requires sufficient knowledge. Women can avoid low-cost facilities due to a lack of exerting the power, resulting in underutilization of PHC Table 4.3 presents the results.

Table 4.3

History on Obstetric concerning expectant women seeking to deliver at CGTRH

Obstetrical History		**n**	**F**	**%**
No. of Pregnancy	0 – 1	232	49	21
	2 – 5		174	75
	6 and above		9	4
No. of Children	0 – 1	232	128	55
	2 – 5		97	42
	6 and above		7	3
Place of Delivery	Home	232	27	12
	PHC Facility		7	3
	Public Hospital		188	81
	Private Hospital		7	3
Form of Last Delivery	Normal Delivery	232	165	71
	Assisted Delivery		2	1
	Caesarean Section		65	28

At a significance level of 0.05 to ordinal scale and a bivariate logistic Data on individual Determinants was transformed and performed to establish the influences of demographic and social elements and history of obstetrics of pregnant women self-referral and hence pursue the individual elements to be included when regressing the various variables. The outcome revealed that expectant women who have undergone tertiary level of education [$p < 0.05$; CI 1.469 to 12.072; 95%; OR = 4.211] were slightly more than 4 times expected to directly pursue services of delivery within CGTRH, overlooking facilities of health in the lower-level facilities, this was correlated to the ones without education. While comparing the pregnant women without any education with pregnant ones possessing secondary and primary level education in relation to referring themselves to referral institutions there existed a non-significant difference. This study was in line Magoro et al. (2015) findings which indicated that women with a secondary school or higher education were found to be more likely than those with a mere A level education to give

birth in a health facility. The result also concurred with Akande (2004) who asserted that pregnant women with less training increased the number of women who did not deliver in a health facility, Table 4.4 presents the results.

The outcome contradicted the outcome by a survey undertaken by Tererra et al. (2012) who brought to light that older women as compared to younger women were more likely to be self-referral while the younger women (15-19 years) choosing to self-refer themselves. The outcome was aligned with Bayu et al. (2015) findings who asserted that older women were in the norm of being self-referred as compared to the younger women. These findings contradicted with the outcome of a survey undertaken by Akande (2004) in Nigeria which also indicated that the level of education that one attained did not come in handy in cases where women chose to recommend themselves as they bypassed the primary health care facilities. The outcome contradicted those by Bayu et al. (2015) study who brought to light that status of marriage did affect the preference of delivery with men deciding where their pregnant wives would go to give birth, with most men opting for the wives to deliver at institution of higher level.

Table 4.4

Bivariate Regression Results of Individual Factors on Self-Referrals among Pregnant Women Seeking Delivery Services at CGTRH

Individual Factors			Referral		Self-Referral		OR	95% CI	Sig.
		n	F	%	F	%			
Age (Years)	18 - 20 (Ref)	41	13	32	28	68	1.000		
	21 – 30	223	84	38	139	62	1.723	.396 to 7.495	.468
	31- 40	103	43	42	60	58	1.324	.346 to 5.068	.682
	41 – 50	9	4	44	5	56	1.116	.283 to 4.401	.875
Educational Status	No education	18	11	65	7	35	1.000		
	Primary education (Ref)	145	58	41	87	59	2.537	.864 to 6.434	.094
	Secondary education	121	50	42	71	58	2.231	.809 to 6.153	.121
	Tertiary education	92	25	28	67	72	4.211	1.469 to 12.072	.007
Occupation	Unemployed (Ref)	231	91	39	140	61	1.000		
	Employed	86	30	33	56	67	1.213	.724 to 2.033	.463
	Self-employed	59	23	39	36	61	1.017	.566 to 1.828	.954
Marital Status	Single (Ref)	69	26	38	43	62	1.000		
	Married	299	117	39	182	61	.941	.548 to 1.613	.824
	Divorced /separated / widowed	8	1	13	7	87	4.233	.492 to 36.377	.189
No. of Pregnancy	0 – 1 (Ref)	81	31	38	50	62	1.000		
	2 – 5	282	105	37	177	63	1.045	.628 to 1.739	.865
	6 and above	13	8	62	5	38	.088	.116 to 1.291	.123
No. of Children	0- 1 (Ref)	206	73	35	133	65	1.000		
	2– 5	160	65	41	95	59	.802	.524 to 1.228	.310
	6 and above	10	6	60	4	40	.366	1.000 to 1.339	.129
Place of Previous Delivery	Home (Ref)	37	17	46	20	54	1.000		
	Primary Health Care	11	4	36	7	64	1.487	.371 to 5.962	.575
	Public Hospital	239	87	36	152	64	1.485	.739 to 2.985	.267
	Private Hospital	8	5	63	3	37	.510	.106 to 2.453	.401
Form of Previous Delivery	Normal Delivery (Ref)	208	73	35	135	65	1.000		
	Assisted Delivery	4	1	25	3	75	1.622	.166 to 15.876	.678
	Caesarean Section	83	39	47	44	53	.610	.364 to 1.023	.061

Table 4.4 demonstrates bivariate regression of individual element regarding self-referral within pregnant women pursuing delivery care at CGTRH study findings. The results shows that age

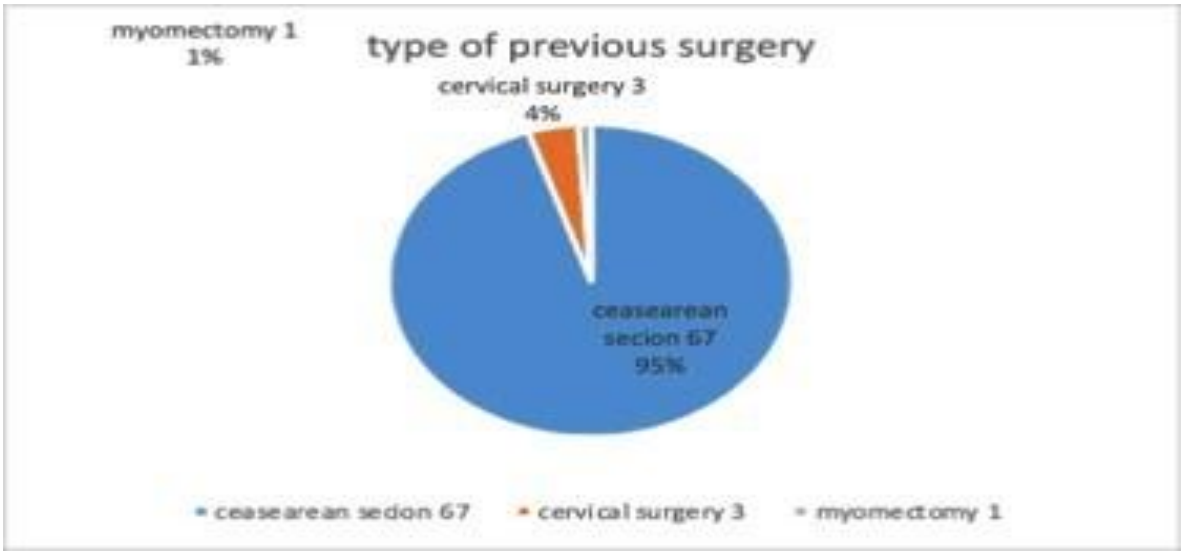
has no significance but educational status has shown significance demonstrating that women possessing tertiary level of education are 4.2 times likely to seek delivery services in a referral facility. This is in line with Bayu et al. (2015) in Ethiopia who stated that pregnant women with less education swelled the women numbers who did not deliver in a health facility. It is also in agreement with Akande (2004) who stated that women with secondary school or higher education were found to be more likely than those with only primary school education delivery within health institutions. The study findings differ with another study done by Marogo et al. (2015) who claimed that education has no impact on the choice of delivery in a health facility. The other individual factors like occupation, marital status, number of pregnancies, number of children and previous delivery had no significance. This study also differs with Marcassa (2012) and Visser (2015) studies who brought to light that occupation or employment status play a significant role regarding decision for choice of health care facilities. The studies found out that patients with a source of income had a high likelihood to overlook their PHC institutions.

4.5 Risk Factor Determinants of Self-Referrals among Pregnant Women at CGTRH

The second variable investigated risk factor predictors of pregnant women in referring themselves to deliver at CGTRH. Out of the 232 pregnant women who had previous deliveries, the results indicated that 181(78%) never experienced any previous miscarriage, 227(98%) never gave birth to a baby with defects in their previous deliveries, 225 (97%) never experienced severe bleeding requiring blood transfusion in any of the previous pregnancies, while 230(99%) never had an assisted delivery by vacuum forceps or any obstetric maneuver. See Figure 4.1.

Figure 4.1

Type of Previous Surgery



These results were in line with Goh et al. (2015) who highlighted that the comment reason for referral to tertiary facilities include preterm lab our, ante partum hemorrhage, poor progress of labour, induced hypertension and premature rupture of membranes. Additionally, Dattaray (2013) also reported that looking into the characteristics of "un-booked mothers," obstetric risk factors that necessitate admission to a referral health facility include hypertension disorders and infections such as urinary tract infections Moreover, Sorbye (2011), also asserts that women whoare referred for delivery at a health facility have a higher caesarean section rate and a lower neonatal outcome than women who self-refer, implying that the formal referral scheme effectively recognizes high risk mothers. Table 4.5 presents findings on the risk factors.

Table 4.5

Risk Factors Experienced by Pregnant Women Seeking Delivery Services at CGTRH

Risk Factors	n	Yes		No	
		F	%	F	%
Previous miscarriage	232	51	22	181	78
Previous birth with defects	232	5	2	227	98
Severe bleeding in previous pregnancies	232	7	3	225	97
Surgery during previous birth	232	70	30	162	70
Previous assisted delivery	232	2	1	230	99
Suffering for chronic medical condition	232	26	11	206	89

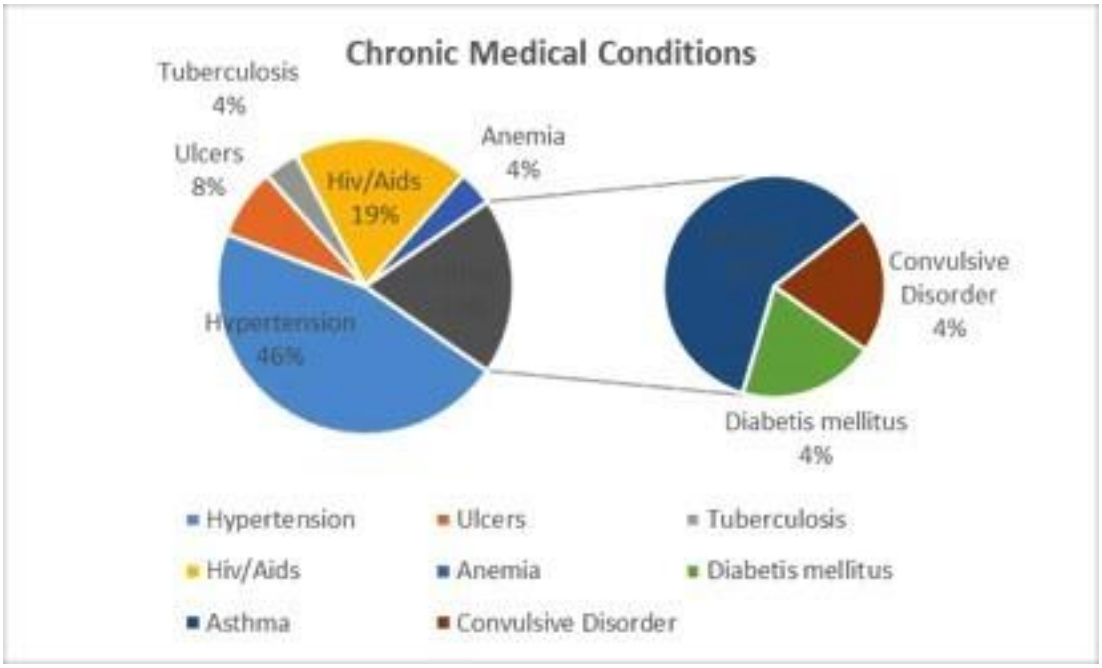
Additionally, Table 4.5 indicates that out of 232 pregnant women with previous deliveries, only 70(30%) had previous deliveries through surgery, out of which 67 (95%) had caesarean section, 3(4%) had cervical surgery, while 1(1%) had myomectomy. These results were in line with Mahindra (2013) who did a study on the determinants of self-referral among patients with severe illnesses with a focus on health facilities at Kenyatta National Hospital were found to be statistically significant compared to patients who self-referred. If their health problem is severe, they may obtain special health services within health institutions in high levels, bypassing their local health facility.

Furthermore, results show that only 25 (11%) of the respondents were suffering from a chronic medical condition for which they were taking medication, including 12(46%) who were suffering from hypertension, 5 (19%) HIV/AIDS, 3(11%) asthma, 2(8%) ulcers, 1(4%) anemia, 1(4%) convulsive disorder, 1(4%) tuberculosis, and 1(4%) diabetes mellitus. The outcome were aligned with those of Arab et al. (2016) who conducted a study in USA and found out that premature

labor, hypertension, blood transfusion venous thromboembolism, and postpartum depression were all found to be more common in HIV pregnant women in the States. See Figure 4.2.

Figure 4.2

***Chronic Medical Conditions among Pregnant Women Seeking Delivery Services at* CGTRH**



A 0.05 significance level was registered when two variables were regressed to establish the impact of risk elements that makes pregnant women to refer themselves to health institutions, hence looking at the risk elements which were included in the regression of the multiple variables. The outcome revealed that none of the risk factors had influenced significantly the pursuit of pregnant women to refer themselves to CGTRH for delivery. These results contradicted with findings of Abdi et al. (2015) who conducted study on the degree and predictors of patients referring themselves to health institutions in Ethiopia and found out that patients in need of specialized treatment from higher levels were less likely to seek previously pursue care within health institutions are lower levels.

Table 4.6

Bivariate Regression Results of Risk Factors on Self-Referrals among Pregnant Women Seeking Delivery Services at CGTRH

Risk Factors		N	Referral		Self- Referral		OR	95% CI	Sig.
			F	%	F	%			
Previous miscarriage	No (Ref)	231	87	41	144	59	1.000		
	Yes	64	26	38	38	62	.883	.502 to 1.554	.666
Previous birth with defects	No (Ref)	290	111	38	179	62	1.000		
	Yes	5	2	40	3	60	.937	.153 to 5.654	.930
Severe bleeding in previous pregnancies	No (Ref)	287	111	39	176	61	1.000		
	Yes	8	2	25	6	75	1.892	.375 to 9.540	.892
Previous surgery	No (Ref)	208	73	35	135	65	1.000		
	Yes	87	40	46	47	54	.635	.382 to 1.057	.081
Previous assisted delivery	No (Ref)	293	112	38	181	62	1.000		
	Yes	2	1	50	1	50	.619	.038 to 9.992	.735
Suffering from chronic medical condition	No (Ref)	336	123	37	213	63	1.000		
	Yes	40	21	52	19	48	.522	.320 to .778	.054

Moreover, according to a study done by Goh et al. (2015) highlighted that the comment reason for referral to tertiary facilities include preterm labour, ante partum hemorrhage, poor progress oflab our, induced hypertension and premature rupture of membranes. Dattaray et al. (2013) also added to a report looking into the characteristics of "un-booked mothers," the report asserted thatobstetric risk factors that necessitate admission to a referral health facility include hypertension disorders and infections such as urinary tract infections.

The study findings differ with the outcome of investigations conducted within Tanzania that showed that the risk mother's especially to the caesarian section had poor neonatal outcomes and had to be referred as compared to those who self-referred themselves Sorbye et al. (2011)

findings. The findings also differ with the findings of Mahinda (2013) who assessed Kenyatta National Hospital referral amongst patients seeking health services, with the indication that nearby health facilities were likely to be ignored and bypassed by severe illness pregnantwomen. The findings are also inconsistent with the findings of Abdi et al. (2015) which indicatedthat those patients needing specialized care at a general hospital in Ethiopia had at the lower- level health facility chosen not to seek health care. Another study conducted in Ethiopia by Edosa et al. (2019) also established that the perception that a patient had about her health made those who perceived their condition to be less severe not to refer themselves and those who perceived their condition to less severe to refer themselves

4.6 Access Determinants of Self-Referrals among Pregnant Women at CGTRH

The third investigated predictors was in relation to access being able to influence pregnant women in referring themselves to CGTRH to pursue delivery care.

The rating of the responses was according to a Likert 5 point scale; strongly agree was denoted by 4, agree denoted by a 3, disagree denoted by a 2 and strongly disagree denoted by a 1. The perceptions were summarized and the responses offered in the form of percentages/frequencies.

The outcome revealed that delivery services were sought by pregnant mothers within referral institutions because the facilities had drugs availability, the facility offered quality services, it offered laboratory services and also due to the 24 hour operating period which was a response provided by the majority of the respondents. Table 4.7 presents the results.

Table 4.7

Access Factors Motivating Pregnant Women to Seek Delivery Services Directly at CGTRH

Access Enabling Factors	n	Disagree		Agree	
		F	%	F	%
CGT&RH is close to where I live compared to PHC	232	150	65	81	35
Availability of drugs attracted me to referral facility	232	53	23	178	77
Quality of service attracted me to this referral facility	232	11. 6	5	220	95
I come to this referral facility for laboratory tests	211	91	24	176	76
CGTRH is open 24 hours in a day which is encouraged you to attend	81	35	9	211	91

The outcome was in consonant with a majority of other investigations. According to Sharaf et al. (2013), Maharaj et al. (2013) and DeValk et al. (2014), the belief that better services are readily accessible referral institutions tends to affect patients' judgments of quality of treatment.Linden et al. (2014), Alyasin et al. (2014) and Unwin et al. (2016), all stated that the possibility of their capability to access examinations including x-rays and blood tests arose as a result ofthe aforementioned factors. Other studies have described a shortage of prescription stock at the primary level of treatment as a justification for patients bypassing these health institutions. Visser et al. (2015), Young et al. (2015) and Beache et al. (2016) found that the absence of attending physicians, as well as testing services, at PHC facilities, forced patients to seek treatment in the referral facilities.

A 0.05 significance level was registered when two variables were regressed to reveal whether access is an element that enables pregnant women to refer themselves to health institutions and hence look at whether access can be considered as an enabling element that can be included

when regressing multiple variables. The outcome revealed that those pregnant women who agreed that CGTRH's 24 hour period of operation was the reason behind them pursuingservices within the health institution ($p < 0.05$; CI = 0.242 to 0.982; 95%; OR = 0.487) were twice expected to directly visit CGTRH to deliver, overlooking facilities of health in the lower levels as compared to the ones who were in disagreement that the 24 hour period of operation was the reason behind them seeking delivery services there. Table 4.8 captures the outcome.

Table 4.8

Bivariable Regression Results of Access Factors on Self-Referrals among Pregnant Women Seeking Delivery Services at CGTRH

Risk Factors			**Referral**		**Self-Referral**		**OR**	**95% CI**	**Sig.**
		n	**F**	**%**	**F**	**%**			
Close proximity of CGTRH	Disagree (Ref)	244	96	39	148	61	1.000		
	Agree	132	48	36	84	64	1.135	.733 to 1.759	.570
Availability of drugs at CGTRH	Disagree (Ref)	85	37	44	48	56	1.000		
	Agree	291	107	37	184	63	.754	.462 to 1.232	.462
Quality of service at CGTRH	Disagree (Ref)	18	8	44	10	56	1.000		
	Agree	358	136	38	222	62	.766	.295 to 1.988	.583
Availability of laboratory services at CGTRH	Disagree (Ref)	91	36	40	55	60	1.000		
	Agree	285	108	38	177	62	.932	.575 to 1.512	.776
24 hours operating nature of CGTRH	Disagree (Ref)	35	19	54	16	46	1.000		
	Agree	341	125	37	216	63	2.052	1.018 to 4.135	.044

Bivariable regression outcome in relation to access as an element influencing pregnant women to refer themselves to CGTRH for delivery services due to closeness to them, availability of drugs, quality of services, availability of laboratory services and 24hours of operating nature of

CGTRH. There was statistically significant associated between 24hours operating nature and self-referral among pregnant women seeking delivery care within CGRTH. The facilities 24 hourperiod of operation within CGRTH (OR=2.052,95cl1.018,4.135 p=0.044) was a strong predictor of self-referral.

This result concurred with those of visser et al. (2015) who asserted that the time it takes to obtain medical treatment within the institution was revealed to be mostly significant among self- referral patients. Moreover, Becker et al. (2012) also asserted that passing behavior facilitated increased waiting time at the local hospital. According to a study by Ntleko et al. (2010), self- referral patients indicated that facility waiting time was more appropriate than waiting at thelocal clinic.

The outcome is conflicting with outcomes of investigations carried out by Ishandree et al. (2019) within South Africa who revealed that the availability of medicines was a considerable predictor when an individual is referring themselves to a health facility as well as when being referred by another. Additionally it was also revealed by Abeno et al. (2014) that discontent due to medicine shortage within the institution their behavior when seeking health services. On other investigation by Visser et al. (2015) revealed that just 38% of patients who refer themselves to health institutions had obtained their prescription facilities of health in the lower level.

The outcome in relation to the facilities proximity contradicts with the outcome of an investigation by Mashishi et al. (2012) who revealed that majority of those who referred themselves to Dilokong hospital actually closer to it compared to those referred to the facility. Hussein et al. (2012) brought to light the location of residence of the pregnant mother was a key

determinant of whether the mother self-referred themselves. It was revealed by Edosa et al. (2017) that the geographical position and access to transportation were mostly related to self- referrals by patients.

The outcome in relation to the hours of operation were in consonant with an investigation carried out by Pillay and Mahomed (2019) in South Africa, where it was revealed that despite the hours of operation being among the well ranked elements influencing patients to refer themselves to health facilities, it was however established not to be a considerable factor resulting in self- referral according to an analysis of multiple variables.

4.7 Institutional Determinants of Self-Referrals among Pregnant Women at CGTRH

This study's fourth objective was to determine institutional predictors enabling pregnant women to refer themselves to the CGRTH to pursue delivery services. The rating of the responses was according to a Likert 5 point scale; strongly agree was denoted by 4, agree denoted by a 3, disagree denoted by a 2 and strongly disagree denoted by a 1. The perceptions were summarized and the responses offered in the form of percentages/frequencies. The pregnant women agreed that they sought CGTRH to deliver because the quality of service at the facility is good, waiting time is short, staff are more friendly, the facility has adequate staff, availability of skilled staff, and because it was easier to be attended to by a consultant at the referral facility. Table 4.9 presents the results.

Table 4.9:

Institutional Factors Encouraging Pregnant Women to Seek Delivery Services Directly at CGTRH

Institutional Factors	n	Disagree		Agree	
		F	%	F	%
Quality of service attracted me	232	21	9	211	91
Waiting time at the referral facility is short	232	53	23	177	77
Staffs at the referral facility are friendly	232	23	10	208	90
Nurses in the lower facilities are rude	232	158	68	74	32
Referral facility have adequate staff	232	5	20	185	80
Staff at the referral facility are skilled	232	12	5	220	95
It is easier to be attended by a consultant	232	23	10	209	90

Institutional factor encouraging pregnant women to directly seek CGTRH for delivery were assessed by interviewing 232 women who had come to seek delivery services at CGTRH .out of 232, 211 women (91%) agreed that the quality of service attract them while 21 women (9%) disagreed.53women (23) disagreed that the period for waiting at the referral facility is short while 177 women (77%) were in agreement. This result concurred with those of Visser et al. (2015) who asserted that the time it takes to obtain medical treatment at the institution was revealed to be more significant among self-referral patients. Moreover, Beckeret et al. (2012) also asserted that passing behavior facilitated increased waiting time at the local hospital. According to a study by Ntleko et al. (2010), self-referral patients indicated that facility waiting time was more appropriate than waiting at the local clinic.

The result also concurred with Edosa et al. (2019) whose to report indicated that, 65.8% of self-referred patients felt their proximal health facility's standard of care was poor, and they preferred self-referral to level 5 hospitals. As a result, patients who self-refer were almost three times more

likely to self-refer if they felt the quality of health care at the proximal health facility was poor. The findings also concurred with Teresita et al. (2014) who found out that the quality of health was identified as one of the institutional determinants of patients' self-referral to a health facility, moreover service. In another study carried out in Honduras by Kumiko et al. (1998) patients' who knew the other health care provider did not provide a specific service quality they needed had a (13.3) higher probability.

The findings also concur with a study done by Pillay and Mohamed (2019) within South Africa revealed that the most important institutional reasons for patient self-referrals were the availability of drugs, medical testing, doctor services, operating hours, and satisfaction with services rendered. They discovered that waiting times, diagnostic test availability, and drug availability were all significantly linked to self-referencing.

The results are in line with those of many previous studies. Waiting time at a health facility was found to be extremely significant for self-referral patients (Visser et al., 2015). According to Becker et al. (2012) increased waiting time at the local facility encouraged self-referrals to higher level health care facilities. Ntleko et al. (2010) found that in contrast to waiting at the local clinic, self-referral patients indicated that the hospital waiting period at the preferredfacility was more suitable.

According to Edosa et al. (2019), the majority of self-referred patients thought the quality of health care at primary health care facilities was low, and they favored self-referral to level 5 hospitals. Pillay and Mahomed (2019) found that the most common reasons for self-referrals

among patients in KwaZulu Natal, South Africa, were the availability of medication and diagnostic information.

A further investigation conducted in India by Nath et al. (2008) revealed that trust in doctors and health facilities, as well as the availability of specialists, were the main reasons for individuals to refer themselves to tertiary and secondary facilities of health. According to Edosa et al. (2019), the majority of self-referral patients were more optimistic that they would be able to see any form of health care provider they desired within the facilities of health rather than those closes to their health facility.

A 0.05 significance level was registered after regressing two variables so as to establish the influence of institutional elements on pregnant woment referring themselves to health centers and hence looking at whether to include institutional elements in regressing the multiple varibles. The outcome revealed that none of the institutional factors considerably influenced self-referral among pregnant mothers pursuing delivery care within Coast General Teaching & referralHospital. Table 4.10 presents the results.

Table 4.10

Relationship between Institutional Factors and Self-Referral among Pregnant Women Seeking Delivery Services at CGTRH

Institutional Factors		Referral		Self-Referral				
		F	%	F	%	OR	95% CI	Sig.
Quality of service at CGTRH	Disagree (Ref)	13	41	19	59			
	Agree					1.112	.532 to 2.328	.777
Short waiting time at CGTRH	Disagree (Ref)	33	38	55	62	1.000		
	Agree	111	39	77	61	.957	.585 to 1.566	.860
Friendly staffs at CGTRH	Disagree (Ref)	12	32	26	68	1.000		
	Agree	132	39	206	61	.720	.351 to 1.477	.370
Rude nurses in the lower facilities	Disagree (Ref)	103	40	153	60	1.000		
	Agree	41	34	79	66	1.297	825 to 2.039	.260
Adequate staff at CGTRH	Disagree (Ref)	26	35	49	65	1.000		
	Agree	118	39	183	61	.823	.485 to 1.396	.470
Skilled staff at CGTRH	Disagree (Ref)	7	37	12	63	1.000		
	Agree	137	38	220	62	.937	360 to 2.437	.893
Availability of consultants at CGTRH	Disagree (Ref)	13	33	26	67	1.000		
	Agree	131	39	206	61	.786	.390 to 1.585	.501

The results contradict those of Teresita et al. (2014), who described health service quality as an institutional predictor of individuals self-referral to a health facility. Floyd et al. (2014) discovered that the emotional support provided by health care staff to pregnant women during childbirth, the reverence shown, and the compassion shown as a factor in facility selection.

D`Ambruoso et al. (2005) stated Women expect humane, competent, and courteous treatment from healthcare staff, as well as a fair standard of physical environment, according to the report**.**

The findings also differ with the findings of Pillay and Mahomed (2019) which indicated that waiting times, availability of diagnostic tests and availability of medication were revealed to be considerably related to self-referral. Another study by Edosa et al. (2019) revealed that patients who thought the quality of primary health care services was bad were more likely to self-refer than those who thought the quality was good.

4.8 Determinants of Self-Referrals among Pregnant Women at CGTRH

A multivariate logistic regression analysis was conducted at a significance level of 0.05 in order to identify the determinants of self-referral within CGTRH by pregnant women who refer themselves there. After screening of the various factors using bivariable logistic regression (at a significance level of 0.05), two predictor variables were included in the multivariable regression model including education status of the pregnant women, and the referral facility operating for 24 hours in a day. The results indicated that the referral facility being open for 24 hours in a day had a significant relationship with self-referral among the pregnant women. The results indicated that pregnant women with tertiary education [OR = 4.414; 95% CI = 1.532 to 12.721; $p < 0.05$] were 4.4 times expected to pursue direct services of delivery from the Coast General Teaching & referral Hospital, bypassing lower-level healthcare facilities, compared to those with no education. The outcome revealed that women who are pregnant and yet chose CGTRH due to its 24 hour period of operation while seeking services of delivery ($p < 0.05$; CI = 0.242 to 0.982; 95%; OR = 0.487) were 2.1 times expected to seek CGTRH for services of delivery, overlooking

facilities of health at the lower level, in relation to the pregnant women who indicated not to have chosen the facility because of its 24 hour period of operation. Table 4.11 outlines the outcome.

Table 4.11

Multivariate Regression of Co-Factors on Self-Referrals among Pregnant Women Seeking Delivery Services at CGTRH

			Non-Self-Referral		Self-Referral				
Individual Factors		n	**F**	**%**	**F**	**%**	**OR**	**95% CI**	**Sig.**
Educational Status	No education (Ref)	18	11	65	7	35			
	Primary education	145	58	41	87	59	2.410	.880 to 6.601	.087
	Secondary education	121	50	42	71	58	2.352	.849 to 6.519	.100
	Tertiary education	92	25	28	67	72	4.414	1.532 to 12.721	.006
24 hours operating nature of CGTRH	Disagree (Ref)	35	19	54	16	46	1.000		
	Agree	341	125	37	216	63	2.143	1.052 to 4.365	.036

Multivariate regression of co-factors self-referral among women seeking delivery services at CGTRH at 95% confidence interval on educational status has significance of .006.The findings are inconsistent with the findings of Akande (2004) and Magoro et al. (2015) which revealed that education does not play a role in self-referrals, in that pregnant women self-refer regardless of their education level.24 operating hours of CGTRH at 95% confidence, had significance of .036 The findings also differ with Pillar and Mahomed (2019) investigation carried out within South Africa which revealed that despite the period of operation being among the well ranked institutional elements as to why patients refer themselves to health facilities, it was not however a considerable predictor to self-referral..

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

Presented in this section is a summarization of the outcome, conclusion of the data together with suggestions and recommendation. The organization of this section is based on the study objectives.

5.2 Summary of Findings

The findings revealed that a high proportion of the pregnant women confirmed to have sought direct services of delivery at the Coast General Teaching & referral Hospital, by passing lower-level healthcare facilities. The aim of the study was to identify the elements resulting in pregnant women self-referral in seeking services related to deliveries at the Coast General Teaching & referral Hospital. The determinants examined in this study include individual factors (socio-demographic factors and obstetric history), risk factors, access factors and institutional factors.

The first variable investigated individual self-referral elements in relation to the quest by pregnant women to seek services in delivery within the Coast General Teaching & referral Hospital. A 0.05 significance level as regressed by bivariable logistic revealed a considerable relationship relating self-referrals to their status of education. Where the pregnant women had more education, their likelihood of self-referral to health facilities also increased. Specifically, there was a 4.2 times likelihood of self-referral where tertiary education level had been attained by the pregnant women in relation to those without any education. A 0.05 significance level was

registered when it was additional analyzed through the utilization of multivariable regression, hence revealing a considerable variation in relation to the education of women with tertiary education and those without any education. In terms of self-referrals, those with tertiary education were 4.4 times more expected as compared to those without.

The second variable investigated risk factor elements in relation to pregnant women making self-referrals in their pursuit of delivery services within Coast General Teaching & referral Hospital. A 0.05 significance level was registered when regressed according to bivariable logistic. This indicated that none of the risk factors was considerably influencing pregnant women to self-refer themselves to pursue delivery services at the referral facility.

The third variable investigated was related to the analysis of enabling elements that influence pregnant women to self-refer themselves to Coast General & referral Hospital while seeking delivery services. A 0.05 significance level was registered when the two elements were regressed, thus showing a considerable relationship linking self-referral to the CGTRH hour of operation. This outcome revealed that the operating period of 24hours for the facility was the reason being the pregnant women's' decision to seek the facility's services. They were therefore twice as likely to self-refer themselves to that facility as compared to compared to the pregnant women who were in disagreement to having sought delivery services at CGTRH because of its24 hour operating period. A 0.05 significance level was registered when a regression analysis was conducted on multiple elements. It additionally revealed that CGTRH's hours of operation had influenced the self-referrals of pregnant women in a considerable way as they pursued delivery services.

The fourth variable investigated institutional elements of self-referral in relation to CGTRH being sought for delivery services by pregnant women. A 0.05 significance level was registered when the analysis of the two elements were regressed. It revealed that none of the institutional factors had influenced considerably the pursuit of pregnant women to self-refer themselves to CGTRH while seeking delivery services.

5.3 Conclusions

The finding of this study concludes that education level is a strong predictor determinant when pregnant women are referring themselves to CGTRH in seeking delivery services. There was a 4.2 times chance to self-refer when the education attained by the pregnant women was tertiary level as compared with when they had not attained any education level. This could be due to the factor that learned women have a better way to choose where they are going to delivery that women who have less educated. There is need to take another study and analyses where the less educated women are delivering.

The results of this study also concludes that risk factors are not significant elements when pregnant women refer themselves to CGTRH for delivery services. The findings that highlighted that the comment reason for referral to tertiary facilities include preterm labour, ante partum hemorrhage, poor progress of labour, induced hypertension and premature rupture ofmembranes. Other studies have stated the referral of women to health institutions for delivery have a higher caesarean section rate and a lower neonatal outcome than women who self-refer, implying that the formal referral scheme effectively recognizes high risk mother.

The results of this investigation concluded that the operating period of 24 hours by the institution is a considerable cause of pregnant women referring themselves to CGTRH for delivery services. Other studies have described a shortage of prescription stock at the primary level of treatment as a justification for patients bypassing these facilities found that the absence of attending physicians, as well as testing services, at PHC facilities, forced patients to seek treatment at otherlevels of healthcare.

The study also found out that institutional factors were not significant predictor of pregnant women referring themselves to CGTRH for delivery services.

And a further study conducted in India found that trust in doctors and health facilities as well as the availability of specialists, were the main reasons for self-referrals to tertiary and secondary health institutions which corresponds with the findings of this study**.** Majority of self-referral patients were more optimistic that they would be able to be attended to by any cadre of health care provider they desired at the referral health institution rather than at the closest health facility

5.4 Recommendations from the Study

i) The health department at the county of Mombasa need to establish mechanisms ofmaking sure that facilities offering primary health are attractive to more expectant womenpursuing delivery care at the health institution.

ii) The County Department of Health should ensure that public health facilities at lower levels operate for more than 24 hours a day.

iii) The County Department of Health should ensure that health facilities implement and adhere to referral guidelines in order to reduce congestion in Coast General Teaching & referral Hospital for uncomplicated cases.

5.5 Suggestions for Further Research

The study should be replicated in other referral facilities in the country in order to compare findings with an aim of generating more knowledge on the determinants of self-referrals among pregnant women. This will enable key stakeholders in the devolved and central governments to find ways of streamlining the referral system to reduce the congestion of patients at referral facilities, and thus minimize challenges such as strained resources (material and human) because of large number of patients, slow pace of delivering services to patients because of their high number and low standards of care provided to patients.

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APPENDICES

Appendix I: Informed Consent Form

To be read in a language that the respondent is fluent in.

Title of the study: Determinants of self-referrals among pregnant women seeking delivery services at Coast General Teaching & referral Hospital, Mombasa, Kenya **Institution**: Kenya Methodist university Department of Health sciences, Nairobi campus, P.O box 40205, 00100.Nairobi Kenya

Investigator: Elizabeth Muthoki Kivuva P. O. box 41584 Mombasa.

Supervisors: Dr. Kezia Njoroge Dr. Wanja Tenambergen.-Department of health sciences Kenya Methodist university ethical approval: Kenya Methodist University ethical and research committee

Permission is requested from you to enroll in this study. You should understand the following general principles, which apply to all participants in this research:

i. Your agreement to participate in this study is voluntary.
ii. You may withdraw from the study at any time without necessarily giving a reason for your withdrawal.
iii. After you have read the explanation, please feel free to ask any questions that will enable you to understand clearly the nature of the study.
iv. The interview is anticipated to last 15 minutes

Researcher

My name is Elizabeth Muthoki Kivuva a student in the department of health system in Kenya Methodist University Nairobi I am inviting you to take part in this research study and would like to give you information that will help you decide whether or not you will participate in this study. Feel free to stop me and ask any questions about the purpose of this study, any risks or benefits, what happens if you participate and anything else about the study that is not clear. Once

I have answered the questions to your satisfaction, you may then decide to sign your name onthis form to agree to take part in the study. It is also good to understand that your decision foryou to participate in this study is voluntary; you are free to withdraw yourself from the study at any time without giving a reason. Refusal to participate will not in any way affect the services you are entitled to at Coast General Teaching & referral Hospital. I will give you a copy of this form for your record.

May I continue? Yes /no

This study has been approved by Coast General Teaching & referral Hospital - Kenya Methodist University ethics and research committee protocol no…….

Purpose of the study:

The researcher listed above is carrying out this study to determinants of self-referrals among pregnant women seeking delivery services at Coast General Teaching & referral Hospital Mombasa, Kenya.

Procedure:

If you agree to participate in this study, the following things will happen: you will be interviewed by the principle researcher in a private area where you feel comfortable answering questions. To obtain your permission to participate, you will be taken through the recruitment process whereby procedures will be explained to you. There will be no direct procedures that will be done to you by the researcher. The researcher will provide you with a consent form to sign. You will be asked a number of questions from a questionnaire with available option as answers to choose from.

Duration: The interview is estimated to take 10- 20 minutes

Assurance of confidentiality: All information obtained from you will be kept in confidence. At no point will your name be mentioned or used during data handling or in any resulting publications. Codes will be used instead. The questionnaire will be kept separately from

electronics copy that will be entered in to SPSS software which will be subsequently destroyed on completion of the completion of the research.

Risks:

One potential risk of being in the study is loss of privacy. We will keep everything you tell us as confidential as possible. To ensure privacy, your name will not be filled on the data collection instruments. For this study, you will be assigned a unique number that I will use to identify him/her in a password-protected database. All the records will be kept under lock and key and only I will be able to access and use it. The results from this study will be published or presented at professional meetings but your name will not be used or associated with the findings.

Benefits:

This information from this study may benefit the population using these health care facilities and also the profession by identifying issues associated with current referral practice. These can be used for making referrals for implementation of future policies on operating an effective health care referral system in Kenya.

Withdrawal:

your participation in this study is voluntary .you have the right to refuse to take part or withdrawal at any time .if you chose to refuse to take part or withdraw from the study. you not receive any penalty or loss of any benefit to which you are entitled.

Concerns:

In case you need to contact me, my academic department or the Kenya Methodist University ethics and research committee concerning this study please feel free to use the contacts provided above.

Participant recruitment:

Convenient sampling method will be employed. Every pregnant mother meeting the inclusion criteria will be included in the study until the desired sample size is met. On obtaining ethics approval the principal investigator will read to Coast General Teaching & referral Hospital

administration requesting for permission to conduct the study. The list of new admissions will obtained from the nursing station. The patients admitted in the last 48 hours were perused every morning every day the mothers will be approached and invited to participate in the study. They will be informed about the study and requested to provide consent with the aid of informed consent form .An explanation on the harm, benefits and confidentiality was provided. All pregnant mothers who will give consent to participate in the study, they will be requested to sign the consent form.

Statement of consent:

I.....give consent to the investigator to interview me and use the information obtained in her study .Elizabeth Muthoki Kivuva has explained the nature of the study to me and I have understood.

Signature.....date.....

I confirm that I have explained the nature and effect of the study.

Signature.....date.....

Appendix II: Questionnaire

The aim of this study is to identify the determinants of self-referrals among pregnant women seeking delivery services in Coast General Teaching & referral Hospital. The information that you will give is confidential and will only be used for the purpose of this study. I request you to feel free and cooperate in this exercise.

Instructions to the Respondent

a. Please answer all question in this questionnaire
b. Do not write your name anywhere on this questionnaire
c. Make the answers confidential as possible after the exercise
d. Tick your appropriate choice and write down the brief statements in the open-ended questions

A. Individual determinants Demographic determinant

1. Name of your health facility ……

2.What is your age bracket?

[ ] Below 20 yrs [ ] 21 - 30 yrs [] 31 - 40 yrs

3.Educational status (Years of Education):

[ ] No education [] primary education [] Secondary

[ ] Tertiary education

4. Occupation of the patient

[ ] Unemployed [ ] Employed [ ] Other ……

5. Marital status

[] single [] married [ ] Divorced
[] widowed [] separated

Obstetrical History

6. No of pregnancy including the current one

{ }0-----1 { }2-5

{ }6---10 { }Above 10

7. No of children

{ }0-----1 { }2---5

{ } 6—10 { } Above ---10

8. When having children where did you deliver? { } Home { } Primary health care
{ } Hospital
{ } Private hospital

9. How did you give birth to your last baby?
{ } Normal delivery
{ } Assisted delivery { } Caesareans section

B) Risk factors determinant

10. Did you have any previous miscarriage? { } yes{ } no

11. Did you ever give birth to a baby with defects? { } yes { } no

12. Did you have any severe bleeding requiring blood transfusion in any of the previous pregnancies? { } yes { } no

13. Did you have any previous surgery like caesarean sections, myomectomy cervical surgery?
a) { } yes { } no

b) If YES above specify. .....

14. Did you ever have an assisted delivery by vacuum forceps or any obstetric maneuver?
{ } yes { } no

15. Do you suffer from any chronic medical condition for which you are taking medication?
a) { } yes {] no

b) If YES above, specify.....

C) Access Determinants

Please use tick (√) in the provided 4 point likert scale.

Key: Strongly disagree-SD, Disagree-D, Agree-A, Strongly Agree

	You come to the referral facility because	**SD**	**D**	**A**	**SA**
16.	CGT&RH is close to where I live compared to PHC				
17.	Availability of drugs attracted me to referral facility				
18.	Quality of service attracted me to this referral facility				
19.	I come to this referral facility for laboratory tests				
20.	CGT&RH is open 24 hours in a day which is encouraged you to attend				
21.	This referral facility is closest to where I live				

D) Institutional determinant

Please use tick (√) in the provided 4 point Likert scale.

Key: Strongly disagree-SD, Disagree-D, Agree-A, Strongly Agree

	Did you pass the lower facilities because of the following	**SD**	**D**	**A**	**SA**
22.	Quality of service attracted me to this referral facility				
23.	Waiting time at the referral facility is short				
24.	Staffs at the referral facility are more friendly				
25.	Nurses in the lower facilities are rude				
26.	Referral facility have adequate staff				
27.	Staff at the referral facility are skill				
28.	It is easier to be attended by a consultant at referral facility				

E) Self-referral

29. Were you referred? [ ] Yes [ ] No

30. If yes, were you given referral letter? [ ] Yes [ ] No

31. If yes, where is the referral letter?

[ ] Left it at home

[ ] Lost it.

[ ] In the bed letter

[ ] Don't know

32. Were you informed about the use / importance of referral letter? [ ] Yes [ ] No

What is your opinion on the referral system from the lower primary facilities to referral facility?

Please use tick(√) in the provided 4 point likert scale

Key: Strongly disagree-SD, Disagree-D, Agree-A, Strongly Agree

	Did you pass the lower facilities because of the following	**SD**	**D**	**A**	**SA**
33.	I'm aware of the referral system policy				
34.	The staff at the PHC give information of referral system				
35.	The formal referral system is slow and expensive				
36.	I have never heard of the referral system				
37.	The referral system does not function effectively				

Appendix III: Letter of Transmittal

To whom it may concern,

Dear sir/ Madam,

RE: ACADEMIC RESEARCH

I am a student from Kenya Methodist University undertaking Master's Degree in Health System Management. I am carrying out a study on determinant of self-referrals among pregnant mothers seeking delivery service in cost general and referral hospital. It is a requirement to write a research project report as a partial fulfilment of the course.

This is therefore to seek permission to collect data to facilitate the same. Information provided will be purely for academic purposes and will be treated in confidence. Your assistance and co-operation will be highly appreciated.

Yours faithfully,

Elizabeth Muthoki Kivuva
HSM-3-0806-1/2017

Appendix IV: Authorization for Data Collection - CGTRH

COUNTY GOVERNMENT OF MOMBASA

DEPARTMENT OF HEALTH SERVICES

COAST GENERAL TEACHING & REFERRAL HOSPITAL

Phone : 2314202/5, 2222148,2225845
Mobile No : 0722207868
Fax : 2220161, Mombasa
Email : cacoastpgh@yahoo.com
When replying please quote :

P O Box 90231 – 80100
Mzizima Street
MOMBASA

Ref. ERC-CGH/MSc/VOL.I/69 **Date: 7TH JULY, 2020**

Elizabeth M. Kivuva
HSM-30806-1/2017
P.O. Box 4159-80100
MOMBASA

RE: DETERMINANT OF SELF REFERRALS AMONG PREGNANT WOMEN SEEKING DELIVERY SERVICESAT COAST GENERALTEACHING REFERRAL HOSPITAL, MOMBASA-KENYA

This is to inform you that the Ethics Review Committee reviewed the document submitted and the study is granted approval for implementation effective from the date of this letter.

Please note that authorization to conduct this study will automatically expire on the 20th June, 2021. If you plan to continue with data collection and analysis beyond this date, please submit an application for continuing approval to the ethical Review Committee-Coast General Hospital in appropriate time.

Any unanticipated problem resulting from the implementation of this protocol should be brought to the attention of the ERC-CGH. You are also required to submit any changes to this protocol to the ERC- CGH.

The ERC-CGH looks forward to receiving a summary of the research findings within 60 days upon completion of the study to be part of the data base to be consulted when processing related researches to minimize duplication.

DR. M. A. OCHOLA
SECRETARY ERC-CGH

Appendix V: Research Permit - NACOSTI

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 125799

Date of Issue: 20/June/2020

RESEARCH LICENSE

This is to Certify that Ms. ELIZABETH MUTHOKI KIVUVA of Kenya Methodist University, has been licensed to conduct research in Mombasa on the topic: DETERMINANTS OF SELF REFERRALS AMONG PREGNANT WOMEN SEEKING DELIVERY SERVICES AT COAST GENERAL REFERRAL AND TEACHING HOSPITAL MOMBASA, KENYA for the period ending : 20/June/2021.

License No: NACOSTI/P/20/5368

125799

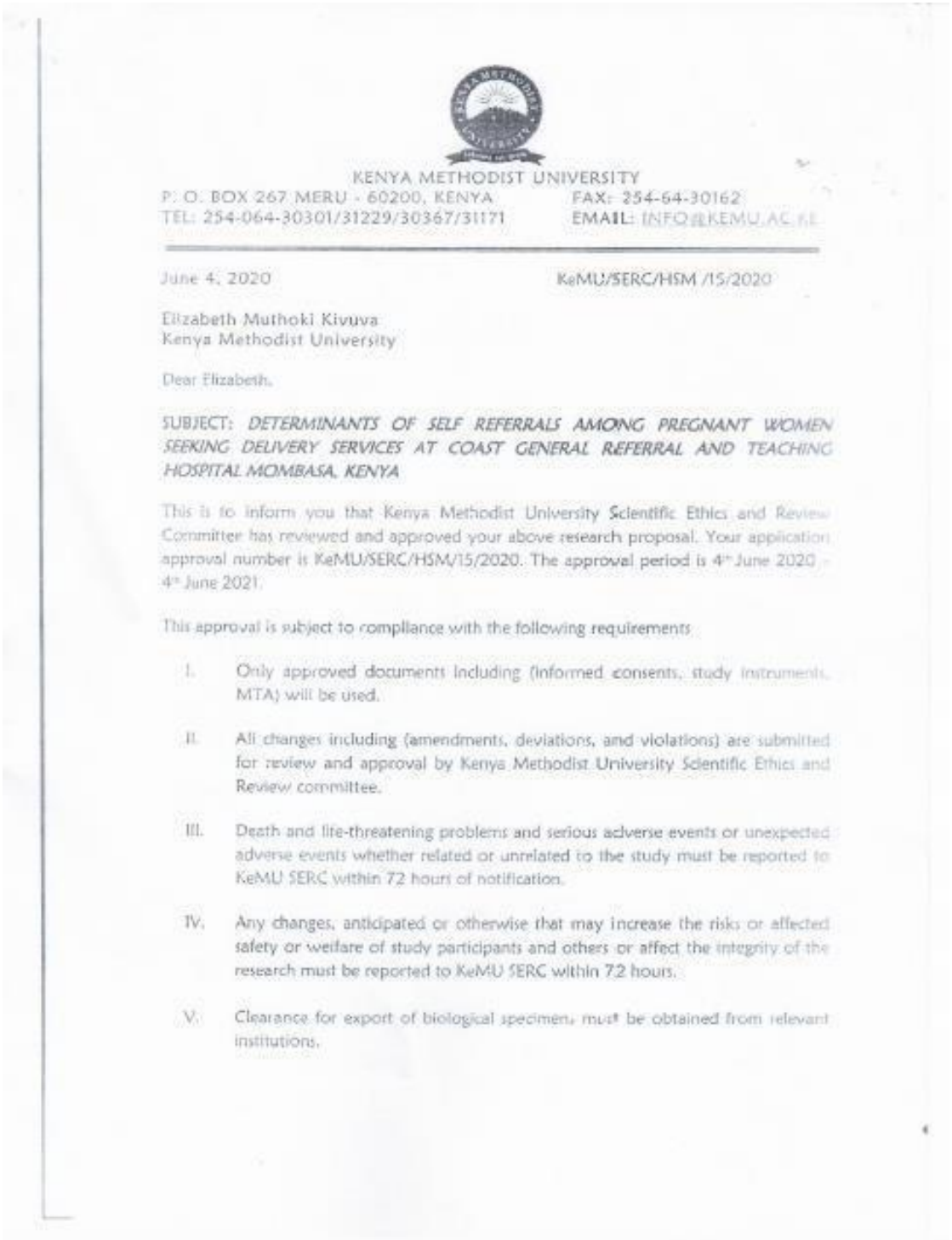
Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix VI: Ethical Approval - KeMU-SERC



KENYA METHODIST UNIVERSITY
P. O. BOX 267 MERU - 60200, KENYA
TEL: 254-064-30301/31229/30367/31171
FAX: 254-64-30162
EMAIL: INFO@KEMU.AC.KE

June 4, 2020

KeMU/SERC/HSM /15/2020

Elizabeth Muthoki Kivuva
Kenya Methodist University

Dear Elizabeth,

SUBJECT: *DETERMINANTS OF SELF REFERRALS AMONG PREGNANT WOMEN SEEKING DELIVERY SERVICES AT COAST GENERAL REFERRAL AND TEACHING HOSPITAL MOMBASA, KENYA*

This is to inform you that Kenya Methodist University Scientific Ethics and Review Committee has reviewed and approved your above research proposal. Your application approval number is KeMU/SERC/HSM/15/2020. The approval period is 4th June 2020 - 4th June 2021.

This approval is subject to compliance with the following requirements

I. Only approved documents including (informed consents, study instruments, MTA) will be used.

II. All changes including (amendments, deviations, and violations) are submitted for review and approval by Kenya Methodist University Scientific Ethics and Review committee.

III. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to KeMU SERC within 72 hours of notification.

IV. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to KeMU SERC within 72 hours.

V. Clearance for export of biological specimens must be obtained from relevant institutions.

VI. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal

VII. Submission of an executive summary report within 90 days upon completion of the study to KeMU SERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely

SERC
24 JUNE 2020

Dr. A. WAMACHI
Chair, SERC

Appendix VII: KeMU Introduction Letter

KENYA METHODIST UNIVERSITY

P. O. Box 267 Meru - 60200, Kenya
Tel: 254-064-30301/31229/30367/31171
Fax: 254-64-30162
Email: info@kemu.ac.ke

June 12, 2020

Commission Secretary,
National Commission for Science, Technology and Innovations,
P.O. Box 30623-00100,
NAIROBI.

Dear sir/ Madam,

RE: ELIZABETH MUTHOKI KIVUVA (HSM-3-0806-1/2017)

This is to confirm that the above named is a bona fide student of Kenya Methodist University, Department of Health Systems Management undertaking a Degree of Master of Health Systems Management. She is conducting research on, 'Determinants of self-referrals among pregnant women seeking delivery services at Coast General Referral and Teaching Hospital, Mombasa, Kenya'

We confirm that her Research proposal has been defended and approved by the University.

In this regard, we are requesting your office to issue a permit to enable her collect data for her research.

Any assistance accorded to her will be appreciated.

Thank you.

12 JUN 2020

Dr. John Muchiri, PHD.
Director Postgraduate Studies