

UNIVERSITY OF GHANA

**QUALITY OF HOSPITAL-BASED CHILDBIRTH SERVICES AND CONSUMER
UTILIZATION BEHAVIOUR IN THE DENKYEMBOUR DISTRICT OF EASTERN
REGION OF GHANA**

BY

SOLOMON MENSAH

STUDENT ID: 10552458

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HEALTH SERVICES MANAGEMENT**

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DECLARATION

I hereby declare that this study is my original work and has not been presented anywhere for academic award either in this University or any other University.

.....

SOLOMON MENSAH

(10552458)

.....

DATE

CERTIFICATION

I hereby certify that this work was duly supervised in accordance with procedures laid down by the University.

.....

DR. PATIENCE ASEWEH ABOR

(SUPERVISOR)

.....

DATE

DEDICATION

This work is dedicated to my family for their incalculable sacrifices, exceptional roles in my life and timeless counsels which helped in shaping my dreams and to the numerous mothers out there who suffer from maternal complications.

ACKNOWLEDGEMENT

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LIST OF ABBREVIATIONS

ANC	Antenatal Clinic
CWC	Child Welfare Clinic
EWIFA	Elderly women in fertility age
GCDH	Great Consolidated Diamonds Limited hospital
GHS	Ghana Health Service
HBCB	Hospital-Based Childbirth
HBCBS	Hospital-based childbirth Services
MOH	Ministry of Health
NHIS	National Health Insurance Scheme
OPD	Out Patient Department
SDH	St. Dominic hospital
TBA	Traditional Birth Attendant
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations International Children's Emergency Fund
WHO	World Health Organization
WIFA	Women in Fertility Age
YWIFA	Young Women in Fertility Age

ABSTRACT

Childbirth which ought to be a joyful moment for families often turn sad and unforgettable experiences with millions of women develop life-long complications. This has been global issue, and has attracted global attention for more than two decades. Several interventions like Fee-exemption policy (FEP), Millennium Village project, safe motherhood programme have been instituted both at national and international level. Quality of childbirth services, delays in obstetric care services, among others have been cited by some scholars are major causes of maternal deaths and obstetric complications. Several studies have been done on quality of healthcare but most of them have centred on out-patient services in Ghana. Some studies have looked at determinant of utilization of healthcare services. However, this study sought to investigate the relationship between quality of hospital-based childbirth services and consumer utilization behaviour intentions. A quantitative approach was employed and structured questionnaire was used to gather data. The study was a cross-sectional explanatory survey of 400 mothers who delivered in the St. Dominic hospital within one year prior to data collection, and 80 health workers especially those working in the maternity ward. Samples were randomly drawn. Data was analysed using independent two-sample t-test and binary logistic regressions. The findings revealed that quality of hospital-based childbirth services has a positive relationship with consumer utilization behaviour. And socio-demographic characteristics especially age, income, marital status, and parity have relationship with consumer utilization behaviour intentions. Based on this it was recommended that healthcare managers should fix their eyes constantly on quality improvement strategies. Also, to eliminate financial barrier to hospital-based childbirth services, health insurance and other healthcare fund managers must ensure that schemes are sustainable.

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1 Introduction

The focus of this study was to investigate quality of hospital-based childbirth services and consumer utilization behaviour in Denkyembour District in the Eastern Region of Ghana. This chapter presents a general overview of the entire thesis under the sub-heading organization of the thesis. The chapter begins with background to the study through problem statement, objectives in addressing the gaps in literature, specific research questions, to significance of the study. This chapter would have been incomplete without spelling out scope/ delimitation of the study, and definition of terms used under this study. The chapter ends with organization and summary of the chapter.

1.2 Background to the Study

Quality as concept with its root in sales of goods and products (Crosby,1979) gained prominence in the service industry especially in healthcare when the book titled “To err is human” was published (Crosby, 1979) cited in (Parasuraman et al, 1985). Undoubtedly, quality which has been defined as “zero defects to it right at the first time” (Crosby, 1979) cannot be overemphasized in childbirth services or healthcare delivery in general. Poor healthcare delivery often than not results in serious complications leading to prolonged hospitalization, irreversible injuries or deformities and sometimes death. Childbirth which ought to be a joyful moment for mothers and their babies sometimes tend to be sad unforgettable event with permanent disabilities and/ or emotional trauma associated with the processes in health facilities. The goal of Sustainable Development goal 3.1 to reduce global maternal mortality to less than 70 per 100000 live births by 2030 (World Health

Organization, 2015) remains bleak if special attention is not paid to the whole continuum of maternal health services.

Facility-based childbirth (FBCB) has been the focus in ameliorating this global problem more than two decades. At WHO's General assembly in 2001, high maternal mortality rate was top agenda and countries were admonished to ensure that at least skilled birth attendance (FBCB) accounted for at least 60% of childbirths by 2015 (World Health Organization(WHO), 2001). However, just a focus on FBCB and outcome indicator (mortality ratio) had not yielded much since quality has not been the focus of this intervention.

According to WHO (2014) 289,000 maternal mortality and 12 million women suffer from severe maternal complications globally. 62% (179,000) of the maternal deaths occur in Sub-Saharan Africa (WHO; UNICEF; UNFPA; The World Bank; United Nations Population Division, 2014). Better still, institutional maternal mortality ratio in Ghana decreased steadily from 195/100,000 live births in 2011 to 143.8/ 100,000 births in 2014 with (Ghana Health Service-Family Health Division, 2014). It was reported that 99% of global maternal mortality happen in developing countries and 80% maternal deaths are as a result of direct obstetric causes like bleeding, septic abortion, ectopic pregnancy etcetera (WHO et al., 2014). It is against this back drop that the international community as well as Ghana is promoting facility-based childbirth, especially in areas with high maternal mortality rates.

AbouZahr (2003) maintained that two thirds (2/3) of maternal deaths happen around the time of childbirth (delivery), and WHO et al.(2014) accounts indicates that all maternal deaths is a result of direct and indirect causes (please see operational definition for details on direct and

indirect causes of maternal deaths). The direct maternal death causes can be managed with relatively and timely basic techniques in well-equipped hospital with quality output (AbouZahr, 2003). Surprisingly, more attention has been placed on Antenatal clinic (ANC) attendance with the basis that early detection of complication is ultimate in reducing maternal mortality. Though ANC has contributed in some respect in reducing maternal mortality, but the concept of maternal mortality can be compared to relay race. No matter how well the starter of the race pursues the crown if the last person performs abysmally, the effort of the whole relay team will be useless.

Van den Heuvel, De Mey, Buddingh, and Bots (1999) as cited in (Abor, Abekah-Nkrumah, Sakyi, Adjasi, & Abor, 2011), have maintained that primary focus of maternal healthcare service is prompt detection (diagnosis) and management of women at risk of pregnancy related complication and hence the focus should be on antenatal services. The relay analogy deflates this position in its entirety unless the early recognition of complication is throughout the continuum of the maternal healthcare and not a section of it.

Similarly, Freedman (2003) opines that most obstetric related complications happens abruptly and at any time of the pregnancy. Odo and Shifti (2014) added to the discourse that most obstetric complications and deaths are preventable and that all pregnancies are at risk for which routine antenatal clinic assessment may not always identified them. Quality of skilled delivery and consumer utilization behaviour is essentially important in the fight against maternal mortality since neither prompt arrival at the hospital alone or quality alone does not guarantee safe delivery.

Some parturient women utilize traditional birth attendant (TBA) services or home delivery, and resort to hospital-based childbirth services only when they see that complication is eminent. Though fee- exemption policy (FEP) for services exist, some women present to the facility too late to be helped (Lang'at & Nwanri, 2015), and a plethora of reasons have been assigned to this. Popular among this is rude behaviour of some healthcare providers and general poor quality of FBCB services (Crissman, Engmann, Adanu, Nimako, Crespo, & Moyer, 2013; D'Oliveira, Diniz, & Schraiber, 2002; Jewkes, Abrahams, & Mvo, 1998).

It is worth noting that some studies have been done on HBCB services in Ghana but a lot remained to be studied. Some studies have focused on Maltreatment during delivery. For instance, Yakubu, Benyas, Emil, Amekah, Adanu, and Moyer (2014) using qualitative research design studied abuse during childbirth from both consumer and provider perspectives, but its findings could not be generalized. Another study by Crissman, et al., (2013) at St. Dominic hospital in Akwatia-Ghana focused on understanding barriers to skilled birth utilization from only users' perspective using qualitative research design. These studies failed to show how widespread these physical and verbal abuse are in the district. Though, some studies (Atinga , 2012; Abuosi, 2015) have been done on quality healthcare in Ghana using out-patient department consumers but little consideration had been given to quality of childbirth services and consumer utilization behaviour. This study in bridging the literature, method, and context gaps sought to examine quality of hospital-based childbirth services from both consumers and providers' perspective and how it influences consumer utilization behaviour intentions.

1.3 Problem Statement

Labour and delivery are known to be the most crucial stage of childbirth as most pregnancy related mortality and life-long complications occur this time irrespective of the adherence to possible best antenatal clinic attendance and services. According to AbouZahr (2003) two thirds of the maternal mortality occur around the time of delivery. Consumer behaviour such as prompt presentation at health facility and quality facility childbirth services are essentially important in preventing the known major causes of obstetric deaths and complications. When mortality or complication occurs patients and relatives tend to point fingers at health personnel blaming the cause of complication or death on the poor quality of care they receive (Akum, 2013), whereas health providers also point fingers at patients for not reporting promptly at the health facility for quality services (D'Ambruso, Abey, & Hussein, 2005). There have been instances of abuse and neglect of duty during this crucial moment in several parts of the country including suburb in even the national capital, Accra (D'Ambruso, Abey, & Hussein, 2005). In some instances, obstetric complications are treated on the quiet even when they are reported by patients.

Recently the Denkyemba district recorded institutional maternal mortality higher than that of even the national average of 143.8/100,000 despite the fact the facility-based delivery was 85% and ANC (Antenatal clinic) attendance was 69% which is extremely closer to the WHO recommended target for ANC and Facility-based delivery for developing countries (Ghana Health Service-Family Health Division, 2014). From 2005 to 2014, (except 2009 with 211/10000 live births) the hospital did not record maternal mortality ratio below 282/ 100000 live births, and the facility cited in their 2016 annual report that maternal mortality was persistently a major problem in the hospital (St. Dominic Hospital, 2017). The question is why is facility-based delivery high and maternal mortality so high in this district? Does it mean that

pregnant women report late for delivery or the quality of service available is poor? Or services rendered to them do not meet their expectation so they use the service as last resort when they realize that complications are setting in at home? The hospital's report cited late disbursement of health insurance claims as part of the challenges faced by the facility. Lang'at and Nwanri (2015) late disbursement of health insurance claim to the health facility makes it difficult for effective running of the facility since it affects adequate procurement and stocking of medicines and other consumers. This invariably has negative repercussion on quality of services patients receives in the health facilities and worse affected are pregnant women in labour and their unborn foetus. Though, some studies have been in Ghana on facility-based child birth services existing studies employed qualitative study design or approach. For instance, Yakubu, Benyas, Emil, Amekah, Adanu, and Moyer (2014) using qualitative research design studied abuse during childbirth from both consumer and provider perspectives, but their findings could not be generalized. Similar study by Crissman, et al., (2013) at St. Dominic hospital in Akwatia-Ghana focused on understanding barriers to skilled birth utilization from only users' perspective using qualitative research design. Though, some studies (Atinga, 2012; Abuosi, 2015) have been done on quality healthcare in Ghana using quantitative study design but their study focused on out-patient department consumers but no consideration had been given to quality of facility-based childbirth services and consumer utilization behaviour. This study in bridging the literature, method, and context gaps sought to examine quality of hospital-based childbirth services from both consumers and providers' perspective and how it influences consumer utilization behaviour intentions in Denkyembaour district in Eastern region of Ghana.

1.4 Research Purpose

The purpose of the thesis was to investigate the quality of Hospital-based childbirth services from the perspectives of consumers and providers, and its relationship with consumer utilization behaviour.

1.5 Research Objectives

The main objective of this study was to evaluate the quality of institutional childbirth services from the perspectives of the consumers and the service provider. This was achieved through the following sub-objectives:

1. Examine quality of hospital childbirth services from the perspective of consumers and healthcare providers in Denkyemba district in Eastern Region of Ghana.
2. To determine the relationship between consumer utilization behaviour and perceived quality Facility-based childbirth services.
3. To investigate how consumer socio-demographic characteristics influence consumers' utilization behaviour in Denkyemba district.

1.6 Research questions

The purpose of this thesis was achieved by answering the following questions:

1. What is the level of quality hospital childbirth services in Denkyemba district from consumer and providers' perspectives?
2. What is the relationship between consumer perception of quality hospital-based childbirth service and consumer utilization behaviour?
3. What is the relationship between consumer utilization behaviour and consumer socio-demographic characteristics in Denkyemba District?

1.7 Hypotheses

H1: There is a significant difference between providers' and consumers' perceived hospital-based childbirth services.

H2: There is a significant relationship between favourable consumer behaviour and consumer perceived quality of hospital-based childbirth services.

H3: There is a significant relationship between consumer utilization behaviour towards Hospital-based childbirth services and consumer marital status.

1.8 Significance of the study

It is the expectation of the study to provide both relevant empirical, theoretical and practical contribution towards reduction of maternal mortality and attainment of the sustainable development goal 1.3 (achieve maternal mortality ratio below 70/100000 live births). The study will also contribute to understanding of the relationship between utilization behaviour of consumers and quality of hospital-based childbirth services. The study will contribute to research by adding to the body of knowledge on consumer utilization behaviour and quality of childbirth services in developing country context. Again, the study will contribute to the academic debate on facility-based childbirth services through literature on quality of hospital-based childbirth services from both consumer and providers' perspective.

With reference to practice, the study provides a reference document to health administrators in boosting quality of hospital-based childbirth services, productivity and efficiency.

1.9 Delimitation of the study

Though two hospitals are in the district and all situated in Akwatia, the district capital, the study was restricted to only the biggest hospitals in Denkyembaour district in Eastern region. The study examined quality of hospital-based childbirth services or care from both consumer and providers' perspective and its effect on consumer utilization behaviour. The study was restricted to women who delivered in St. Dominic hospital from May 2016 to 18th April, 2017 and resides in the district. The study was restricted to St. Dominic hospital in the Denkyembaour district only due to the fact that maternal mortality is still high in the district and St. Dominic hospital accounts for higher percentage of institutional maternal deaths in the district. Lastly, St. Dominic hospital is an accredited health insurance facility for which financial barrier ought not to be a problem for maternal health services utilization.

1.10 Operational Definition of Terms

Assurance: This refers to factors like competencies, courtesy, trust, security, and confidence in service providers.

Basic education: Includes level of education below the level of senior high school (from no formal education through junior high school).

Direct Obstetric cause of maternal deaths: These are causes of maternal deaths arising from bleeding (haemorrhage), obstructed labour, eclampsia, ectopic pregnancy, sepsis, hypertension in pregnancy. This account for 80% of all maternal deaths (WHO; UNICEF; UNFPA; The World Bank; United Nations Population Division, 2014), and are treated or prevented with basic procedures like blood transfusion for bleeding, antibiotic for sepsis (infections). Caesarean section for Obstructed labour etc.(AbouZahr, 2003).

Elderly women in fertility age (EWIFA): This refers to women age 30- 49years.

Facility based Delivery: It refers to any form of institutional childbirth such as childbirth in the hospital, clinic, health centre etc

Favourable Consumer Utilization Behaviour: This refers to either prompt reporting to a hospital for delivery or change of the hospital for the sake of lack of quality

High income: Income above GHC 100.00 per week

High education: level of education beyond Junior High school level (senior high school education through university level education)

Indirect Obstetric causes of maternal deaths: The indirect causes result from co-morbidities (existing diseases) or disease that arise in the course of the pregnancy which is not as a result of direct causes of maternal mortality. Eg renal diseases.

Low income: Income below GHC 101 per week

Maternal Mortality: “The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes” (World Health Organization(WHO), 2001)..

Maternal Mortality Rate: The number of maternal deaths in a given period per 100,000 live births of women of reproductive age during the same time-period.

Parity: Refers to number of children and still births a woman of a woman.

Parturient women: Refers to a woman in labour or about to deliver her baby

Reliability Dimension of quality: reliability under the study connotes the capacity to perform the service dependently and without errors.

Responsiveness quality dimension: Denotes the willingness of healthcare providers to assist and offer services promptly.

Tangible Quality Dimension: It refers to physical environment and resources available in the service delivery.

Unfavourable Consumer Utilization Behaviour: It refers to behaviours of mother exclusively to delay in seeking hospital-based childbirth or attempting to home delivery or childbirth.

Young Women in Fertility Age (YWIFA): This refers to women aged 15 to 29years.

1.11 Organization of the study

The study report was organized into five main chapters. The first chapter discusses the introduction and background to the study, the state of the problem, objectives and questions that guided the study, the significance of the study, scope and limitation of the study as well as operational definitions. The second chapter will present argument related to relevant empirical and theoretical literature and conceptual framework for the study. Chapter three presents research design and methodology. Chapter four discusses issues pertaining to the findings of the study (analysis) with reference to the theoretic framework, conceptual framework, and the reviewed empirical literature. The last chapter looked at summary, conclusion and recommendations of the study. Lastly, each chapter will begin with brief introduction to the chapter and summary of the chapter.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

This chapter presents review of relevant literature on the study. It presents definition on what constitute quality maternity (Facility-based childbirth) services, review of theories related to quality hospital-based childbirth services, importance of studying quality of hospital-based childbirth services to health administrators, and review of relevant health services utilization theories, and quality measuring instruments.

Lastly, the chapter presents review of relevant empirical literature, and conceptual framework for the study.

2.2 Definition of Quality Maternity Service (Facility-based Childbirth)

Healthcare quality according to Institute of Medicine (1990) refers to health service provision that is consistent with desired outcome and professional knowledge. The institute stretched this definition to redefine what quality maternal health services as “degree to which maternal health services for individuals and population increase the likelihood of timely and appropriate treatment for the purpose of achieving desired outcome that is consistent with current professional knowledge and uphold reproductive rights”. Desired outcome of health always emphasise betterment or maintenance or duration of life. Fuentes (1999) agreed with Gronroos (1990) that quality healthcare in general is multidimensional and it reflects the judgement about whether the service rendered to a patient was appropriate or whether the relationship between the providers and consumers was appropriate. Several models have been used by scholars in evaluating the concept of healthcare quality. Among the popular ones are SERVQUAL model,

Donabedian healthcare quality model etc. SERVPERF emerged from the SERVQUAL as a result of some of the criticisms on SERVQUAL model.

2.3 Theories and Theoretic Review

This section reviews what is known about hospital-based childbirth services, and theories relevant to the study. It explains hospitals-based childbirth services, emphasises the importance of quality of hospital-based childbirth studies to health administrators and reviews three main theories. Theories reviewed here include Andersen's Behavioural model of Health service utilization, Young's choice-making model, and SERVQUAL/ SERVPERF. Apart from the latter which measures quality of healthcare, the former two theories aforementioned deals with utilizations of health service.

2.3.1 Hospital-based Childbirth (HBCB)

Hospital- based childbirth is defined as childbirth occurring in Hospital setting. According to some scholars, births occurring in health facilities are all termed Facility-based delivery (AbouZahr, 2003; Moyer, 2012). Again, because facility based-delivery is known to be carried out by trained or skilled personnel, some authors refers to facility-based childbirth as skilled - delivery service. Facility-based childbirth has been trumpeted by many international organization as the single most effective approach to the fight against maternal complication and mortality (WHO/UNFPA/UNICEF/World Bank, 1999). This had led to some countries banning the use of traditional birth attendants in conducting delivery of pregnant women eg Zambia in 2010 banned TBA practices. According to the WHO report, aforementioned, facility-based delivery is characterized by skilled attendants and enabling environmental,

supportive enough to handle complications that sometimes ensue during the delivery process. It was expected by United Nation Organization that by 2015 all countries achieved skilled delivery rate of 60% (United Nations' Economic and Social Affairs Department, 2007).

Proponents of Facility based childbirth argue that since two-thirds of maternal deaths occur around delivery (AbouZahr, 1998), there is the need to focus attention on facility-based childbirth. According to Koblinsky et al (2000) every year, 6.9 million perinatal deaths results from complication of delivery and post-natal period. Some studies have raised counter-argument on the promotion of Facility-based childbirth as a single most efficient way of drastically reducing maternal morbidity and mortality (Freedman, 2003; Akin & Hutchinson, 1999). D'Ambruso, Abey, and Hussein (2005) had shown in their study that reaching a hospital does not guarantee the safe and mortality-free delivery for both mother and foetus especially when the service is inefficient or the quality of service offered is ineffective. There is the need for well-resourced health facility and committed trained personnel with good management practices.

D'Ambruso et al. (2005) argued further that having well equipped and quality facility will not yield the outcome that it seeks to achieve if consumers reach the facility too late to be helped. Women still die after reaching the facility and they attribute this to either consumer behaviour eg like late presentation or and institutional factor like poor quality of service.

Some studies have found out that coverage of ANC, though high, it does not have a corresponding increase in facility-based delivery even at places where these facilities exist

(Crissman, et al., 2013; Amoakoh-Coleman, et al., 2015). According to D'Ambruso, Abey, & Hussein (2005) some women use facility-based delivery only when complication set in during home delivery or at traditional birth attendant's set-up. Reasons some women assigned to this is unacceptable poor quality of service they obtain from the health facilities.

Quality of maternity service from consumers' perspective play major role in health seeking behaviour of consumers. Poorly delivered healthcare has the tendency to compromise "access to care" compliance and effectiveness (D'Ambruso et al., 2005). Factors related to the health facility such as human-relationship plays critical role in the utilization of skilled delivery services (Tchibindat, Martin-Prevel, Kolsteren, Maire, & Delpeuch, 2004; Family Care International and Inter-Agency Group for Safe Motherhood, 1998). For example, in a study done in Greater Accra region of Ghana, D'Ambruso et al. (2005) cited poor health providers' attitudes among others as rationale for non-acceptability and low consumption of facility-based delivery services. The women in the study responded that humane, professional, respectful treatment, reasonable standard of physical environment were criteria for selecting place to childbirth. They added that they will consciously change delivery facility if they encounter degrading and poor standards of care from the health providers. This makes it imperative for health administrators to see quality service provision critical to their organization's growth and survival.

Health consumers will certainly selected health facilities they want to deliver their new-born in the mist of emergency and urgency of their health situation like labour. The question then is what about where there is only one health facility within the district or within reach? The labouring woman will either resort to TBA or travel long distance to her desire facility which

will lead to delays and likely poor delivery outcome. In another study, preference of home birth delivery or indecision resulted in delay in seeking HBCB services and this accounted for most of the causes of several still-births, complications and maternal mortality and that early care seeking behaviour enabled women to prevent delivery complications. (Cofie, Barrington, Singh, Sodji-Tettey, & Akaligaung, 2015; Lang'at & Nwanri, 2015).

Quality healthcare is considered either under providers' or consumers' perspective according to some scholars (Abuosi, 2015; Atinga, 2012). However, some authors are of the view that while consumers have no expertise to evaluate technical quality, providers are in the best position to determine it better since they have the expertise (Abuosi, 2015). The focus of the study is not to stretch the argument further but to look at both perspectives and be able to draw conclusions on the level of quality facility-based Childbirth services and its effect on consumer utilization behaviour.

2.3.2 Importance of Quality of Hospital-based Childbirth Services Studies to Health

Administrators

Healthcare quality has become an issue of global concern not only to health administrators but the entire healthcare fraternity and its stakeholders. In the developed countries, one out of 370 in-patient dies as a result of poor quality or negligence (Houle & Flee, 2012), and more than 100,000 women worldwide develop obstetric fistula due to poor quality of obstetric care annually (De Bernis, 2007). Some health facilities faced law suit from some of these poor quality obstetric outcomes. Brachman and Haley (1981) found in their study that hospital's administrator's active involvement in complication prevention programmes such as infection

prevention in US hospitals was effective in such programmes as such recommended it to be obligatory on all health facility managers.

Besides, Health managers constantly need to determine factors associated with consumer satisfaction and the quality of service (Zineldin, 2006), and this will require that quality healthcare studies are periodically carried out. Healthcare quality does not only provide to consumer satisfaction of services but also reduces cost incurred as a result of prolong hospitalization associated with complications and general poor quality healthcare outcomes

It has been found in some studies (Shou-Hsia, Yu-Jung, & Hong-Jen, 2006) that quality care competition is more common than price competition in healthcare industry. This therefore makes it imperative for managers to pay keen interest in studies like this. Again information asymmetry dominates healthcare market as such consumers rely greatly on recommendations from family and friends (Edgman-Levitan & Cleary, 1996; Hsieh, Cheng, & Lew-Ting, 2000) in (Shou-Hsia, Yu-Jung, & Hong-Jen, 2006). A satisfied consumer will recommend the facility to others. As bad news spread like bush fire in the harmattan, the dead of a labouring mother as a result of poor quality service spreads to the entire village or community.

This affects the corporate images and utilization of the facility by friends and relatives of that “poorly treated” consumer. Loss of revenue is inevitable for the organization as a result of poor quality service as patient turn out decreases with decrease quality and satisfaction (Ovretveit, 2004) and administrators will find it a daunting task in equipping the facility from its own resources. Easier to build than to destroy, so it makes sense for health administrators to keep their eye on quality improvement dimensions as well as periodic

scientific study in the service output from its stakeholders, and by so doing they can influence their subordinates or workers positively (Ovretveit, 2004).

Measuring Hospital-based childbirth service quality re-orient health administrators of health sector charity and healthcare provision to a more market-oriented one (Vandamme and Leunis, 1992) cited in (Adom, Yamoah, & Mensah, 2014).

Studying Maternity service quality in today's health system is important as the World Health Organization is pushing hard for developing countries to adopt and promote facility-based delivery services as the Millennium development goal on maternal mortality was not attained by most countries in 2015, and a more challenging Sustainable Development Goal (SDG) on maternal mortality reduction is set. Measuring or studying quality of facility-base delivery will also provide safe and trusted environment for both mother and her babies in an era where baby theft is emerging prominently.

In an era where human rights have taken centre stage in health governance, it becomes imperative that the bolts and nuts that hold the healthcare delivery is constant assessed in this rapidly changing global village.

Lastly, Health administrators and maternal health fund managers will find assessment of maternity services quality extremely useful in efficient fund or health system management and building of good corporate image for the institution he/ she is head or manager. It is extremely important in raising the bar for health service delivery since a small error might cost the life of a consumer with legal suit on the facility used.

2.3.3 Andersen's Behavioural Model of Health Service Utilization

Andersen's behavioural model of health service utilization has been used extensively in health in relation to consumer behaviour. This model has seen several modifications and refinement but this study seeks to use the generic model in explaining consumer behaviour intentions bearing in mind consumer's perception of quality hospital-based childbirth services and Socio-economic characteristics of consumers (Users).

According to the model, utilization of any health service is influence by three main factors. These factors are predisposing characteristics, enabling resources and need factors (Andersen, 1995). He named these three factors as "proclivity to utilize health care services" (Wolinsky, 1988).

According to Andersen, Predisposing characteristics refers to demographic characteristics, social structure, and health belief of the individual. An individual's propensity to use healthcare services partly dependent on these predisposing characteristics. An individual who believes health services are beneficial for treatment will likely utilize those services.

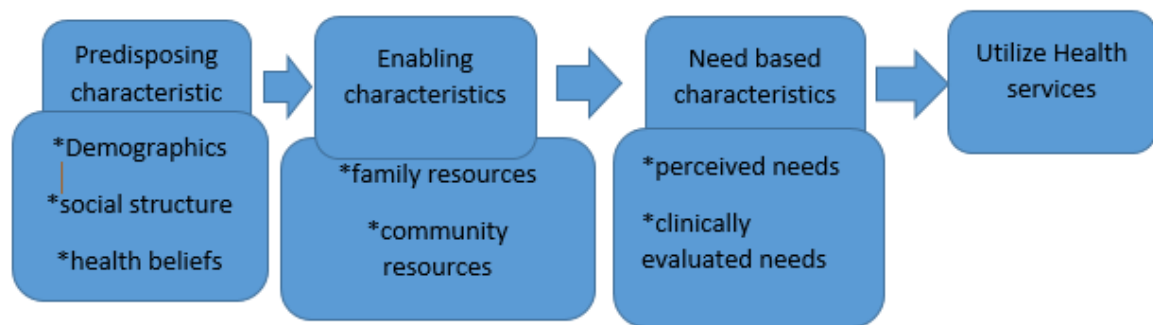
The enabling characteristics refer to two categories of resources he named family resources, and community resources. Family resources is the ability of the individual to afford the services available, other support from the family towards utilization healthcare by the individual and relative location of potential consumer's residence to facility.

Community resources is about available of facility, equipment and available personnel necessary for healthcare delivery in the community (Wolinsky, 1988)

The last leg is the need-based characteristics which refer to consumers' perception of need for health services. He grouped this into objective need (clinically evaluated need) and perceived need.

From the revised version of the model, utilization and frequency of utilization of the healthcare services will have different determinants which is based on characteristics of the population and the kind of health services (Andersen, 1995).

Figure 2.1: Andersen's Behavioural Model of Health Service Utilization



(Source: Wolinsky, 1988)

2.3.4 Young's Choice-making Model

Young (1981) suggested a choice-making model which is founded on his ethnographic studies of healthcare utilization in Mexico. This model integrates four constituents that are most vital to a person's health service choice: perception of gravity, knowledge of home treatment, faith in the remedy, and treatment accessibility.

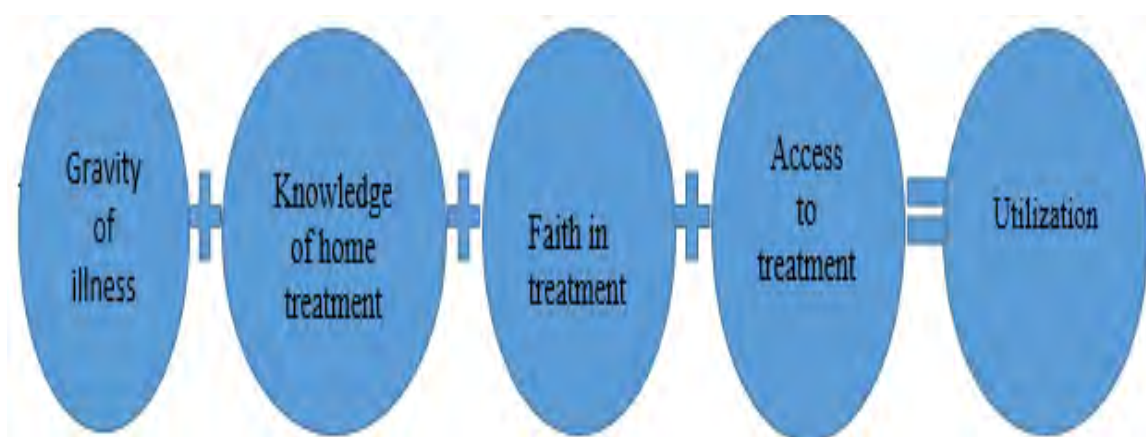
Perceptions of gravity. -This group embraces both the individual's perception and their social relationships consideration of illness severity. Gravity is based on the supposition that the society or community classifies illnesses by magnitude of severity.

Knowledge of a home treatment- This refers to the fact that awareness of home remedy that is efficacious is mostly the first point of call when an individual suffers from ill-health. The consumer will likely utilize that home treatment option (TBA) known to her before utilizing allopathic or orthodox healthcare system.

Faith in remedy- This component includes the potential consumer's belief of efficacy of treatment for the present illness. A potential consumer will not utilize the healthcare service if she does not believe in the existing therapy and its efficacy.

Accessibility of treatment- This incorporates the consumer's evaluation of the cost of healthcare services and the existence of those services in the community. According to Young, access may be the most significant determinant on healthcare utilization (Wolinsky, 1988).

Figure 1.2: Young's Choice Making Model



(Source: Young, 1981)

2.3.5 Healthcare Quality, SERVQUAL, and SERVPERF models

Several debates have gone on over the years and still continues as to how healthcare quality can be defined. Quality as a concept originated from sales of goods or products (Crosby, 1979) and later gain attention in service industry especially in healthcare when the book title “To err is human” was published (Kohn, Corrigan, & Donaldson, 1999). Though, literature indicates that quality determinants may be ill-defined, its benefits to organizations and consumers is unequivocal (Parasuraman, Zeithaml, & Berry, 1985). Quality has been defined as “zero defects to it right at the first time” (Crosby, 1979) cited in (Parasuraman et al, 1985). Healthcare which involve lives of patients or consumers cannot depart from this definition if indeed it seeks to offer quality healthcare.

SERVQUAL which represents service quality has been used widely in several sectors including health. It was pioneered by Parasuraman, Zeithaml, and Berry (1985) through exploratory study on what constitute quality service. It resulted in ten quality dimensions which was later revised into five generic SERVQUAL quality dimensions; reliability, assurance, responsiveness, empathy, and tangibles (Parasuraman, Zeithaml, & Berry, 1988).

The fifth dimension (tangibles) incorporates the physical environment, equipment, and the appearance of health providers (staff). The model evaluates both the expectations and perceptions of consumers, hence quality gap. However, some scholars are of the view that expectation of service quality has weak reliability but quality perception has strong reliability. Brady and Cronin (2001) asserted that SERVQUAL dimensions are reliable and essential for any study of service quality. Several literatures on quality healthcare in general often consider quality from either the perspective of consumers or providers of the service. Some scholars

also consider it as either technical or functional dimension of quality (Harrington & Pigman, 2008; Gronroo, 1984; Lin et al, 2004).

From Lehtinen and Lehtinen (1991) three service quality dimensions that is physical, corporate, and interactive exist. To them, the interactive component of quality service dimension refers to the quality arising from the interaction between the consumer and the service provider. The interactive dimension has also been known as consumer-centred view of service quality and is the most important focus of most private business operating entities in healthcare industries (svensson, 2006). According Ovretveit (1992), friendliness of service provider, timely delivery of services and effective communication are what consumers considers in the rating of quality healthcare. Similarly, Atinga, Abekah-Nkrumah, & Domfeh (2010) found in their study that good manners and gestures result in enabling environment where patient are free to seek clarification regarding treatment.

It been argued that patients with no technical lenses are not in a better position to evaluate technical quality well so it makes it imperative to benchmark this with providers' perspective of quality. Donabedian (1982) conceptualized the dimensions of clinical quality (technical quality) as the qualifications of providers, using proper and adequate diagnostic equipment, timing and systematic way of diagnosing and treating patients. Example of outcome quality measures includes mortality and complications, average length of stay etc.

2.4 Review of Empirical Literature

This section reviews empirical findings of previous studies relevant to the present study. It presents empirical findings from consumers and providers' perspectives. Under consumers' perspective, it looks at socio-demographic variables influences utilization of facility-based

childbirth services, consumer-centred care influencing facility-based delivery utilization, provider attitude and consumer utilization behaviour, and technical quality and consumer utilization behaviour. Lastly, the empirical literature presents finds of previous studies from the perspectives of providers relevant to the study, and summary of empirical findings.

2.4.1 Quality of Hospital-based Childbirth Services from Consumers' Perspective

Consumers' perspective of quality of facility-based childbirth services play a crucial role in health-seeking behaviour. Ailing and poor quality healthcare services have been seen to affect "access to service, compliance and effectiveness" (D'Ambruso, Abey, & Hussein, 2005). Similarly, World Health Organization (2000) had it that patients' assessment of care received when offered thorough attention has the ability to make healthcare delivery more responsive to patient's needs and expectation, and general effectiveness of health facility or system. According to Haddad, Fournier, Machouf, & Yatara (1998), healthcare utilization is a chronic issue for most developing countries, and is sensitive to consumer perception of quality service delivery.

The childbirth experiences by mothers in most developing countries has been characterized by physical and verbal abuses and general low quality, and Ghana is not an exception (D'Ambruso, Abey, & Hussein, 2005; D'Oliveira, Schraiber, & Diniz, 2002). Physical abuse recounted by women in some studies include slapping, hitting, or forcefully holding women down (D'Oliveira, Schraiber, & Diniz, 2002). It has been reported in some studies that sometimes a woman need to know someone in the health facility as a friend or relatives before certain level of quality childbirth services can be assured (Spangler & Bloom, 2010; Story, et al., 2012).

Parturient women experiences during childbirth services and perceptions has great impact on facility utilization and outcome of pregnancy in general. One study in Nigeria discovered that the reputation of facility and staff influenced women to use services (Alastair & Pepper, 2005) cited in (Dolamo, Konde, & Monareng, 2011). Some studies have shown that insolent, inhumane services, and services deficient of emotional support deters women from utilizing obstetric care in a health facility (Behruzi, Hatem, Fraser, Goulet, Li, & Misago, 2010; Afsana & Rashid, 2001).

In another vein, positive consumer perception of doctor and nurse/midwives' skills can improve utilization of childbirth services (Kruk, Rockers, Mbaruku, Paczkowski, & Galea, 2010; Duong, Binns, & Lee, 2004). Due to anxiety during the process of childbirth, support in the form of comfort, reassurance and praises from providers is essentially important in client's rating of quality childbirth services (Khresheh, 2010).

Again, privacy during delivery has been cited as important to expectant mothers, and this is often violated as there are no dedicated and enough delivery or labour wards (Overinde, et al., 2012; Gebrehiwot, Goicolea, Edin, & Sabastian, 2012). This aspect of the service delivery partly makes some women gravitate towards home delivery or TBAs or change provider (Overinde, et al., 2012; Gebrehiwot, Goicolea, Edin, & Sabastian, 2012).

Besides, it has been reported that some women perceive loss of autonomy and right to self-determination as a human being in the childbirth process as they experience unnecessary vaginal examinations from the staff (Magoma, Requejo, Campbell, Cousens, & Filippi, 2010; Afsana & Rashid, 2001). Worse of this, is that most of the time the staff fail to share the findings

of these examinations with them and they feel neglected by the health provider (Afsana & Rashid, 2001).

Improved staff-patient communication has been emphasized as an essential pillar towards client centred healthcare and not the usual paternalistic orientation of the provider. Family Care International and Inter-Agency Group for Safe Motherhood (1998), and Tchibindat , Martin-Prevel , Kolsteren , Maire , and Delpuech (2004) have demonstrated that human relationship aspect of care plays a crucial role in health facility utilization. Women health seeking behaviour positively correlated with improved staff-patient communication and client-centred care in Cape-Town, South Africa (Abrahams, 2001) cited in ((Dolamo , Konde, & Monareng, 2011).

Tayelgn, Zegeve, & Kebede (2011) in their study in Ethiopia shows that overall satisfaction with childbirth services in hospital was below average with only 57.5% of the women prepared to recommend the hospital to family and friends. One will be tempted to say that distance to a health facility and cost of service delivery have a bigger role to play in quality facility-based childbirth services. This assertion may be right in some respect in that these two factors can potentially affects the outcome of childbirth services. However, in a study at Amansie West District of Ghana (Nakua , et al., 2015) using qualitative study deign, it was discovered that “cost and distance” to the health facility were the two least reported problems by mothers in the study. They concluded that almost half of the women used TBA (Traditional Birth Attendants or unskilled attendants) services despite the fact that they lived closed to the facility (less than 5Km) and were enjoying free maternal delivery services as well under the Millennium Village Development project (MVDP). Reasons some of the women in that study recounted as rationale for not using facility-based childbirth services was similar to other

studies (Mwifadhi, et al., 2007; Warren, 2010) like poor attitude, verbal abuse from skilled service providers, and availability of TBAs in the community.

Generally, consumer perspectives on quality of facility-based childbirth may vary from one patient to the other and this is based on consumer socio-demographic factors. The relevant consumer socio-demographic factors have been discussed below as well as consumer-provider service interaction and consumer-centred care.

Consumer socio-demographic factors and Quality facility-based childbirth (FBC)

Maternal socio-demographic characteristics have been shown to influence perception of quality facility-based delivery service and consumer utilization behaviour. Consumer utilization behaviour has not been studied adequately in Ghana. Among some of the studies done elsewhere, maternal age, maternal education, income status and parity have been shown to influence consumer utilization behaviour on facility-based delivery. These are discussed below.

Maternal Education and Utilization Behaviour of HBCBS

In a study by Esena & Sappor (2013), they found out that all 26 respondents in their study who achieved tertiary education (100) facility-based childbirth (FBC) services but as to how prompt they presented for the service was not studied. 4.6% of those without formal education and 66.3% primary and Junior High School in the same study delivered at health facility. However, this percentage rise declines with (Senior High School) SHS leavers (18%) interest in using

FBC services but picks up with higher education like Tertiary level formal education in the same study.

Does it mean that this category with high FBC services utilization behaviour have higher risk of developing complications or is a matter of understanding how complicated the process can be? This orientation will definitely impact on timely presentation at health facility for childbirth. In one study, most patient who attend ANC and use FBC services were mostly those who realise that they were extremely at risk of developing complication.

Ahmed et al (2010), and Ensor & Cooper (2004) emphasized that secondary and post-secondary education of women have higher tendency of using more facility-base delivery services than those without. This will make them seek for information on quality-provision facility from friends, relatives and internet and consciously select best quality option.

A typical rural community study in Cambodia, (Yanagisawa, Oum, & Wakai, 2006) buttress this phenomenon in their study. They found that maternal education has strong relationship with facility delivery and women who had attain not less than seven (7) years of schooling are six time more likely to give birth at health facilities with quality systems than those without formal education.

Anwar, Sami, Akhatar, Chowdhury, Salma, Rahman, et al. (2008) in a study in Bangladesh discovered that women utilize facility-based childbirth services if they utilize antenatal care. This tends to support the fact that most ANC attendance especially when more than four visits will promote understanding on benefits of skilled delivery. However, findings from a study in

Amansie-West district in Ghana indicated that mere number of times a woman attend ANC will only have little effect on the possibility of women using FBC service if the ANC staff fail to educate mothers on dangers of not using FBC services. They also reported that out of 26 professionals in the study, all of them (100%) utilized facility-based delivery services while 66.8% of 268 non-professionals in the study delivered in health facility.

In summary, highly educated female consumers are significantly more likely to have facility-based childbirth services compared with female consumers with no education, and previous studies have highlighted this finding (Prata, Greig, Walsh, et al. 2004; Stekelenburg, Kyanamina, Mukelabai, et al. 2004).

Maternal parity and Consumer Utilization Behaviour of HBCBS

Parity refers to the number of deliveries including still births or child-births a consumer has. It has been discovered (Amoakoh-Coleman, et al. 2015) that some pregnant women experiment with their first pregnancy by choosing to deliver at home despite the fact that they may be regular antenatal attendant. Amoakoh-Coleman, et al. (2015) again discovered that parturient consumers who experience complications in their previous pregnancies were more likely to used facility-based delivery services. It was seen as preventive and thus use it (FBCBS) sparingly for delivery services.

It has been discovered in some studies that primi-parous women patronize facility-based delivery (Bell, et al., 2003; Mills, Williams, Adjuik, & Hodgson, 2008). This could probably

be due to the complication they experience during their first child-birth. Surprisingly, same authors found that primi-parous women patronize facility-based delivery services more than women with higher parity (multiparous women). The Ghana Demographic Health survey of 2003 and 2008 shows a consistent pattern with this (GSS, 2009).

Though, there is strong correlation between age and parity, Yanagisawa et al (2006) found no association between parity and facility-based delivery. However, other studies found statistically significant association between parity and modern facility-based delivery facility and that higher parity mothers tend to used Facility-Based Childbirth services less than lower parity women (Van Eijik et al, 2006; Mwaniki et al, 2002).

Maternal age, Quality of Hospital-based Childbirth and Utilization Behaviour

Maternal age refers to the age of women during the delivery or child-birth. It appears that younger age mothers tend not to utilize facility-based delivery services like those advanced in age. A study by Yanagisawa et al (2006) discovered that young women in fertility age showed a significant negative association with facility-based delivery. The Ghana Demographic Health survey 2008, showed that the age bracket 20-34 utilize facility-based delivery more (Ghana Statistical Service (GSS), 2009). Some studies have reported that older mother with high parity tend to use facility-based delivery less than younger women (Van Eijik et al, 2006; Mwaniki et al, 2002). It is therefore clear that younger age mostly 20-30yrs utilized modern FBC services more than older women.

Marital Status and Consumer Utilization Behaviour of HBCBS

Marital status may play a role in the selection of place of childbirth among parturient women. This is probably through its influence on female autonomy in decision making or through financial resources (Odo & Shifti, 2014). Single or divorced women may be poorer but may have greater independence than newly wedded women. Young women in reproductive age and have single marital status may be cared for by their family of orientation, which may encourage skilled attendance, especially for a first birth (Mekonnen & Mekonnen, 2003). On the other hand, unmarried women may be stigmatized and wish to give birth at home because they anticipate unwelcoming provider interaction. Several studies found no association between marital status and skilled attendance (Gyimah, Takyi, & Addai, 2006; Mekonnen & Mekonnen, 2003; Nwakoby, 1994), while some find married women using it less often (Onah, Ikeako, & Iloabachie, 2006; Letamo & Rakgoasi, 2003).

Maternal Income Status and Utilization Behaviour of HBCBS

Financial barrier to utilization of FBC services has been documented extensively. In view of this most developing countries where maternal deaths and morbidity is a serious problem have free maternal health services policies in place. However, women still do not use the free facility-based delivery (FBD) services because they perceived the services as of poor quality than that offered by the traditional birth attendants (Griffiths & Stephenson, 2001). Under the Millennium Village Development (MVD) project, a study conducted in Amansie West-Ghana by Nakua, Sevugu, Dzomeku, Otupiri, Lipkovich, & Owusu-Dabo (2015) reported that only 4.4% of mothers who did not utilize FBC services was due financial difficulties. However, this is not the same for persons who have sound socio-economic status and this

economic inequality impacts on maternal and neonatal deaths and impoverishment of susceptible households (Witter, Arhinful, Kusi, & Zakariah-Akoto, 2007). It is therefore common knowledge that even in the countries where fee-for services are non-existent, women still incur unofficial expenses. Borghi, Ensor, Somanathan, & Lissner, (2006) reported that parturient women were occasionally made to buy items like detergents on the ward for sterilization and decontamination of instruments, bed linens etc. The study in Amansie West district of Ghana shows that, out of 100 unemployed mothers, only 24.3% utilized FBC services while almost 30% delivered at home.

Consumer-centred Care Provision on Consumer Utilization Behaviour

Client-centred facility-based delivery services take into consideration the preference and client involvement during the health delivery process. The services are tailor-made to the preferences of the consumer. Service rendered that fall short of this is more likely to be rated as poor from the perspective of consumers. In one study in India, parturient consumers wished emotional support was given during childbirth by family members eg her mother or husband (Bhattacharyya, Srivastava, & Iqbal, 2013). In another study in South Africa, 80% of the women preferred vaginal delivery to caesarean section and sometimes some of them were bullied or forced to have instrument delivery. This behaviour obviously will not make consumers satisfied to rate service delivery quality high no matter how good the outcome of the treatment will be. This demonstrates clearly that client involvement during the care process is as important as the expected outcome by the health professionals.

In a cross-section study in Gambia, Lerberg, Sundby, Jammeh, and Fretheim (2014), majority of the respondents, (94%), delivered at home. Four percent delivered while on the way to a health facility. Again the rest of the respondents gave birth in a TBA's or someone else's house.

This implies that women often than not wait so long a time for labour to advance before seeking facility-based childbirth services (Lerberg, Sundby, Jammeh, & Fretheim, 2014). The researchers found that women were exhibiting this health-seeking behaviour partly due to the fact that TBA understood their preferences and were always willing to stay by the patients throughout the delivery process.

Provider Attitude and Consumer Utilization Behaviour

Many studies have reported that health seeking behaviour of expectant mothers in labour is influence by the attitudes of health providers. Koblinsky et al. (2006) reported that where there is no alternative health facility, women choose to give birth at home primarily due to staff attitude at the labour wards. According to the study looking at barriers to facility-based childbirth, some of the women reported of health providers using very offensive and demeaning language and sometimes ridicule them of high parity, poor personal hygiene etc. sometime some of these personnel abandon them during the labour period with unkind words and lack of informed consent to treatments as reported in Uganda (Kyomuhendo, 2003).

Health workers' attitudes regarding mistreatment is not restricted to a section of the world. This mistreatment ranges from verbal and physical abuse (Yakubu, et al., 2014; Nakua, et al.2015), to Sri (2009) neglect. Most of the existing studies are qualitative in character or design eg Sri (2009) qualitative study in Tamil.Nadu found that despite the directive by the government to allows companions in the delivery rooms by all government hospitals, most of the consumers were not aware of this right and verbal and physical abuse from health providers was still a prevailing phenomenon. Similar qualitative study was done in a catholic hospital in Central region (Yakubu, et al., 2014) of Ghana and the findings was not different. The study revealed

that physical abuse and verbal abuse had been a common practice associated with delivery at the labour ward. Both consumers recounted their ordeals that occur in the labour ward but however agreed that it was in the interest of both mother and baby. In this day and age, human rights violations no matter the circumstance can never be seen and considered as “greater good for both mother and baby”.

However, no quantitative studies have looked at how wide this phenomenon is and best possible ways of addressing the issue to make birthing memorable. One might be tempted to say that it is an issue to do with predominantly rural folks with limited alternatives as reported that OPD staff attitude is profoundly poor in rural communities than urban areas where alternatives abound (Jehu-Appiah, Aryeetey, Agyepong, Spaan, & Baltussen, 2012; Andersen, 2004). Atinga (2012) asserted that the health providers often regard the consumers as “villagers” and hence the sub-standard treatment.

Surprisingly, a study in Greater Accra region of Ghana by D'Ambruso and Abey (2005) cited poor staff demeanour as one of the rationales for non-acceptability and low utilisation of childbirth services. The women passionately expressed that they were disappointed in the inhumane, unprofessional and rude conduct of staff that characterize healthcare delivery from ‘health professionals. They vowed that, they will consciously change their place of childbirth and discourage others from using such facility if they encounter demeaning and intolerable behaviour from health professionals.

Qualitative interviews from post-natal mothers who experienced an infant death in New Delhi revealed that women felt that they did not understand what the doctor was instructing them to

do during labour which was partly due the fact that the staff disallowed the partners who could have convinced them better than the staff to be with them during the labour. (Saikia, Sehgal, Kumar-Bora, & Diamond-Smith, 2015). Another qualitative study in New Delhi with parturient women as respondents described how they spouses and mothers-in-law were yelled at and prohibited from entering the labour ward (delivery room) during childbirth (Sudhinaraset, Beyler, & Barge, 2015). Companions can play very instrumental role in the delivery process but very often left out.

In a study in Amansie-West, Ghana by Nakua, Sevugu, Dzomeku, Otupiri, Lipkovich, and Owusu-Dabo, E. (2015), they reported only 4.4 % of mothers who failed to utilize facility-based childbirth services was due to financial constraint. It is therefore important to understand why many potential mothers would still like to give birth outside healthcare centres despite the high likelihood of maternal complications and/ or death. Some of the reasons recounted by the mothers in that study include availability of a trained traditional birth attendant in their community, verbal abuse and general poor staff attitude.

Though, there is growing evidence on mistreatment that some consumers experience during birthing. Bohren, Vogel, Hunter, Lutsiy, Makh, and Souza, (2015) reported in their study that mothers 'impression about FBCB services showed that majority 317 (80.4%) liked the services rendered. However, about 19.6% were displeased about the services. For respondents who were pleased with the services, majority (50.8%) responded that the health providers were nice and affable, with (45.1%) saying they did their best. A few (4.0%) however responded that they were rude and unkind.

Many studies have shown that poor provider-consumer interaction is one of the factors that militate against healthcare-seeking behaviour of women in labour, Koblinsky et al., (2006) maintained women preferred to give birth at home because health providers use uncouth and demeaning language, mocked at parturient consumers as a result of their faded old apparel, high parity and 'unkempt appearance'.

Technical Quality and Consumer Utilization Behaviour

Technical quality which also refers to tangible aspects of service delivery that can influence consumer Facility childbirth utilization behaviour. Though, some scholars are of the view that providers assess technical quality better than consumers. Even among healthcare providers, it has been found that clinical staff appreciation of quality healthcare is different from non-clinical staff. For instance, a study in Spain by Miranda , Murillo, Chamorro, & Vega (2010) found that healthcare managers' perception of service quality was rated higher and different from patient perception of same service and that of nurses. Similarly, Nashrath, Akkadechanunt, & Chontawan (2011) found statistically significant difference in quality nursing care perception between nurses as providers and patients.

In a rural community study, Saleh (2012), found that low quality including lack of medicines, necessary equipment and skilled care providers were disincentive to healthcare utilization in general. Similarly, Kyomuhendo (2003) in Uganda discovered that, a lack of qualified trained health personnel at the primary health care level, use of foul language, neglect and poor treatment in hospital, poorly understood rationale for procedures, and health workers' views that women were ignorant, explained the reluctance of women to give birth in health facilities.

2.4.2 Health Providers' Perspective of Quality Healthcare

Health workers are of different categories. Among these are clinical staff and non-clinical staff. Clinical staff includes personnel who have 'direct contact' with patient in the service delivery process. They include but not limited to Doctors, nurses and midwives, physiotherapists, anaesthetists, paediatricians, obstetricians etc. The non-clinical staff includes administrative staff, accountants, electricians, etc. several studies have pointed out that health quality perception differ among clinical staff and non-clinical staff and likewise users (Abuosi, 2015; Miranda et al, 2010; Silvestro, 2005).

On the contrary, Alrashdi and Al Qasmi (2012) study found that there was no difference between different categories of staff regarding healthcare quality provision. (Alrashdi & Al Qasmi, 2012) in their descriptive survey involving 838 frontline staff managers and junior clinical health providers. Alrashdi and Al Qasmi (2012) found that both clinical and non-clinical rated technical dimensions as of paramount importance than other dimensions like interpersonal (except respect and dignity) dimension of patient care. Again, both group in that study considered empathy dimension as the least important among all the quality dimension healthcare.

Clinical staff like midwives and obstetricians, often than not pay special attention to outcome dimension of quality than process dimension of quality like interpersonal aspects of care (Alrashdi & Al Qasmi, 2012). For instance, in one study in Bangladesh involving health workers using mixed method, the staff identified acute under-staffing and logistics, unavailability of laboratory support, less utilization of patient-management protocols, lack of training and insufficient supervision as reasons behind the poor quality of healthcare

provision (Islam, Rahman, Halim, Eriksson, Rahman, & Dalal, 2015). Again, Islam et al.(2015) maintained that physicians inability to offer optimal health care services was due to high patients turn out.

Studies done on maternity services and on quality perinatal services have abuse at the maternity ward dominating. The views of providers have been documented on this phenomenon. In south African study, Jewkes, and Mvo (1998) midwives believed that maternity services and for that matter midwife-patient relationship is paternalistic one and that they must use whatever means to ensure social distance in such relationships.

Similarly, a study in one catholic hospital in Ghana, found that (Yakubu, Benyas, Emil, Amekah, Adanu & Moyer, 2014) midwives believed they have responsibility to ensure safe delivery of both mother and baby using all means and methods and hence usage of force (violence) in situations where woman is perceived as uncooperative. They further admitted that yelling, and slapping in labour is justifiable. In that same qualitative study midwives viewed themselves to have “mother-daughter” relationship irrespective of the age of the labouring woman (Yakubu, et al., 2014). Abrahams, D'Oliveira, Diniz, and Schraiber (2002) cited several instances that suggest that environment in maternity units were so unfriendly that women were scared to call for assistance, yell, or express their pain for fear of reprisals.

Lastly, it can be concluded that health providers often place higher emphasis on outcome and tangible dimensions of quality of maternity services than process dimension of quality of care.

2.4.3 Summary of Empirical Literature Review

The existence of facility-based delivery centres and services do not guarantee their use by women. Neither does the use of health facilities and services guarantee optimal outcomes for women. An important aspect of childbirth services has been highlighted to explain why women either do not utilize services at all or utilize them late or suffer an avoidable adverse outcome, despite timely presentation, tied to the intangible concept of quality maternal care (Hulton, Zoe, & Stones, 2000).

Perceived quality of care, has bearing on quality medical care, and it is presupposed to be an imperative on health care-seeking behaviour. A study by Thaddeus and Maine confirmed that assessment of quality of services "largely depends on people's own experiences with the health system and those of people they know". In most cases, the woman may not like the health facility protocols such as the situation where family members are not to be present around the labouring woman bed during the process, imposition of supine birthing position, and when privacy is disregard; this may result in poor perception of quality of care (Thaddeus & Maine, 1994). These unacceptable attitude of staff is likely to delay the consumer in reaching the facility since she may consider it only when complication is eminent especially in areas where there is no alternative health facility.

2.5 Theoretical and Conceptual Framework for the Study

Demand for maternity services or place of delivery has a direct relationship with Quality service provision. Yip and Orbeta (1999) found that quality has positive effect on individual's

choice. Akin and Hutchison (1999) asserted that quality is the main reason why healthcare consumers bypass the nearest cheaper public health facility to a private one.

Modern healthcare provision is such that consumers in the health consumption loop of a particular institution will leave if the quality of service fails to meet their criteria. Various dimension of quality is known to influence utilization of maternity services or the health seeking behaviour of consumers. Lavy and Qugley (1993) find in their study that treatment alternatives and its availability affect utilization of health services more than price of the services. This explains why individual may travel long distances to facilities where they may have access to alternative treatments. Within the host of factors constituting perceive quality of care, consumers make trade-offs between availability of drugs, patient-provider human relationships, technology use and availability of staff. Mwabu et al (1993) found that general availability of drugs is positively related to demand for health services.

As opined by Weaver (1995) an in-patient health-seek behaviour will be different from potential outpatient consumer, and so is dimension of quality different from one community or country from the other.

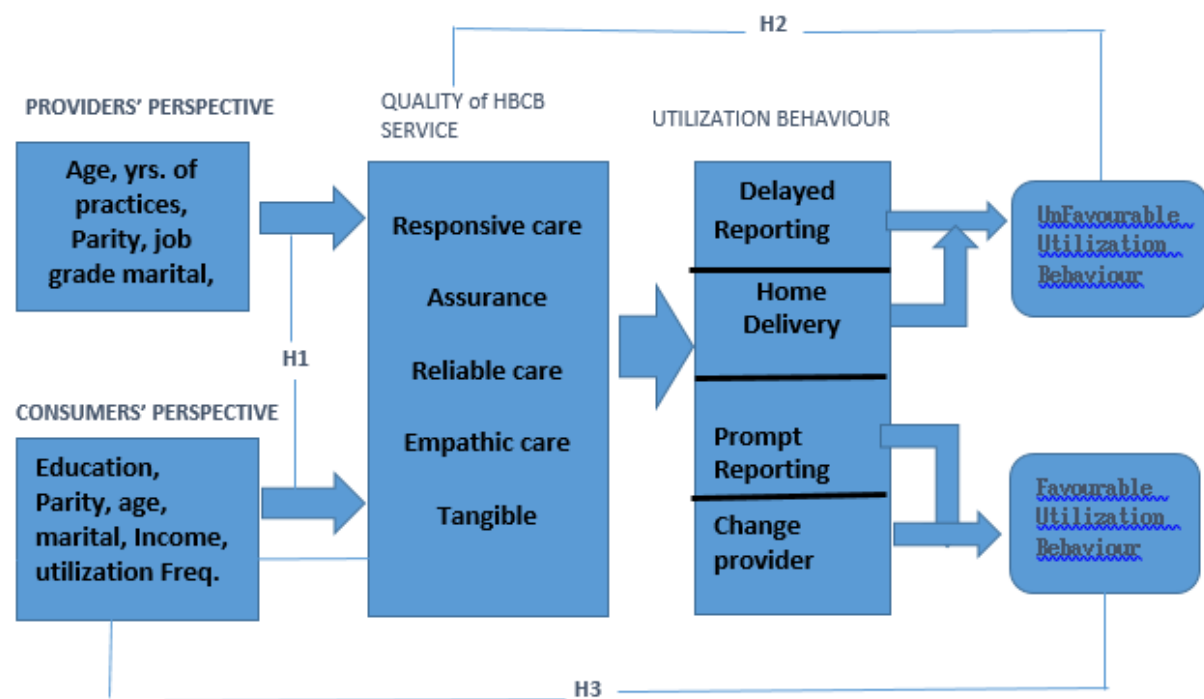
2.6 Conceptual Framework for the Study

The study was premised on modified generic SERVQUAL model comprising of five dimensions. This model has been used by several scholars (Adom, Yamoah, & Mensah, 2014; Atinga, 2012) to measure health care quality. This modified SERVQUAL dimension where only perception of quality care is measure is termed by some scholars as SERVPERF.

Only perception aspects of SERVQUAL model will be employed in the study since simultaneous use of expectation and perception makes SERVQUAL instrument weak in

reliability and validity (Brown et al, 1993). SERVQUAL model have been used in similar studies in evaluating quality of healthcare (Adom, Yamoah, & Mensah, 2014; Panchapakesan, Chandeasekharan, & Prakash, 2009). The figure below shows the conceptual framework for the study. The independent variables are five quality dimensions, sociodemographic characteristics, and the dependent variable in the study is the utilization behaviours.

Figure 2.3: Conceptual Framework



(Author's Development, 2017)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research paradigm or philosophy, research design, the sources of data and data collection method, the target population, sample size and the sampling technique. It also contains discussions on the instrument for analysis and method of analysis, validity and reliability of the instruments used, ethical considerations and an overview of the study location.

3.2 Research Paradigm

Research paradigm serves as a road map that guide researchers in carrying out scientific study and it identifies members of researchers in a specialty area of study (Patton, 1982) or the scientific community. Morgan (2007) defines paradigm as system of belief guides and directs the sort of knowledge scholars seek and how they interpret the data they gather, whereas Creswell (1998) cited in (Morgan, 2007)) sees them as a simple set of conventions that guide enquiries.

All researchers are to belong to a paradigm since paradigms shapes and directs how the study is to be conducted. Base on this, the study identifies with the positivists research paradigm based on the objectives, research questions and beliefs the researcher shares with this paradigm. Positivism is associated with French philosopher Auguste Comte as its father (Pring, 2000). Members of this world view believed that reality is stable and must be described objectively (Levin, 1988). Babbie (2001) maintained that positivism can be traced to Auguste Comte as the paradigm's root, and he perceived human beings as a phenomenon to be studied

methodologically and systematically. Positivists opine that study of social phenomena or the social world must be similar to the principle of natural science (Denscombe, 2008), and hence assume that positivism is scientific and have the following assumptions:

1. Patterns (trends), generalizations, procedure and methods, cause-and-effect issues are also pertinent to the positivist social scientists. Positivism maintains that human beings being the object of social sciences are studies based on afore-mentioned characteristics of social science study since this make implementation of study findings relatively suitable and smooth. Kothari (2004) have associated this assumption to have originated from the scientific model as such positivists approach tries to express law-like findings applicable to populations.
2. The laws that results from positivists study serves as a means of explaining the causes of observable phenomenon and measurable human behaviour. Positivism researchers like working with observable social reality; and these realities studies give birth to generalisations comparable to those by the natural scientists.
3. Positivists also maintained that objective reality exists independent of personal experiences with its own cause-and-effect relationships (Romenyi, Williams, Money, & Swart, 1998; Saunders, Lewis, & Thornhill, 2009). Base on this, positivists maintains that it is possible to adopt neutral and non-interactive, and detached position during the study (Malhotra & Birks, 2007). Such posture or assumption position the researcher as an objective analyst who would be capable to make detached interpretations from the data gathered in a value-free manner. For the same reason, positivists like an analytical interpretation of quantifiable data (Druckman, 2005). They abstract ideas of the social relationship, and are consequently linked to the precise dimensions of the social world.

4. Positivists believed that knowledge is valid only if it has empirical basis or is observable and measurable. It therefore means that a phenomenon which cannot be observed has not place in the scheme of positivists' study; could be directly or indirectly with the aid of instrument like microscope etc (Bryman & Cramer, 2005). Thirdly, De Vos, Strydom, Fouche, & Delport (2005) asserts that positivists have in their study hypotheses like the natural scientists and are submitted for empirical testing. This implies that their studies are deductive since it seeks to extract specific prepositions from general accounts of reality. This sometimes leads to construction of specific theory to explain the existing law in a particular field. Hypotheses under such studies are subjected to rigorous empirical examination before accepting, revising or rejecting.
5. Finally, positivism also entails a particular stance in relation to values. That the researcher' values are independent of the study. Thus, it is required of positivists to purge themselves of values so that it will not impair objectivity and validity of knowledge obtained (Flick, 2007).

Research approach characteristic of positivism is quantitative approach (Smith, 1983). Quantitative research approach aims at elucidating relationships or associations between two or more variables (Blaikie, 2010).

This thesis shares in all above assumptions as opine by the positivists except that generalization can be restricted to the population with similar characteristics as the study as the study area, however, the results of the study can be generalized to the whole Denkyembour district. Again the quantitative research approach was used in this study.

3.3 Research Design

Burns & Grove (2003:195) define a research design as “a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings”. This blueprint has been explained further to entail account on how, when and where data for a study will or was collected and analysed (Parahoo, 2006). Similarly, Polit & Beck (2010) maintained that research design depicts the overall process towards answering of the research questions under the study including the testing of hypothesis.

Considering the above deliberations, it is evident that this study is conducted from a positivist's perspective. All the assumptions under this perspective is applicable in this study. Since the study seek to test hypothesis and establish relationships, the explanatory research purpose, the survey method via use of self-administered questionnaires and considering time resource availability and the fact that similar study had used cross-section instead of longitudinal approach to data gathering, the study employed cross-sectional explanatory survey.

A cross-sectional explanatory survey allows a researcher to study a particular phenomenon at particular point in time in a given population. Survey approach is an approach through which a researcher obtain data on characteristics, actions, opinions of large group of people or population (Malhotra and Birks, 2007). This strategy has largely been associated with deductive research (Quantitative studies). This is a preferred research strategy when the researcher is keen in obtaining primary data for analysis on a large target population concern a phenomenon. Survey Strategy mandates that samples with characteristics that reflect those of the larger population is drawn. It also employs carefully structured and standardized questionnaire

(Babbie, 2004). Data obtained from such strategy characteristically can undergo series of statistical analysis and comparison including inferential statistics (Creswell, 2014). Besides questionnaire, structured observation and interviews can be used for survey study or strategy (Malhotra and Birks, 2007; Creswell, 2014). On the basis of the fore-going arguments, this study adopted the survey strategy with structured questionnaire administration in assessing the quality of Hospital-based childbirth services and its relationship on consumer utilization behaviour in Denkyembour District from both consumers and providers' perspectives.

3.4 Sources of Data and Data Collection Methods

There are two main basic sources of data for every research. These are primary and secondary data sources (Saunders, Lewis, & Thornhill, 2009). Primary data source is basically a data collected for the first time by a research which is non-existing in any form or state and often described as original in character (Kothari, 2004). On the other hand, secondary data source is a data collected by researcher which had already been compiled by a firm/ someone else or raw data from previous studies. In line with the research design and the phenomenon, primary sources of data was employed in this study since it is relevant to get highly reliable data in unravelling at solutions to this global phenomenon affecting the life of mothers and health institutions.

The survey questionnaires were self-administered, and this was apt because it ensures that each respondent answered the questionnaire items without intrusion from other respondents. This technique was employed because it is economical in that circumstance where large sample size is need for inferential statistical analysis. The standardized characteristics of self-administered questionnaire makes it more preferable to other methods of data collection (Saunders, Lewis,

& Thornhill, 2009). Research data collection assistants were trained and Pre-testing done to improve the reliability of the main data for the study.

3.4.1 Questionnaire Design and Administration

Based on the research objectives and specific research questions, questions were developed following the procedures outline by (Malhotra & Birks, 2007) for designing survey questionnaires.

The first step was careful synthesis of literature in areas relevant to the current study from which concepts relevant to the objectives of the present study were identified. The next step was to develop new construct or variables and their measurement items based on the literature underpinning and supporting these new variables and concepts.

Afterwards, a first draft of the questionnaire was designed followed by pre-testing involving 10 health workers, and 10 nursing mothers from Kade Child welfare Clinic. According to Fink (in Saunders et al, 2007) a minimum of ten members for pretesting is adequate. The pre-testing carried out focused on content, wording, order and difficulty in understanding question as well as ensuring practicality, suitability and reliability of each question. This helped in eliminating ambiguity like number of children and parity etc, after which final revision and discussion with supervisor was made with respect to wording and clarity of measurement items. According to Andersen's health utilization model, "Need" which included subjective and objective factors were presumed to be evident by the fact that respondents under the study were all women who use the hospital for childbirth. Again, the "Enabling" environment was partially evident to all the respondents due to the fact that the facility was present in the community and the hospital

is health insurance accredited facility that consumers were to enjoy free healthcare delivery. However economic status was evaluated as well as payment made by respondents in the facility in the course of childbirth service delivery.

The first section of the questionnaire captured socio-demographic variable like age, parity, income per week, educational qualification, years of practice, category of staff (based on Andersen's theory of behavioural model of healthcare utilization). It opines that socio-demographics of the patient will determine if an individual will utilize health services or not. The second section examines quality of childbirth services based on the five dimensions of quality in the conceptual framework of the study. The five dimensions encompassed responsiveness, assurance, empathy, reliability and tangible aspects of quality.

Reliability according to the study refers to the accuracy and consistency of service and the ability of the facility to execute the service. This was measured using four items such as “the facility insists on service free from complications in maternity services” and “the staff act timely when patient arrived at the maternity ward” for consumer. For provider reliability was measured with items such as “I have at my disposal adequate tools to carry out safe delivery”, “doctors are always available to intervene in complicated cases” etc.

Responsiveness as quality according to the conceptual framework refers to the ability to respond to consumers demands precisely and timely. This was measured using three questionnaire items such as “staff are never too busy to respond to patient's request or complaint”, staff are always available at patient's bed side to assist throughout the childbirth

process” etc for consumers. That of providers were also three items such as “staff never too busy to respond to patient’s complaints or request”, “I feel motivated to carry out my duties without being called”.

Assurance under the study refers to assurance of trust in the delivery of services. It encompasses employee ability and mechanisms in place to ensure that consumer feels safe and secure in the facility. This was measured with four items each for both consumer and provider. Questionnaire items used included “my baby and I feel safe in the delivery ward” “some staff insult me during the delivery process” etc.

Empathy aspects of quality refers the ability of the hospital and its employees to understand the feelings, expectations and challenges of consumers. This quality dimension was assessed using three items each for both consumer and provider. Eg “staff in the facility ensure patient’s privacy during the delivery process”, “staff permit relative or husband to be by patient during childbirth” for consumers while providers on that same score answers question items such as “there is enough materials to ensure patient’s privacy” “patients are free to decide whether to have caesarean or vaginal birth”.

Tangible as last quality dimension refers to the appearance of the environment, equipment and other facilities available to carry out service of high quality. It was assessed using seven dimensions such as availability of water, safe blood transfusion, financial access to care, technology apply in service provision etc. both provider and consumer answered similar

questions here (please see appendix VI and VII). However, only consumers had third section on questionnaire containing the dependent variables.

The second section variable were all measured using 5-point Likert scale with “5” as “strongly agree” and “1” as “strongly disagree”

The researcher visited the St. Dominic hospital to seek approval for the data collection from the hospital authorities before commencement of data collection (please refer to appendix IV and V for application for approval for data collection, and. approval letter respectively). data was collected from maternity ward, Neonatal and Intensive care unit in the children’s ward of the hospital, and Child welfare clinic (CWC) within and outside the hospital but within the same district on patient who delivered in the hospital within the past one year prior to data collection. The researcher approached women who have delivered in the hospital before but not beyond one year of childbirth experience, and the purpose of the study was explained to them as captured on the questionnaire (please see appendix VI and VII). Their Voluntary consent was secured either by thumb printing or signing their signature on the questionnaire. They were informed that they were at liberty to truncate the process at any time despite the fact that they had given prior consent. Only four respondents terminated the process despite the fact that they had given prior consent without adducing reasons. Such behaviours were accordingly respected. Completed questionnaires were all received same day it was administered. Respondents were made to respond independently by not sitting around the same desk while they fill the questionnaire. Same strategies were used in obtaining data from both consumers (users) and health providers in the maternity ward and staff who delivered in the hospital within the past one year prior to data collection. The data collection process started with the approval letter on 28TH March, 2017 and terminated on 18th April, 2017.

3.4.2 Population, Sample and Sampling Procedure

According to Malhotra & Birks (2007) a study's target population refers to an assembly of all elements or objects that have the characteristics and information a research is seeking, and about which inferences are drawn. As a prerequisite for sampling selection, the target population must be defined clearly (Kothari, 2004). This helps focus the sampling process and prevent drawing of irrelevant or unfit element as part of the study sample. Also, this helps the research to put the study findings into rightful perspectives. On the basis of these, the target population for this study was limited to only the female population within 15-49 years; also known as women in fertility age (WIFA) who reside in the Denkyemba district, and also health providers who work in St. Dominic hospital maternity ward or have delivered in the hospital within the past one year prior to data collection. The age bracket (15-49) females was the target population for consumers because this group forms the main reproductive age and for which most researchers who have studied facility-based delivery have used (Esen & Sappor, 2013; Yanagisawa, Oum, & Wakai, 2006; Lerberg, Sundby, Jammeh, & Fretheim, 2014; Lavizzo-Mourey & Mackenzie, 1996; Kyomuhendo, 2003). The district has a total population of 78,841 representing 3.0% of Eastern region's population as at 2010 with annual population growth rate of 2.4% (GSS, 2014). The WIFA (15-49yrs) accounts for 24% of the total population (GSS, 2014). By arithmetic, the total population as at 2016 is estimated to be 90897. The total population for the 15-49years female age is 24% of the total population as per the GSS population census report, 2010 (ie 23,434). Health workers in the maternity facility facilities is 100 including ward assistants. Though similar studies have used Yamane sampling determination formula 1967 which is very useful but this appears to be too old. Cochran's sampling determination formula have been examined by some scholars not to differ significantly from that of Yamane 1967 in sample size determination. This study employed the

Cochran's (1977) sample size determination formula for known (finite) population size given by:

$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

where the infinite population sample size is given by

$$n_0 = \frac{z^2 pq}{e^2}$$

$$q = 1 - p$$

Population variability unknown is assumed to maximum (50%) hence $p = 0.5$ and using 95% confidence level, the margin of error (e) = 0.05

n_0 refers to infinite population sample size

n refers to adjusted or required sample size for the study

N refers to the known population size

Z refers to the critical value of the confidence level (1.96)

P refers to the estimated proportion of an attribute present in the unknown population size.

By the formula, sample size for consumers were calculated as follows:

population of interest were women in fertility age (WIFA) residing in the Denkyembuor district

$$WIFA = 23,434$$

$$n_0 = \frac{(1.96)^2 (0.5)(0.5)}{(0.05)^2} = 384.16$$

Therefore, Consumer sample Size becomes;

$$n = \frac{384.16}{1 + \frac{(384.16 - 1)}{23,434}}$$

= 377 consumers as respondents was rounded up to 400 because of response rate (94.25%).

The providers with response rate of 90% was rounded up to 80. This response rate allowance was evident during the pilot study that preceded the main study. This allowance was to increase the reliability and validity of the findings of the study making generalization valid which is at the heart of positivism. The final write-up therefore made use of 377 consumers as respondents or adjusted sample size, and 72 providers as adjusted sample size for analysis.

For health providers' sample size using the same formula

Estimated population of nurses working in the maternity wards and staff who delivered in the hospital within the past one year prior to data collection = 100

$$n = \frac{384.16}{1 + \frac{(384.16 - 1)}{100}}$$

= 77 Health providers as respondents, because of response rate allowance 3 was added to the figure to make it 80 respondents.

Simple random sampling was used in selected respondents for the study. With this all members presence in the sample frame have equal chances of being selected for the study. This means that sample chosen is more likely to representative of the population of interest and this contributes to validity of statistical conclusions emanating from the study. lottery method was used to sample respondents both providers and consumers (independently) for the study.

Three (3) weeks was used for data collection for the study. Thirty (30) respondents were sampled from consumers who visited any of the post-natal clinic or Child Welfare Clinic

(CWC), and maternity ward. At the CWC, mothers who gave birth at St. Dominic hospital within the past 12 months and have come for services have their names registered in the CWC book after their prayer and general health education session. This unique serial registration numbers were entered on small pieces of papers to serve as identifiable mini-population. This pieces of papers with numbers were put in plastic bowl and thoroughly mixed. A member of the mothers was asked to pick one of the papers by closing the eyes and not facing the direction of the bowl containing the papers till the required sample size was attained. Selected respondents from this lottery process were the interview using the questionnaire.

The same sampling principle was applied in sampling 80 respondents from health providers in the hospital's maternity and among those staff who delivered in the hospital within the past one year prior to data collection.

3.4.3 Instrument for Analysis and Mode of Analysis

The study adopted deductive method of data analysis due to the fact that hypotheses tested were based on review of extant literature on healthcare utilization behaviour and quality healthcare. The units of analysis were the healthcare consumers who gave birth in the St. Dominic hospital, and the individual staff as care givers or providers. This unit of analysis agrees with literature that providers and consumers are in a better position to evaluate quality of Hospital-based childbirth services. The instruments used in analysing the data gathered are computer, and Statistical Package for Social Science (SPSS), version 22.0. Questionnaires were coded and data entered into the analytical software (SPSS) version 22.0. Data screening was done to all variables for missing variables, inconsistencies for wrong input scores rectified before carrying out the main analysis.

As opined by Pallant (2011) that data must be subjected to descriptive statistics before proceeding with any other forms of analysis, the descriptive analysis was carried out on the means and standard deviations and standard errors of the various variables in the data set. Independent two sample t-test was carried out on the first research hypothesis after the means for two categories of respondents were determined. Assumptions of homoscedasticity tested for the data set as well as normality tests were done. Binary logistic regression was carried out to ascertain the relationship between the dependent variable utilization behaviour (favourable, and unfavourable behaviour intention) and quality Hospital-based childbirth services from the perspective of consumers alone. This called for recoding of the data before proceeding with the binary logistic regression. Because socio-demographic characteristics are known to determine utilization of healthcare from Andersen's behavioural model of health service utilization (Andersen, 1995), these variables were controlled for in the binary logistic regression establishing the relationship between Utilization behaviour intentions and quality of HBCBS.

Subsequently, for the last objective, binary logistic regression analysis was carried out to establish the relationship between the socio-demographic variables in the study and consumer utilization behaviour intentions.

3.5 Validity and Reliability of Instrument

Validity refers to measures taken to ensure that the tools to use in carrying out the study really measure what it intend measuring and nothing else. Reliability refers to results obtained by having repeated measures by same researcher or different researcher using same instrument. According Pallant (2011) reliability refers to the extent at which a scale's measurements are free from random errors. Several ways exist in measuring or ensuring reliability and validity.

However, the most frequently used method for reliability is the use of cronbach's alpha (Cronbach, 1951).

Pre-testing of instrument is one of the method used in ensuring validity and reliability.

The questionnaire was piloted or pre-tested using 20 respondents; 10 maternity care users and 10 midwives in Kade Government hospital, a hospital in neighbouring district to the main study setting. Prior this pilot study, training was organized for five data collection assistants which enhanced reliability during the pre-testing. They were trained on topics such as research ethics, data collection procedures and the importance of valid data to the study. The same respondents in the pilot study were made to answer two of same questionnaire within one-hour interval of first and second interview to ensure reliability. This reliability test is known as Test-retest reliability test. A statistical comparison was made between participant's test and re-test scores.

Again content reliability test was carried out to determining if indeed the instrument adequately covers all the content of the study objectives with respect to all the variables under the study. Face validity test was done to determine the content reliability by asking experts like gynaenacologist and supervisor and colleagues' opinion on whether the instrument measures the concept intended to.

Data obtained from the pilot study was coded and entered into SPSS and Cronbach's alpha which is the most common test used in determining internal consistency of the instrument was done yielding a value of 0.76. In this test, the average of all correlations in every combination of split-haves is determined which is within 0 and 1. An acceptable reliability score value is one that is 0.7 or higher (Cronbach, 1951)..

3.6 Ethical Consideration

This study had carefully considered the rights and dignity of respondents through the following measures. The researcher obtained permission from the St. Dominic hospital's authorities (please refer to Appendix IV and V) with copy of data collection instruments, copy of the research proposal for the study and permission to collect data letter. Respondents were told that participation in the study was voluntary, and at any point in time, one is free to opt out from the study without consequence to treatment she and her relatives receive from the facility. No respondent was allowed to write her name on the questionnaire use for data collection. They were also assured that no part of the information obtained from them (respondents) will be disclosed without prior permission from them. Finally, the results of the study will be communicated to the facility for quality facility-based delivery services, and copy will be made available to anyone who wish to have a copy of the findings.

3.7 Overview of Study Location

The study was carried out in Denkyembour District precisely St. Dominic's Hospital and child welfare clinics in the district. Denkyembour district is located at the south-western corner of Eastern Region and shares northern boundary with Kwaebibirem and Akwemans Districts, and to the south by West Akim municipality, and to south-west by Birim Central municipality. Until 9th February, 2012, the district was part of Kwaebibirem district. The district has only two town councils and three area councils namely Akwatia, Boadua, Oseawuo-Takrowase, Mmo-Dwenase, and Okumanin. Akwatia is the district capital with the only two hospitals the district has. The dominant ethnic groups are Akyems, followed by Ewes and Krobos. The district has some landmark areas like Oil Palm Research Institute,

University of Ghana Agricultural Research stations and the defunct Akwatia diamond mines. Farming, small-scale oil palm processing mills, mining are the main economic activities in the town. The district has both diamond and Gold deposits with only one senior high school.

Figure 3.1: Map of Denkyembour showing Health Facilities Distribution



(Source: Denkyembour health directorate, 2017)

3. 8 The Study Setting

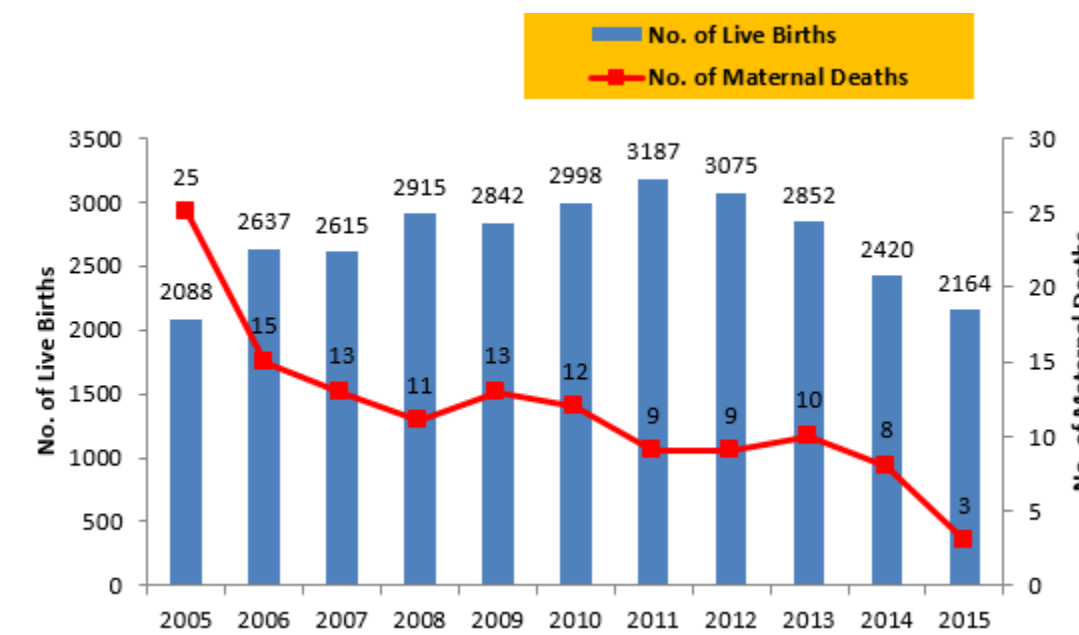
The study setting was St. Dominic Hospital's Maternity and its Neonatal and Intensive care unit, and Child Welfare Clinics in the Denkyembour district. The hospital has only one competitor, the Great consolidated diamonds limited hospital. The hospital was founded by the Dominican sister from Germany in 1960. Presently, the hospital is managed and controlled by

only Ghanaians and it is under the Koforidua Diocesan Health service. The management team comprises of the medical superintendent, the hospital administrator, the health service administrator, the nursing administrator, the clinical coordinator, and the financial controller. The hospital is a member of Christian Health Association of Ghana (CHAG). The hospital provides 24hour services, and it is health insurance accredited facility for which health insurance subscribers are to enjoy exemption in cash and carry delivery of services. The hospital provides array of medical services including Dental, eye, obstetric, physiotherapy, mortuary services and laboratory services just to mention a few.

The hospital which is catholic mission hospital, operates as district hospital in the interim since the district has not Government or “public hospital”. The hospital received support from both foreign partners in either cash, medical equipment, medical service delivery, and support from the Government of Ghana in the form of payment of salary of most of the workers of the facility. The hospital has a total staff population of 439 and out of this 183 belongs to the nursing and midwifery profession. Out of these, 29 are midwives, 100 general nurses and the rest are ancillary nursing staff. The hospital has five theatre rooms but three are fully equipped with three (3) Nurse anaesthetists that all the departments share. The maternity ward is a 54 bedded facility with only four designated labour beds. They have medical house offices, physician assistants and general practitioners who work occasionally at the department. The obstetrics and gynaecology department has four (4) obstetricians including consultant

83 percent of the hospital’s staff are on Government of Ghana payroll. The figure below is a snapshot of the hospital’s Obstetric profile or performance from 2005 – 2015.

Figure 3.2: 10-Year Obstetric Performance Profile of St. Dominic Hospital



(Source: Biostatistics Dept., St. Dominic Hospital)

The diagram indicates that the hospital carries out not less than 2100 births by annum and maternal mortality is becoming a chronic problem. Who is next to die? Every life must count.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter presents the analysis and discussion of the findings of the study. The empirical data collected was thoroughly examined under the lens of the research objectives and the hypotheses underpinning them.

4.2 Presentation and Data Analysis

A preliminary background descriptive statistics on the respondents is presented followed by the three main research questions of the study that were used in achieving the research objectives of this piece of study. 480 questionnaires were self-administered to two categories of respondents; healthcare consumers and healthcare providers from 28th March, 2017 - 18th April, 2017. Out of 480 questionnaires distributed, 400 went to consumers and 80 to health providers. Only 377 was received as valid for analysis from consumers representing 94.25% response rate, and 72 questionnaires were received from health providers as valid for analysis representing 90% response rate. Brief comparative analysis was presented on few instance about response from the categories of respondents. The chapter ends with summary of the chapter.

4.3 The Demographic Background of Respondents in the Study

This section presents a snapshot of the socio-demographic profile of respondents who partook in the study. The respondents were profile according to age groupings, educational qualification or staff category, average weekly income, Parity, marital status, number of times a respondent has used the facility for childbirth services (for consumers only). The tables 4.1-4.3 below provide the results of the demographic statistics obtained from the study.

Table 4.1: Age and Marital Profile of Respondents.

Category	of	Measurements	Frequency	Percent
Respondent	Profile			
Consumer	Age	15-19yrs	28	7.4
		20-25yrs	78	20.7
		26-29yrs	83	22
		30-35yrs	85	22.5
		36-40yrs	65	17.2
		41-49yrs	38	10.1
Provider		26-29yrs	3	4.2
		30-35yrs	43	59.7
		36-40yrs	24	33.3
		41-49yrs	2	2.8
Consumer	Marital status	Single	35	9.3
		Cohabiting	104	27.6
		Married	225	59.7
		Widowed	11	2.9
		separated/ Divorced	2	0.5
Provider		Single	17	23.6
		Married	55	76.4

N: consumer=377, provider= 72

The study respondents were made up 377 consumers, and 72 healthcare providers (either worked in the maternity unit or had delivered in the maternity unit within one year prior to data collection). Out of the sampled consumers, most of them (85 respondents representing 22.5%) were within the age bracket 30-35years followed by 20-25yrs age group (78 respondents representing 22% of consumer sample). The age group with smallest representations were 40-49years and 15-19years accounting for 10.1 % and 7.4%.

In other words, teenagers and those above 40years were few. And this might be due to the fact that women above 40 years are often inching towards menopause or stoppage of childbirth.

Similarly, of the 72 health providers sampled under the study, majority (43 respondents representing 59.7%) of them were within 30-35 years followed by 36-40years (24 respondents representing 33.3%). The age group with the least representation was 26-29yrs (3 respondents representing 4.2%) respectively among the health providers. This indicates that the facility has a vibrant labour force but as to whether this will translate in quality service delivery will unfold later in the write up.

However, 23.6% (17 respondents) of health providers were unmarried as against 9.3% consumers (35 respondents) of with same status. None of the health providers had cohabitating status while 27.6% (104 consumers) were cohabitants. It is not surprising to have high percentage (59.7%) of consumers married since the phenomenon which is childbirth is mostly a product of marital union. It therefore stands to reason that the respondents who have single marital status were few. Marital and cohabitation status accounted for 87.3% (329 respondents) of the consumers in the study. Again, majority (55 respondents representing 76.4% of the provider category) of the providers were married and on the surface value it is expected that they will understand issues to do with childbirth better.

This indeed reflects a true representation of the study population in terms of age and marital distribution since it has similar values as the Ghana Statistical service population survey 2010 for the study location. The study revealed that most of the health worker (67 respondents representing 93% of the providers' category) were within 30- 40years age bracket.

Table 4.2: Education and Income per week profile of Respondents

Category of Respondents	Profile	Measurements	Frequency	Percent
Consumer	Educational level	No Formal Educ.	51	13.5
		Basic education	204	54.1
		Secondary	87	23.1
		Tertiary	35	9.3
Provider	Job grade	ward assistant	9	12.5
		General Nurse	19	26.4
		Midwife	24	33.3
		Gynaecologist/ GP	7	9.7
		Other Personnel	13	18.1
Consumer	Income /week (GH cedi)	Below 50.00	69	18.3
		50-100.00	102	27.1
		101.00- 200.00	75	19.9
		201.00- 400.00	95	25.2
		Above 400	36	9.5
Provider		201.00- 400.00	11	15.3
		Above 400.00	61	84.7

N; Consumer = 377, Provider = 72

Majority (204 respondents representing 54.1%) of the consumers have basic education, and those with Tertiary, and no formal education were 35 respondents representing 9.3% and 51 respondents representing 13.5% respectively. The rest of the consumers had secondary education. The health providers were generally midwives, Gynaecologist and general

Practitioners (GPs), general nurses, ward assistants and other health providers. Most of the health providers (24 respondents representing 33.3%) were midwives followed by General nurses (19 representing 26.4%). The smallest group among the health providers were Gynaecologists and General Practitioners (7 respondents accounting for 9.7% of health providers in the study). Only 12.5% (9 respondents) of the health providers in the study were ward assistants.

Majority of the health workers (61 respondents representing 84.7%) earn above GH cedi 400.00 as weekly income while minority of the health providers (11 health providers representing 15.3%) earn between GH cedi 201- 400.00 per week. 25.2% consumers (95 respondents) earn GH cedi 200-400.00 per week. 27.1% consumers (102 representing) earn GH cedi 50- 100.00. Consumers earning below GH cedi 50.00 per week were 69 representing 18.3%. However, consumer earning above GH cedi 400 .00 were 9.5% (36 respondents).

Table 4.3: Parity and HBCB utilization profile of Respondents

Category-of Respondent	Profile	Measurement	Frequency	Percent
Consumer	Parity	1-2	178	47.2
		3-4	137	36.3
		5-6	45	11.9
		7-8	12	3.2
		9 and above	5	1.3
Provider		0	15	20.8
		1-2	43	59.7
		3-4	14	19.4
Consumer	Freq. of using SDH for childbirth	1	184	48.8
		2	93	24.7
		3	54	14.3
		4	27	7.2
		5	19	5
Provider	Years of Practice	1-3	15	20.8
		4-7	27	37.5
		8-12	30	41.7

N; Consumer =377, Provider = 72

From table 4.3, consumers with 1-2 parity accounted for the highest percentage of 47.2% (178 respondents) while same parity group accounted for the highest 59.7 (43 respondents) as well for health providers. This was followed by parity 3-4 group for consumer (137 respondents

representing 37.3%), and provider with no or zero Parity was 20.8% (15 respondents). Consumers with the highest parity (9 and above) were only 1.3% (the smallest group with 5 respondents).

Among the 377 consumers, those who have delivered in the hospital on five occasions were 5%, (19 respondents) and consumers who were first time users of childbirth services in the St. Dominic hospital were 48.8% (184 respondents)

The last segment of measurement on the table assessed the number of years a health provider had been rendering healthcare services. Providers with 8-12years of service was 41.7% (30 respondents) and those with 1-3 years was 20.8% (15 respondents).

The mean parity for consumers was 2.9 which is slightly below the total fertility rate (3.4) for the district in 2010 (GSS, 2010).

4.4 Objective One: Evaluate the Quality of Hospital-Based Childbirth Services

This was evaluated using descriptive statistic on the various questionnaire items, followed by descriptive statistics based on the five quality dimensions of the conceptual framework for the study. Lastly inferential statistic was done to determine if statistical significance existed in the difference between consumers and providers' mean quality of HBCBS.

Descriptive Statistics

For research involving human participants, scholars suggest the need to first subject the data to descriptive analysis before any further data validation and analysis (Hair, Black, Barbin, & Anderson, 2010; Pallant, 2011). These descriptive statistics include the mean, standard deviation, range of scores, skewness and kurtosis. Table 4.4 below displays the descriptive

statistics of the variables used in survey instrument particularly based on mean results of each questionnaire item. Since the questionnaire were scaled 1-5 (from strongly disagree to strongly agree with 3 being neither agree nor disagree), the mean values here indicate the extent to which the respondents disagreed or agreed with the statements in the questionnaire. From the table the highest mean for providers was 4.28 (Doctors are always available at the unit to intervene in complicated deliveries) while their lowest was 1.42 (some staff slap my thigh during the delivery process). The 21 quality variables displayed in Table 4.4 below represents the components of the 5 constructs of quality Hospital-Based childbirth services depicted in the conceptual framework for the study.

As indicated by some scholars (Atinga, 2012; Adom, Yamoah, & Mensah, 2014), patients tend to trust the reliability of the service when there is availability and committed staff as well as logistics. The consumers recounted that though, staff act timely when patient arrived at the facility for delivery or childbirth. Consumers on average answered that they experience error free or no complication (mean 3.47) whereas providers think that tools they have at their disposal to carry out safe delivery is somewhat inadequate (mean = 3.96). This is nowhere near perfection, there is the need for improvement. The staff including doctors are always available at the maternity ward to intervene in complicated childbirth as both consumers corroborated this account (consumer mean 3.66; provider 4.28).

However, the staff were of the opinion that in- service training they receive is not regular (mean = 3.40) whereas patients average rating for timely response to complaints when lodged was 3.34 indicating that more needs to be done in that regard. Staff believed that staff strength is inadequate as they disagree on average (mean = 2.65) to the statement that “the facility has enough staff” but consumers are of quite contrary opinion (mean= 3.57). While staff respond

to patient promptly when they arrived at the facility, the staff were of the view that, staff are never too busy to respond to patients' complaints (mean = 3.76), consumers disagree (mean = 2.96).

Surprisingly, patients rating of staff availability at bedside was 2.90 which was very abysmal and staff corroborated this by rating the level of motivation to carry out their duties to be 3.46 on average. On the account of insults and verbal abuse consumers who go to give birth experience, consumers did not rule such incidence out outright. Consumers (physical abuse mean= 2.42; verbal abuse 2.47) indicated that verbal and physical abuse on labouring women is a rare incidence at St. Dominic hospital. The health providers indicated that they have never witnessed incidence of abuse either verbal or physical intention or unintentional (physical abuse mean 1.42; verbal abuse mean 1.74).

The consumers agree (Mean= 4.38) that the facility has adequate water supply, and monies paid are always receipted (mean= 4.32, agree). The health providers equally agree to these questionnaire items. This shows that the facility is ensuring good accountability systems.

Both consumers and providers agree that there is access to blood transfusion service at all time in the facility (mean; consumer = 3.62, provider = 4.24). Providers and consumers agree that the facility uses modern equipment in carrying out childbirth services (mean; consumer= 3.55, provider= 3.75). Though staff believed that materials to ensure adequate privacy was somewhat inadequate, patient's experiences and evaluation was not too different from health providers. This assertion was supported by both consumers and providers disagreeing that the facility allows husbands/ partners to be by their wives or partners during the childbirth process (consumers mean= 2.02, provider mean 2.92).

Despite all these challenges, both consumers and providers are of the view that respect for patients' preference remains supreme in their interactions during childbirth as providers responded that patients are free to decide whether to have a caesarean section or vaginal delivery (mean= 3.99) whereas consumers responded that staff somewhat respect patients' believes and emotions during childbirth (mean= 3.39).

On the whole, both consumers and providers responded favourably to all the questionnaire items. However, the table 4.5 suggests that providers rate themselves higher than consumers except some few instances like staff strength, verbal and physical abuse.

Table 4.4: Descriptive Statistics on Independent variables

Quality dimensions	Variables for the various dimensions	CONSUMER MEAN	PROVIDER MEAN
Reliability	Experience of error free or no complications/ I have at my disposal adequate tools to carry out safe delivery	3.47	3.96
	Staff sincerity in rendering care / Doctors are always available at the unit to intervene in complicated deliveries	3.66	4.28
	Staff act timely when patient arrives at the Ward / there is good working relationship between staff of all categories in the mat. Ward	3.36	4.19
	Staff act timely when patient lodge complaint/ I receive regular in-service training from my employers	3.34	3.40
Responsive	Staff never too busy to respond to patient's request	2.96	3.76
	Staff is always available at my bed side to assist me throughout the delivery process/ I feel motivated to carry out my duties without being called	2.90	3.46
	Most of the staff explain procedures to my understanding / I explain procedures and share findings of examinations with patient at all times	3.44	4.21
Assurance	My baby and I feel safe at the delivery ward / there is adequate security on the ward for both patients and staff	3.81	3.97
	some staff slap my thigh during the delivery process	2.42	1.42
	some staff insult me during the delivery process	2.47	1.74
	My or patient's relatives feel welcome to the facility	3.87	4.24
Empathy	staff in the facility ensure patient's privacy during childbirth / there is enough materials to ensure patient's privacy during childbirth process	3.46	3.68
	Staff permit my husband/ relative to be by me during delivery	2.02	2.92
	Staff respect my beliefs and emotions during the delivery process/ patients are free to decide whether to have C-section or vaginal delivery	3.39	3.99
Tangible	Delivery ward is clean and appealing at all times	3.47	4.25
	Staff use modern equipment in the delivery process	3.55	3.75
	The facility has enough staff	3.57	2.65
	The facility has adequate supply of water	4.38	4.15
	Despite being a NHIS subscriber, one pays for some services like lab test	4.34	4.25
	Monies paid are always receipted	4.32	4.39
	Access to blood transfusion service at all times	3.62	4.24

N; Consumers=377, Providers=72

Now the question is “What is the level of quality Hospital-based childbirth service in Denkyembour district from consumers and providers’ perspective”. The five quality

dimensions were used in assessing this critical aspects of healthcare service. Each items under each quality dimension were Computed into absolute scores based on how positive the statement was made and the Likert's response that goes with it. Reliability has four individual items with a total score of 20. Responsiveness, and Empathy had 15 score each as their total score since each dimension had three items under it. Again, in a similar vein, Tangible with seven items had a total score of 35, and Assurance with four items had a total score of 20. The table below shows the comparative mean score of each dimension by the independent groups.

Table 4.5: Quality of HBCBS based on the Five Quality Dimensions

Category	Dimensions	Mean	Std. Deviation	Std Error
(Respondents)				
Consumer	Reliability	13.84	1.947	.100
Provider		15.83	2.096	.247
Consumer	Responsiveness	9.30	1.872	.096
Provider		11.43	1.500	.177
Consumer	Assurance	8.70	1.469	.076
Provider		7.13	1.331	.157
Consumer	Empathy	8.87	1.506	.078
Provider		10.58	1.676	.198
Consumer	Tangible	27.25	2.134	.110
Provider		27.67	1.854	.218

Consumer; N= 377, Provider; N= 72

Table 4.5 indicates the mean, standard deviations and standard errors of the individual five quality dimension scores with respect to consumer and health provider. Apart from assurance that the consumer means score was higher than the provider (8.70 as against 7.13) the remaining quality dimensions' score were scored higher by the provider than the consumer. The difference between the reliability score was 1.99 in favour of the provider (15.83-13.84). However, the difference between provider and consumer mean score on responsiveness was higher (2.13) than all the dimensions (11.43- 9.30). Empathy was not too different from responsiveness score. The difference was 1.71 with provider scoring itself 10.58 and consumer having a mean score of 8.87

Though tangible was scored higher (27.67) than consumers (27.25), the difference was the least among all the quality HBCBS dimensions (0.42).

Apart from reliability dimension that about 95% (SD=2.096) of the response for providers centred around the mean, the remaining dimension has about 70% (SD less than 2) of the response of the provider around their mean score.

Similarly, apart from tangible that about 95% (S.D= 2.134) of the response for provider centred around the mean the remaining dimension has about 70% (SD less than 2) of the response of the provider around the mean score.

Table 4.6: Overall Quality of HBCBS among Consumers and Health Providers

Category of respondent	Mean Quality	Std. Deviation
Consumer	67.9602	4.55533
Provider	72.6389	4.23036

Consumer N = 377, Provider = 72

Now according to table 4.6, the overall quality of hospital-based Childbirth service in St. Dominic hospital from the providers' perspective was higher (mean= 72.64) than consumers (mean= 67.96) perspective. It can therefore be concluded that the level of quality of HBCHS is different among the users (consumers) and providers (staff). The magnitude of the quality of hospital-based childbirth services gap between consumers and providers was 4.68 (72.6389-67.9602).

H1: There will be a significant difference between providers' and consumers' perceive quality of hospital-based childbirth services.

H0: There will be no significant difference between the means of Quality HBCBS of providers and consumers.

The independent samples t- test was used in testing the hypothesis as indicated below. However, the following assumptions of t-test were met as shown in Appendix 1.

Independent T-test

Assumptions under the independent sample t- test of means

1. The data or scores must be independent of each other. All respondents were made to answer the questionnaire without carrying them home or from the site of data collection. Persons with no interest in the study were not involve in the self-administration of questionnaires. Health providers' questionnaire administration was independently done without influence from other personnel. This measure besides others qualifies the data to assume independence.
2. The dependent variable must be distributed normally within all the two groups under the study. Test of normality of the dependent variable quality of hospital-based delivery was done using Shapiro-Wilk test of normality as shown in Appendix 1. From this test the sig (p value = 0) value was compared to a priori alpha level (level of significance of the statistic: 0.05). A determination based on the rule: reject the null hypothesis when p-values is less or equal to alpha (0.05), but retain the null hypothesis when p-value is greater than the alpha value. Since the p- value was less than 0.05, the null hypothesis was rejected and concluded that the independent variable was distributed normally between the two groups of respondents.
3. Assumption that the variances in the two groups should be equal (Homoscedascity). From table4.6, the variances of the two means are slightly different on inspection and in such circumstance Levene's test for unequal variances in testing for homogeneity of variances is applicable. The hypothesis here was ($H_0: VAR1 = VAR 2$). Variance for consumers, and providers under the study was slightly different. That was 4.555 and 4.230 respectively. In view of this, the Levene's test of variance assumed not to be equal was applicable. Pagano (2004) asserts that if sample-size 1= sample-size2 and the size of each of sample is equal to or greater than 30, the t-test for independent groups may be used without appreciable error despite moderate bleach of normality

and/ or homogeneity of variance assumptions. Tabachnick & Fidell (2007) opine that variance can be considered to be different or not homogenous when one group's variance is 4-5 times larger than the variance in the other group. When extreme violations of variance homogeneity and normality occurs, then Mann-Whitney U (non-parametric test) may be used.

Table 4.7: Independent Samples T-test

Levene's test of homogeneity of variance, and t-test of equality of means						
	F	Sig.	T	Df	Sig.(2-tailed)	Mean difference
Equal-variances assumed	.485	.486	-8.074	447	.000	-4.679
Variance-assumed not assumed			-8.491	104.956	.000	-4.679

Consumers N= 377, providers N= 72

Since the F- value 0.485 on the Levene's test for equal variance with p – value (p-value =0.486) greater than alpha of 0.05, we fail to reject the null hypothesis that there is no difference, hence conclude that there is no significant difference between the two variances. This shows that the assumption of homogeneity of variance was met. Therefore, the equal variance assumption can be used in concluding on independent samples t-table output as shown in table 4.7. From this table, it can be concluded that, the P-value (0.000) is less than the alpha value of 0.05 with t= - 8.074 in a two tailed test, so the null hypothesis is rejected and the alternative hypothesis is supported. In the light of this it can conclusively be said that difference between provider and consumer level of quality of HBCBS is statistically significant at the 95% confident interval.

The Effect size

This is given by the formula

$$\text{Eta Squared} = \frac{t^2}{[t^2 + (N1 + N2)]}$$

Where Eta square means effect size

t² means the square of t-values obtained from statistical test

N1 means sample size for first category of respondents

N2 means sample size for second category of respondents

$$T = -8.074 (t^2 = 65.189476)$$

$$N1 = 377$$

$$N2 = 72$$

$$\text{Eta Squared} = \frac{65.189476}{[65.189476 + (377 + 72)]} = 0.126781$$

According Cohen (1988) 0.01= small effect, 0.06= medium effect, 0.14= large effect

From above it can be concluded that the effect is near large than medium (0.13)

4.5 Relationship Between Utilization Behaviour Intention and Quality of HBCBS

This research objective was achieved using a binary logistic regression by examining the relationship between quality of hospital-based childbirth service and consumer utilization behaviour intentions. The research questionnaire as well as the conceptual framework had four exclusive and exhaustive categorical variables as follows: Home delivery, Delay in seeking hospital-based childbirth services in the same hospital, Report promptly to the same hospital for childbirth services, and change the provider. The four categorical variables were recoded into two categorical (binary) variables; home delivery, and delay in seeking childbirth serves

in the same hospital were recoded as unfavourable behaviour intentions (“0”), and the remaining two as Favourable behaviour intention (“1”). Education level of consumers were recoded as “Basic education” =1” for those with basic education and no formal education. “Higher education” = 0” as code for secondary and tertiary education. Age categories of consumers recoded into 15-29yrs as “Young women in reproductive age= 1”, and 30- 49years as Elderly women in Fertility age= 0. Marital status was also recoded to “Unmarried =1” for cohabitating, divorce/ separated, widow and single, whereas “Married=0” was for only those married. Income was recoded as Low-Income Earners (Earning GH Cedi100 and below) =1, and High-Income Earners (those earning GH Cedi 101 and above per week) = 0. For variable coding refer to Appendix II and appendix III. Binomial logistic regression was carried out as below. Since the hospital was national health insurance accredited facility that was expected to allow consumers enjoy fee exemption for service received, income was not considered as a controlled variable in finding the relationship between utilization behaviour intention and quality of hospital-based childbirth service. However other sociodemographic variables under the study were all used as confounders.

Assumptions under binary logistic regression are that at least the dependent variable must be binary categorical variable, with one or more binary independent (predictors) variables and or without numeric independent variables.

The binary logistic equation is given as follows:

Fav. Util. behav. Int =

$$\frac{e^{-1.945 \text{ Age}(1) - 1.615 \text{ Marital}(1) - .097 \text{ Edu}(1) + .090 \text{ Util freq} - .756 \text{ Parity} + .037 \text{ quality} + 8.160}}{1 + e^{-1.945 \text{ Age}(1) - 1.615 \text{ Marital}(1) - .097 \text{ Edu}(1) + .090 \text{ Util freq} - .756 \text{ Parity} + .037 \text{ quality} + 8.160}}$$

Where Fav.util intention is the Favourable intention toward Hospital-Based Childbirth Services

Age (1) represents YWIFA (Young women in fertility age)

Marital (1) represents unmarried

Edu (1) represents Basic Education

Util. freq represents utilization frequency for Hospital based childbirth

Quality represents Overall quality of Hospital-Based Childbirth Service

e is the natural log (Approximately 2.72)

8.160 is the constant of the equation

Table 4.8: Model Summary

Step	-2Log likelihood	Cox & Snell R Square	Nagelkerke-R Square
4	305.157. ^b	.562	.648

The model which includes both numeric and categorical variables explains between 56.2% and 64.8% of the variations in the dependent variable (Favourable behaviour intention) with -2 log likelihood to be as small as 305.157 pointing to the fact that the model is a good one. However, this was explicit with the Hosmer and Lemeshow Test as these pseudo R- squares are sometimes unreliable.

Fav. Util. behav. Int =

$$\frac{e^{-1.945 \text{ Age}(1) - 1.615 \text{ Marital}(1) - .097 \text{ Edu}(1) + .090 \text{ Util freq} - .756 \text{ Parity} + .037 \text{ quality} + 8.160}}{1 + e^{-1.945 \text{ Age}(1) - 1.615 \text{ Marital}(1) - .097 \text{ Edu}(1) + .090 \text{ Util freq} - .756 \text{ Parity} + .037 \text{ quality} + 8.160}}$$

Table 4.9: Hosmer and Lemeshow Test

Step	Chi-Square	Df	P-value
4	16.111	8	.061

The p-value 0.061 of the stepwise Chi-square test was greater than alpha- value of 0.05 so the null hypothesis was rejected and concluded that the model fit the data well and that the model has a good fit.

Fav. Util. behav. Int =

$$\frac{e^{-1.945 \text{ Age}(1) - 1.615 \text{ Marital}(1) - .097 \text{ Edu}(1) + .090 \text{ Util freq} - .756 \text{ Parity} + .037 \text{ quality} + 8.160}}{1 + e^{-1.945 \text{ Age}(1) - 1.615 \text{ Marital}(1) - .097 \text{ Edu}(1) + .090 \text{ Util freq} - .756 \text{ Parity} + .037 \text{ quality} + 8.160}}$$

Table 4.10: Classification Table

Step	Observed	Predicted Utilization behaviours		
		Unfavourable	Favourable	% correct
Utilization	Unfavourable	110	62	64.0
Behaviour	Favourable	57	147	72.1
Overall percentage				68.4

The table above displays the prediction success. Overall prediction success was 68.4% (64.0% for unfavourable behaviour and 72.0% for Favourable behaviour).

Fav. Util. behav. Int =

$$\frac{e^{-1.945 \text{ Age}(1) - 1.615 \text{ Marital}(1) - .097 \text{ Edu}(1) + .090 \text{ Util freq} - .756 \text{ Parity} + .037 \text{ quality} + 8.160}}{1 + e^{-1.945 \text{ Age}(1) - 1.615 \text{ Marital}(1) - .097 \text{ Edu}(1) + .090 \text{ Util freq} - .756 \text{ Parity} + .037 \text{ quality} + 8.160}}$$

Table 4.11 Variables in Equation

	B	S.E	Wald	Df	p-value	Exp.(B)	95% C.I for Exp.(B)	
							Lower	Upper
Age (1)	-1.945	.341	32.594	1	.000	.143	.073	.279

Marital (1)	-1.615	.261	38.429	1	.000	.199	.119	.331
Parity	-.756	.110	47.440	1	.000	.469	.378	.582
Edu (1)	-.097	.259	.140	1	.708	.908	.547	1.507
Util. freq	.090	.131	.470	1	.493	1.094	.846	1.415
Overall quality	.037	.002	267.015	1	.000	1.038	1.033	1.042
Constant	8.160	2.106	15.009	1	.000	3499.02		

Age did not contribute to the model. However, there was a statistically significant ($p\text{-value} = 0.00 < \text{Alpha } 0.05$) relationship between Young women in Fertility age and Favourable behaviour intention.

The negative attached to coefficient of Age (1) means that the target group Favourable Behaviour intention (1) has more of those coded 0 (Elderly women in Fertility age) than those coded 1 (Young women in Fertility age).

Parity was not a dummy variable. It did not contribute to model. However, its overall association with favourable behaviour intention towards HBCBS was statistically significant ($p\text{ value} = 0.00 < \text{alpha value } 0.05$).

Overall quality of HBCBS contribute to the model. There was a statistically significant relationship between Favourable utilization and quality of HBCBS ($p\text{ value} = 0.000 < 0.05$).

The target group (Favourable behaviour intention) tend to have less unmarried coded 1 than married coded 0. Single marital status did not contribute to the model. However, the coefficient of marital status (single status) - negative (-1.615) was more than zero indicating that there was relationship between single marital status and Favourable intention towards utilization of HBCBS. This relationship was statistically significant ($p\text{ value} = 0.000 < \text{alpha value } 0.05$). So

the null hypothesis which state there is no relationship between (coefficient of marital status = 0) single marital status and Favourable behaviour intention was rejected.

The constant of the model contributed (8.160) significantly to the model equation (p value = 0.000 < alpha value 0.05).

The Binary Logistic Equation

Fav. Util. behav. Int =

$$\frac{e^{-1.945 \text{ Age}(1) - 1.615 \text{ Marital}(1) - .097 \text{ Edu}(1) + .090 \text{ Util freq} - .756 \text{ Parity} + .037 \text{ quality} + 8.160}}{1 + e^{-1.945 \text{ Age}(1) - 1.615 \text{ Marital}(1) - .097 \text{ Edu}(1) + .090 \text{ Util freq} - .756 \text{ Parity} + .037 \text{ quality} + 8.160}}$$

Summary of the logistic regression

A binary Logistic regression analysis was conducted on utilization behaviour of expectant mothers to predict consumer utilization behaviour using Overall quality of hospital-based childbirth services, Education, age, Parity, marital status, and frequency of utilization of the hospital as predictors. A test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably distinguished between favourable behaviour intentions and Unfavourable behaviour intentions (Chi-square = 16.111, P < 0.01 with df= 8).

Nagelkerke's R square of 0.648 Indicated moderately strong relationship between prediction and grouping. Prediction success overall was 68.4% (64.0% for unfavourable behaviour and 72.0% for Favourable behaviour). The Wald criterion demonstrated that only Age (p = 0.000), marital status (p = 0.000), Overall Quality of HBCBS (P= 0.000), and parity (p= 0.000) made a statistically significant contribution to the prediction. Other variables like education and frequency of utilization of HBCBS were not significant predictors. Exp (B) value indicates the Odd ratios of the four (4) significant variables in the equation or model. To begin with this, the value under Exp (B) corresponding to age variable indicates that Young women in fertility age

(YWIFA) were 0.143 times as less likely to exhibit Favourable Behaviour intention towards HBCBS than Old women in Fertility age (EWIFA). This also means $1/0.143 = 6.993$ odds for EWIFA which means that, EWIFA are 6.993 times likely to exhibit Favourable Behaviour intention towards HBCBS than YWIFA.

In the same vein, the odds ratio for unmarried women indicated that unmarried women were 0.199 times as less likely to exhibit favourable behaviour intentions towards HBCBS than married women. This also means that the odds for married women is $1/0.199 = 5.025$. This means that Married women were 5.025 times likely to exhibit favourable behaviour intentions towards HBCBS than unmarried women.

Furthermore, the Exp (B) value for parity indicated that when parity was raised by one unit (1 pregnancy), the odds ratio is as small, and therefore consumers are 0.469 times less likely to either report promptly to the hospital or change the health provider during childbirth (Favourable behaviour intentions). The inverse Odds is $1/0.469 = 2.132$ meaning that with a one unit less in parity, the odds is large and therefore consumers were 2.132 times likely to report promptly or change the health provider during childbirth (Favourable behaviour intention).

Lastly, the Exp. (B) value for Overall quality of HBCBS indicated that when overall quality of HBCBS was raised or increased by one unit, the odds ratio is as large, and therefore consumers were 1.038 times likely to report promptly to the hospital for childbirth services (Favourable behaviour intentions) than unfavourable behaviour intentions.

H2: There will be a significant relationship between favourable consumer behaviour and consumer perceived quality of hospital-based childbirth services.

From the binary logistic regression output, overall quality of HBCBS statistically has a positive relationship (0.037) with Favourable Behaviour intentions towards HBCBS. This relationship was statistically significant (p value = 0.000 > alpha value 0.05). The study therefore rejected the null hypothesis which state that “there is no significant relationship between quality of HBCBS and Favourable utilization behaviour”. The research hypothesis thus supported.

4.6 Consumer Socio-Demographic Characteristics and Utilization Behaviour of HBCBS

Before running the binary logistic regression, some of the categorical variables were recoded into binary variable as displayed in appendix II and III. The sociodemographic variables were coded into dummy variables as follows: Higher Education as “0”, and Basic Education as “1”, for Education; High Income Earners as “0”, and Low Income Earners as “1” for Income status; Married as “0”, and Unmarried as “1”; Old women in Fertility age as “0”, and Young women in Fertility Age as “1” for Age.

The model equation is given as:

Fav. Util. behav. Int

$$= \frac{e^{-1.679 \text{ Age}(1) - 1.527 \text{ Marital}(1) + .002 \text{ Edu}(1) - .851 \text{ Income}(1) - .728 \text{ Parity} + .069 \text{ Util freq} + 4.233}}{1 + e^{-1.679 \text{ Age}(1) - 1.527 \text{ Marital}(1) + .002 \text{ Edu}(1) - .851 \text{ Income}(1) - .728 \text{ Parity} + .069 \text{ Util freq} + 4.233}}$$

Where Fav.util intention is the Favourable intention toward Hospital-Based Childbirth Services

Age (1) represents YWIFA (Young women in fertility age)

Marital (1) represents unmarried

Edu (1) represents Basic Education

Income (1) represents Low Income Earners

Util freq represents utilization frequency for Hospital-Based Childbirth Service

e is the natural log (Approximately 2.72)

4.233 is the constant of the equation

Table 4.12: Model summary

Step	-2 Log Likelihood	Cox & Snell R Square	Nagelkerke R Square
4	397.531 ^b	.275	.368

The model which includes both numeric and categorical variables explains between 27.5% and 36.8% of the variations in the dependent variable (Favourable behaviour intention) with -2 log likelihood to be as small as 397.531 pointing to the fact that the model is a good one. However, this was explicit with the Hosmer and Lemeshow Test as these pseudo R- squares could be unreliable.

Fav. Util. behav. Int

$$= \frac{e^{-1.679 \text{ Age}(1) - 1.527 \text{ Marital}(1) + .002 \text{ Edu}(1) - .851 \text{ Income}(1) - .728 \text{ Parity} + .069 \text{ Util freq} + 4.233}}{1 + e^{-1.679 \text{ Age}(1) - 1.527 \text{ Marital}(1) + .002 \text{ Edu}(1) - .851 \text{ Income}(1) - .728 \text{ Parity} + .069 \text{ Util freq} + 4.233}}$$

Table 4.13: Hosmer and Lemeshow Test

Step	Chi-square	Degrees of freedom	P-value
4	11.501	7	.118

The p-value 0.118 of the stepwise Chi-square test was greater than alpha- value of 0.05 so the null hypothesis was rejected and concluded that the model is best fit for the regression analysis.

Fav. Util.behav. Int =

$$\frac{e^{-1.679 \text{ Age}(1) - 1.527 \text{ Marital}(1) + .002 \text{ Edu}(1) - .851 \text{ Income}(1) - .728 \text{ Parity} + .069 \text{ Util freq} + 4.233}}{1 + e^{-1.679 \text{ Age}(1) - 1.527 \text{ Marital}(1) + .002 \text{ Edu}(1) - .851 \text{ Income}(1) - .728 \text{ Parity} + .069 \text{ Util freq} + 4.233}}$$

Table 4.14: Classification Table

Step	Observed		Predicted Utilizations Behaviour		
			Unfavourable	Favourable	% correct
4	Utilization	Unfavourable	124	48	72.1
	Behaviour	Favourable	55	149	73.0
	Overall percentage				72.6

The table above displays the prediction success. Overall prediction success was 68.4% (64.0% for unfavourable behaviour and 72.0% for Favourable behaviour).

Fav. Util.behav. Int =

$$\frac{e^{-1.679 \text{ Age}(1) - 1.527 \text{ Marital}(1) + .002 \text{ Edu}(1) - .851 \text{ Income}(1) - .728 \text{ Parity} + .069 \text{ Util freq} + 4.233}}{1 + e^{-1.679 \text{ Age}(1) - 1.527 \text{ Marital}(1) + .002 \text{ Edu}(1) - .851 \text{ Income}(1) - .728 \text{ Parity} + .069 \text{ Util freq} + 4.233}}$$

Table 4.15: Variables in Equation

	B	S.E	Wald	Df	Sig.	Exp.(B)	95% C.I for Exp.(B)	Lower	Upper
Age (1)	-1.679	.342	24.111	1	.000	.187	.095	.365	
Marital (1)	-1.527	.262	33.986	1	.000	.217	.130	.363	
Edu (1)	.002	.263	.000	1	.995	1.002	.598	1.677	
Income (1)	-.851	.247	11.915	1	.001	.427	.263	.692	
Parity	-.728	.108	45.203	1	.000	.483	.390	.597	
Util freq	.069	.128	.292	1	.589	1.072	.833	1.379	
Constant	4.233	.528	64.314	1	.000	68.909			

Age did not contribute to the model. However, the association between age and utilization behaviour was a statistically significant (p-value= 0.000 < Alpha 0.05).

The negative attached to coefficient of Age (1) in the binary logistic equation means that the target group Favourable Behaviour intention (1) has more of those coded 0 (Elderly women in Fertility age) than those coded 1 (Young women in Fertility age).

Single marital status did not contribute to the model. However, the coefficient of marital status (1) referring to unmarried (-1.527) was less than zero indicating that there was relationship between single marital status and Favourable intention towards utilization of HBCBS. This relationship was statistically significant (p value= 0.000 < alpha value 0.05). So the null

hypothesis which state there is no relationship between (coefficient of marital status = 0) single marital status and Favourable behaviour intention was rejected.

The constant of the model contributed (8.160) significantly contributed to the model equation (p value = 0.000 < alpha value 0.05).

Parity was not a dummy variable. It did not contribute to model. However, its overall association with favourable behaviour intention towards HBCBS was statistically significant (p value = 0.000 < alpha value 0.05). The negative attached to coefficient of Income (1) means that the target group Favourable Behaviour intention (1) has more of those coded 0 (High income Earners) than Low Income Earners. There was statistically significant relationship between Utilization behaviour and maternal socio-demographic variable age, marital status, parity, and income. However, frequency of utilization of HBCBS as predictor variable did not show any significant relationship and this was not different from educational status of consumers or users.

The logistic equation becomes:

$$\text{Log} \left[\frac{P}{1-P} \right] = 4.233 - 1.679 \text{ Age (1)} - 1.527 \text{ Marital status(1)} + .002 \text{ Edu(1)} - .851 \text{ Income(1)} - .728 \text{ parity} + .069 \text{ Util freq}$$

OR

Fav. Util.behav. Int =

$$\frac{e^{-1.679 \text{ Age(1)} - 1.527 \text{ Marital (1)} + .002 \text{ Edu(1)} - .851 \text{ Income(1)} - .728 \text{ Parity} + .069 \text{ Util freq} + 4.233}}{1 + e^{-1.679 \text{ Age(1)} - 1.527 \text{ Marital (1)} + .002 \text{ Edu(1)} - .851 \text{ Income(1)} - .728 \text{ Parity} + .069 \text{ Util freq} + 4.233}}$$

H3: There is a significant relationship between Favourable consumer behaviour and marital status of consumer. According to binary logistic regression table marital status has a statistically significant relationship between favourable behaviour intention toward HBCB (p value = 0.000 < 0.05.) Therefore, the null hypothesis which states that “there is not

significant relationship between marital status and Favourable behaviour intention towards HBCBS” was rejected. The research hypothesis is therefore supported.

Summary of binomial logistic regression results

A binary Logistic regression analysis was conducted on utilization behaviour of expectant mothers to predict consumer utilization behaviour using expectant mothers’ socio-demographic characteristics, age, marital status, Education, Parity, and frequency of utilization of the hospital as predictors. A test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably distinguished between Favourable behaviour intentions and Unfavourable behaviour intentions (Chi-square = 11.504, $P=0.118 > 0.01$ with $df= 7$).

Nagelkerke’s R square of 0.368 and Cox & Snell R square 0.275 (pseudo R square) indicated moderate relationship between prediction and grouping. Prediction success overall was 72.6.4% (72.1% for unfavourable behaviour and 73.0% for Favourable behaviour). The Wald criterion demonstrated that only Age ($p = 0.000$), marital status ($p = 0.000$), Income status ($P= 0.001$), and parity ($p= 0.000$) made a statistically significant contribution to the prediction. Other variables like education and frequency of utilization of HBCBS were not significant predictors. Exp (B) values indicate the Odd ratios of the four (4) significant variables in the equation or model. To begin with this, the value under Exp (B) corresponding to age variable indicates that, holding all other predictors in the model constants, Young women in fertility age (YWIFA) were 0.187 times less likely to exhibit Favourable Behaviour intention towards HBCBS than Elderly women in Fertility age (EWIFA).

Similarly, the odds ratio for unmarried women indicated that unmarried women were 0.217 times less likely to exhibit favourable behaviour intentions towards HBCBS than married women when other predictors in the model were held constant.

Furthermore, the Exp (B) value for parity indicated that when parity was raised by one unit (1 pregnancy), the odds ratio is as large, and therefore consumers are 0.483 times less likely to either report promptly to the hospital or change the health provider during childbirth (Favourable behaviour intentions)

Lastly, the Exp. (B) value for Income status indicated that Low income earners were 0.427 times less likely to exhibit favourable behaviour intention towards HBCBS than High income earners. Similarly, the inverse Odds for high income was 2.342 implying that high income earners were 2.342 time more likely to exhibit favourable behaviour intention towards HBCBS than Low income earners.

4.7 Discussion of Findings of the Study

The focus of the study was to examine quality of hospital-based childbirth services from the perspective of consumers and providers, determine the relationship between consumer utilization behaviour and quality of Hospital-Based childbirth services, and finally to investigate how consumer socio-demographic characteristics influence consumer utilization behaviour in Denkyembaour district.

Evident from the analysis, there was difference between consumer and providers' perspective of quality of Hospital-Based childbirth services in the district. The overall quality of hospital-based Childbirth service in St. Dominic hospital from the providers' perspective was higher (72.64) than consumer (67.96). This finding was not different from previous findings in a study

(Abuosi, 2015) titled “patients versus healthcare providers’ perceptions of quality of care Establishing the gaps for policy action” in a cross- sectional survey of patients seeking outpatient services in 17 general hospitals in Ghana (“patient: $M=89.11$, $SD=11.457$; Providers: $M= 94.60$, $SD=10.922$ ”). Similarly, some scholars (Alhassan, Janssens, Nketia-Amponsah, Spieker, Van Ostenberg et al 2015) found that staff perceived the quality of healthcare they rendered as satisfactory contrary to patients’ dissatisfactory rating of the same services in their study.

These gaps in quality perspectives has been studied by some researchers from purely perception background and mostly from outpatient department (Atinga, 2012; Abuosi, 2015; Khresheh, 2010). Though, the findings in this study was not based on perception but experiences of users, the finding is not different from that of others studies (Abuosi, 2015; Atinga, 2012; Khresheh, 2010). This provides firm grounds to heed to the call on institutional heads to consciously improve their services to meet the ever changing demands of users. This study shows that providers often believed firmly that their services meet the quality lens of consumers but very often, this is an illusion. This results in adaptive strategies by the potential consumer including delay in seeking the service, bypassing or changing provider, home delivery or report promptly to the facility for treatment or services.

The consumers recounted that though, staff act timely when patient arrived at the facility for delivery or childbirth, providers do not respond to complaint promptly when lodged. However, the staff were of the opinion that in- service training they receive is not regular (mean = 3.40) whereas patients average rating for timely response to complaints when lodged was 3.34 indicating that more needs to be done in that regard. Staff believed that staff strength is inadequate as they disagree on average (mean = 2.65) to the statement that “the facility has

enough staff” but consumers are of quite contrary opinion (mean= 3.57). Though consumers disagree that the staff strength is inadequate, this delays in responding to consumers’ complaints is not surprising as providers responded that staff strength is inadequate for the facility.

Though consumers’ assessment in the study indicates that staff act timely when patients arrived at the facility, but providers do not respond to complaint promptly when lodged.

It has been argued by one author (Freedman, 2003), that life threatening complication can develop anywhere and anytime as such effective monitoring of vulnerable clients like the labouring woman deserves nothing less than strict and effective monitoring during childbirth if indeed our labour wards may cease to be ‘slaughters’ houses but play their true functions. The study found that the mean patient or consumer rating of staff availability at the patient’s bedside was 2.90 (staff almost missing from the bedside). The providers corroborated by their level of motivation to carry out their duties (mean score = 3.46). There have been calls to integrate partners or spouse in the childbirth process termed “male involvement” by the Ministry of Health- Ghana. This is not the case as both providers and consumers disagree that the facility allows husbands/ partners to be by their wives/ partners during the childbirth process (consumers mean = 2.02, providers mean = 2.92). Though as part of the roles of health providers in the labour ward, they are to provide support in the form of comfort and reassurance and praises to the labouring woman (Khesheh, 2010). Integrating spouse into the care can augment this role of the providers most especially where there is inadequate staff strength and when the labour ward structures make it permissible.

If staff strength is inadequate but the facility is not making use of spouse in picking up complications early as well as provide emotional support for the wife, then huge vacuum is created as far as early picking of complication in the delivery ward is concern.

Though staff believed that materials to ensure adequate privacy was somewhat inadequate, patient's experiences and evaluation was not too different from the health providers. This finding of inadequate privacy at the labour support previous studies findings (Overinde, et al., 2012; Gebrehiwot, Goicolea, Edin, & Sabastian, 2012) that privacy of labouring women is among the most violated aspect in obstetric care by virtue of no or insufficient dedicated labour rooms. However, both consumer and providers in the study responded that doctors were always available to intervene in complicated deliveries.

Despite all these challenges, both consumers and providers were of the view that respect for patients' preference remains supreme in their interactions during childbirth as providers responded that patients were free to decide whether to have a caesarean section or vaginal delivery (mean= 3.99) whereas consumers responded that staff somewhat respect patients' believes and emotions during childbirth (mean= 3.39). Some studies have found that disrespectful, inhumane service and lack of emotional support deters women from utilizing obstetric care in health facility (Behruzi, et al., 2010; Afsana & Rashid, 2001). This finding erode the paternalistic care that characterize healthcare as reported by some scholars. For instance, it was reported that some women perceived loss of autonomy and right to self-determination as human being in the childbirth process as they experience unnecessary vaginal examinations from the staff (Magoma, Requejo, Campbell, Cousens, & Filippi, 2010; Afsana & Rashid, 2001), and worst of all failing to share findings of examinations with the patient (Afsana & Rashid, 2001).

Haemorrhage which is one of the major causes of perinatal deaths, but its antidote is prompt and safe blood transfusion was assessed to be adequate from both consumers and providers' perspective. Both consumers and providers agree that there was access to blood transfusion service at all time in the facility (mean; consumer = 3.62, provider = 4.24).

Infection prevention is critical to the management of patient care. Water availability and clean environment play a major part in this. Both consumers and providers agree that the delivery ward is clean and appealing at all times (mean: consumer= 3.47, provider= 4.25)

The consumers and providers agree that the facility has adequate water supply (consumer Mean= 4.38, provider mean = 4.15)

On the issue of abuses of consumers who go to give birth experience, consumers did not rule such incidence out outright. Consumers (physical abuse mean= 2.42; verbal abuse 2.47) indicated that verbal and physical abuse visited on labouring women is a rare incidence at St. Dominic hospital. Kyomuhendo (2003) in Uganda found from respondents that, a lack of skilled staff at the primary health care level, verbal abuse, neglect and poor treatment in hospital and poorly understood reasons for procedures partly explained the unwillingness of women to deliver in health facilities in that study.

The health providers in this study validated the response of consumers on abuse. They responded that they have never witnessed incidence of abuse either verbal or physical, intentional or unintentional (physical abuse mean 1.42; verbal abuse mean 1.74) in the facility.

Though, both consumers and providers rated the quality of hospital-based child birth services fairly favourable, providers tend to rate almost all the variables of quality higher than

consumer. This finding also support a study in Spain by (Miranda , Murillo, Chamorro, & Vega, 2010) found that healthcare managers' perception of service quality was rated higher and different from patient perception of same service and that of nurses.

The various dimensions of quality indicated that both consumers and providers rated fairly all the dimensions of quality. Of those that has three items for evaluation, like Empathy and Responsiveness, consumers rated Responsiveness higher (mean=9.30, SE= 0.096) while those with four items, consumers rated Reliability higher (mean=13.84, S.E= 0.10) than Assurance. Though Tangible was averagely rated by both consumer and provider as again ideal overall score of 35 (Consumer M= 27.25, S.E = 0.11; Provider M= 27.67, S.E= 0.218).

The averages of the five main quality of Hospital-based childbirth services constructs in the conceptual framework shows that apart from assurance (Mean=8.70, S.E= 0.076 as against Mean 7.13, S.E= 0.157), the consumer means for all the other quality dimensions were lower than providers mean score. The difference between means for the various dimensions of the two categories of respondents was between 0.42 – 2.13.

Though tangible was scored higher (M=27.67, S.E= 0.218) than consumers (M=27.25, S.E= 0.11), the difference was the least among all the quality HBCBS dimensions (0.42). Notwithstanding the variations in the quality dimensions, overall quality of HBCBS between provider and consumers was statistically significant (p value= 0.000 < alpha 0.05; with $t = -8.074$ with two tail) after an independent t- sample statistical test was conducted. This finding supports previous cross-sectional study (Abuosi, 2015) of out-patients' services seekers in 17 general hospitals in Ghana ("Patients: M=87.11, SD= 11.457; providers; M= 94.60, SD= 10.922"). Similarly, the findings support (Nashrath, Akkadechanunt, & Chontawan, 2011). According to Andersen's Health utilization model, enabling factors is critical to utilization of

health services. From the evaluations above, it is clear that the hospital is making frantic effort to ensure that consumers utilize their facility by making it consumer friendly and respecting consumer preferences during childbirth. However, staff strengths, privacy, prompt response to patient complaint, spouse integration in care, poorly functioning health insurance scheme in the facility are factors that are most likely to threaten the 'enabling factor' of Andersen' health service utilization. Beside this, water, service free from verbal and physical abuse, access to blood transfusion and other logistics appears to optimum and is likely to promote utilization of childbirth services by the women.

4.7.1 Relationship Between Utilization Behaviour Intention and Quality of HBCBS

A binary Logistic regression analysis was conducted on utilization behaviour of expectant mothers to predict consumer utilization behaviour using Overall quality of hospital-based childbirth services, Education, age, Parity, marital status, and frequency of utilization of the hospital as predictors were controlled for. The model could distinguish between Favourable, and Unfavourable consumer utilization behaviour (Chi-square = 16.111, $P < 0.01$ with $df = 8$). Overall prediction success for the model was 68.4% (64.0% for unfavourable behaviour and 72.0% for Favourable behaviour). Though age, marital status, and parity made significant contribution to this model, overall quality has statistically significant (0.037) relationship with Consumer utilization behaviour ($p \text{ value} = 0.000 < 0.05$ with $df = 8$).

Lastly, the Exp. (B) value for Overall quality of HBCBS indicated that when overall quality of HBCBS was raised or increased by one unit, the odds ratio is as large, and therefore consumers were 1.038 times likely to report promptly to the hospital for childbirth services (Favourable behaviour intentions) than unfavourable behaviour intentions. It suggests that all women

consider quality of HBCBS as important factor to inform their Favourable behaviour intention. This finding supports the work of Bohren et al., (2015), reporting in their study that mothers 'impression about hospital-based childbirth services showed that majority 317 (80.4%) liked the services given but only 19.6% did not like the services rendered.

4.7.2 Consumer socio-demographic characteristics and Utilization behaviour of HBCBS

The third objective was achieved by finding answers to the research question "What is the relationship between consumer utilization behaviour and consumer socio-demographic characteristics?" The following demographic variables were considered under this objective: age, education, income level per week, marital status, frequency of utilization of HBCBS in St. Dominic hospital, and parity. With the exception of Parity and frequency of utilization of St. Dominic for HBCBS, all the variables were dummy variables. The dependent variable was utilization behaviour intention. A binary Logistic regression was able to distinguish Favourable and Unfavourable behaviour intention with overall prediction success of 72.64 % (72.1% for Unfavourable behaviour intention, and 73.0% for Favourable behaviour intention), and this was statistically significant (Chi-square = 11.504, $P=0.118 > 0.01$ with $df= 7$. The Wald criterion demonstrated that only Age ($p = 0.000$), marital status ($p = 0.000$), Income status ($P= 0.000$), and parity ($p= 0.000$) made a statistically significant contribution to the prediction. Other variables like education and frequency of utilization of HBCBS were not significant predictors. This implies that irrespective of the number of times a consumer uses the facility for childbirth service, it cannot provide solid grounds for future behaviour intentions towards HBCBS prediction. Same can be said about education in this study.

From the odd ratios of the four significant variables, it can be said that these socio-demographic characteristic has a strong relationship with HBCBS utilization behaviour. This finding is in consonance with Andersen's behaviour model of health service utilization. According his model, an individual's demographic characteristics and position with the social structure were more or less likely to determine the utilization of any healthcare services.

From the logistic output table, age has an odd ratio of 0.187. indicates that holding other predictor variables in the model constant, EWIFA were 5.35 times more likely to either report promptly to the hospital for childbirth or change the health provider (Favourable behaviour intentions) than YWIFA. Finding was statistically significant ($p \text{ value} = 0.000 < \alpha 0.05$) this finding supports previous study finding (Yanagisawa et al, 2006) that younger age has statistically significant negative association with facility-based delivery or childbirth. However, this finding contradicts studies (Van Ejjik et al, 2006; Mwaniki et al, 2002) that found that elderly women or mothers in fertility age tend to use hospital-based child birth services or Facility-based childbirth services less than young women in fertility age.

Similarly, the odd ratio for Married women (unmarried women odds: 0.217) 4.608 indicating that married women were 4.608 times more likely to exhibit Favourable behaviour intentions toward HBCBS than unmarried women. This relationship was statistically significant. This finding is inconsistent with previous studies (Onah, Ikeako, & Iloabachie, 2006; Letamo & Rakgoasi, 2003) that married women use hospital for childbirth less than unmarried women raising arguments like lack of autonomy on the part of married women as accountable for this phenomenon. It can therefore be said that cohabitating women are more likely to delay in seeking hospital-based childbirth services or have home delivery. This could possibly be due to the fact that most of these women with unmarried status are often not desiring to have babies at that status and so the motivation to seek hospital childbirth service is already low if not

absent. Again, (Gyimah, Takyi, & Addai, 2006; Mekonnen & Mekonnen, 2003; Nwakoby, 1994) had argued in their study that, single mothers may be stigmatized and prefer to deliver at home because they anticipate a negative provider interaction. Also, cohabitating mothers and other unmarried women may not likely have spousal support or family support. According to Andersen's theory of health utilization behaviour, without enabling factors like suitable hospital environment and financial resources, family support etc patients will be unlikely to utilize the even free healthcare services.

Moreover, parity odd ratio of 0.0483 (inverse odd ratio= 2.070) which means that a one unit (either one stillbirth or child) less made a consumer 2.07 times more likely to exhibit favourable behaviour intentions towards HBCBS. This finding was statistically significant (p value = $0.000 < 0.05$). This finding is consistent with previous studies (Van Eijik et al, 2006; Mwaniki et al, 2002) discoveries that statistically significant association existed between parity and facility-based delivery, and that old women with high parity use facility-based childbirth services less. Other previous studies findings (Bell, et al., 2003; Mills, Williams, Adjuik, & Hodgson, 2008) also points to the fact that primi-parous women patronize hospital-based childbirth service more than multi-parous women. In a similar vein, (Amoakoh-Coleman, et al., 2015) found in their study that women who experience complications in their previous pregnancies were more likely to used facility-based delivery services.

Lastly, the Exp. (B) value for Low Income Earners was 0.427 (odds ratio for high income earners was 2.342). This means that High income earners were 2.342 times more likely to exhibit favourable behaviour intentions towards HBCBS than Low income earners. The same logistic regression indicates that negative (-.851) relationship existed between Low Income Earners and Favourable Behaviour Intention towards HBCBS. The relationship between weekly income status and utilization behaviour was statistically significant (p value = $0.001 <$

alpha value= 0.05). This finding is inconsistent with (Nakua et al, 2015) report that financial difficulty was not accountable for not utilizing maternal healthcare services by women in Amansie-west region in Ghana as only 4.4% only gave financial constraint. However, this was a qualitative study so cannot be generalized. The study also revealed that health insurance subscribers pay part of the cost of childbirth. Both consumers and providers responded that they agree that one need to pay for some service despite being NHIS subscriber. (Mean; consumer= 4.34, provider=4.25). This finding supports claims by one scholar (Whitter et al, 2007) that economic inequality contributes to maternal and neonatal mortality and impoverishment of the vulnerable households.

4.7.3 Summary of Hypotheses Under the Study

The analyses presented shows that all the hypotheses under the study were all supported and have been summarised as follows:

H1: There was statistically significant difference between providers' and consumers' perceived quality of hospital-based childbirth services as the independent T- test indicated that p- value (0.000) was less than the alpha value (0.05) with $t = -8.074$ in a two tailed test.

H2: There was statistically significant relationship between Favourable consumer behaviour and perceived quality of Hospital-based childbirth services. This was evident from the binary logistic equation's Wald test of coefficient of predictors as in table 4.11 with the equation

Fav. Util. behav. Int =

$$\frac{e^{-1.945 \text{ Age}(1) - 1.615 \text{ Marital}(1) - .097 \text{ Edu}(1) + .090 \text{ Util freq} - .756 \text{ Parity} + .037 \text{ quality} + 8.160}}{1 + e^{-1.945 \text{ Age}(1) - 1.615 \text{ Marital}(1) - .097 \text{ Edu}(1) + .090 \text{ Util freq} - .756 \text{ Parity} + .037 \text{ quality} + 8.160}}$$

H3: There was statistically significant relationship between consumer utilization behaviour toward Hospital-based childbirth services and consumer marital status. This was evident from

the binary logistic equation's Wald test of coefficients of the predictors as shown in table 4.15 with the equation:

Fav. Util.behav. Int =

$$\frac{e^{-1.679 \text{ Age}(1) - 1.527 \text{ Marital}(1) + .002 \text{ Edu}(1) - .851 \text{ Income}(1) - .728 \text{ Parity} + .069 \text{ Util freq} + 4.233}}{1 + e^{-1.679 \text{ Age}(1) - 1.527 \text{ Marital}(1) + .002 \text{ Edu}(1) - .851 \text{ Income}(1) - .728 \text{ Parity} + .069 \text{ Util freq} + 4.233}}$$

4.8 Chapter Summary

This chapter presented the results of the study in consonance with the objectives, research questions and hypotheses as discussed in chapter one of the study. Descriptive analysis of respondents' profile, and five quality dimension variables were presented prior to inferential quantitative analysis. Results of the quantitative analysis supports the applicability of the conceptual framework presented in chapter two of the study. Tables and suitable wordings have been used in interpreting the findings for the sake of clarity. Two sample independent t- test was carried out to determine if significant difference existed between provider and consumer perspective of quality of hospital-based childbirth service. Subsequently to this binary logistic regression analysis was carried to determine the relationship between consumer utilization behaviour intentions and quality of hospital-based childbirth services. In this instance, variables like age, income, parity, frequency of usage of HBCBS, education were controlled for quality HBCBS. Finally, the chapter also attempted looking at the relationships between utilization behaviour intentions and consumer socio-demographic characteristics. The results generated were discussed in line with the empirical literature, and theoretical framework and its relevance to the conceptual framework of the study.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The previous chapter presents the results of the quantitative analysis and discussions of the study. This final chapter summarises the major findings and implications of the study, draws conclusions based on the objectives of the study, and proffer recommendations for further research.

5.2 Summary of the Study

The study inquired into quality of Hospital-based childbirth services and its relationship with consumer utilization behaviour in the Denkyembaour district in the Eastern region of Ghana. Specifically, the study examined the quality of hospital-based childbirth services from the perspectives of both consumers (users) and health providers, relationship between quality of hospital-based childbirth services and utilization behaviour intention, and how user or consumer socio-demographic characteristics influence utilization behaviour in the district. An essential rationale for the study is that the institutional maternal mortality of the district has always been far above the national average since 2014 to date and this is not getting any better despite the fact that the hospital in the district is well patronized by inhabitants far and near.

Pursuant to the objectives aforementioned in chapter one, the study reviewed extant literature on quality healthcare, maternity care utilization, causes of maternal mortality and delay in seeking healthcare and tools for measuring healthcare quality. From this the modified SERVQUAL five dimensions of quality was identified and the various components making constituting the five dimensions were identified from the various literatures reviewed. This

served as a robust measuring tool for the study. From the literature, research gaps were identified and objectives were set for this study with underlying research hypothesis. Subsequently, the study setting was identified based on the problem to the district and the gaps in literature the study sought to address. A survey strategy was adopted and questionnaires were used in obtaining primary data from 377 healthcare consumers and 72 health providers. The healthcare consumers were mother within the age of 15-49years who gave birth in St. Dominic Hospital less than one year prior to data collection. This sample size was arrived at using Cochran (1977) sample size determination formula for definite population with 95% confident interval and 0.5 sample Error (e). The sample was drawn using simple random sampling technique, and the data was analyzed using SPSS (Statistical package for social sciences) version 22. Descriptive and inferential statistics were employed in testing hypotheses for the study. Independent two samples t-test and binomial regression analyses were done.

5.3 Summary of Major Findings

The analyses and discussions of this study was summarised as follows:

Objective 1: Examine quality of hospital childbirth services from the perspective of consumers and healthcare providers in Denkyembaour district in Eastern Region of Ghana.

The study found that the health providers generally rated quality childbirth service dimensions higher than users or consumers. There was a statistically significant differences in the level of quality of HBCBS perspectives from consumers and health providers. While there was adequate supply of water in the facility, staff available at patient bedside and privacy needed improvement. Also, both consumers and health providers in the study

revealed that though one may be an active subscriber of the health insurance scheme, she will still have to pay for childbirth services.

Objective 2: To determine the relationship between consumer utilization behaviour and perceived quality Facility-based childbirth services. According to the conceptual framework for the study, utilization behaviour as dependent variable was categorized into Favourable behaviour intentions, and Unfavourable behaviour intentions.

The favourable behaviour intentions include prompt utilization, and change of provider. The unfavourable utilization behaviour intentions included Home delivery and delay in seeking services from the hospital. The study found that there was a statistically significant relationship between quality of Hospital-based childbirth services and Favourable behaviour intentions of consumers when controlled for socio-demographics like education, income, age, frequency of utilization, and parity.

Objective 3: To investigate how consumer socio-demographic characteristics influence consumers' utilization behaviour towards HBCBS in Denkyembour district. The socio-demographics examined were maternal age, education, income level per week, marital status, frequency of utilization of HBCBS in St. Dominic hospital, and parity. With the exception of Parity and frequency of utilization of St. Dominic's for HBCBS, all the variables were dummy variables. A binary Logistic regression analysis was conducted on utilization behaviour of parturient mothers and nursing mothers to predict consumer utilization behaviour using expectant mothers' the aforementioned socio-demographics. A test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably distinguished between Favourable behaviour intentions and Unfavourable behaviour intentions. Overall success prediction was 72.6.4% (72.1% for

Unfavourable behaviour and 73.0% for Favourable behaviour). The Wald criterion demonstrated that only Age, marital status, Income status, and parity made a statistically significant contribution to the prediction. Other variables like education and frequency of utilization of HBCBS were not significant predictors. EWIFA were 5.35 times more likely to either report promptly to the hospital for childbirth or change the health provider (Favourable behaviour intentions) than YWIFA.

Married women were 4.608 times more likely to exhibit Favourable behaviour intentions toward HBCBS than unmarried women. Cohabiting women were more likely to delay in seeking hospital-based childbirth services or have home delivery.

Moreover, higher parity women are more likely to delay in seeking HBCBS or give birth at home. The study also found that High income earners (above GHC 100.00 per week) were 2.3 time more likely to seeking prompt HBCBS or change provider than Low income earner (below GHC 101 per week).

5.4 Conclusions

The study established that quality of hospital-based childbirth services level was different from both consumer (user) and health providers. Quality gap existed between the health user and provider. Though, the hospital was a health insurance accredited facility, both users and health providers responded that despite the fact that one is a subscriber, affront payment for services was prevailing. Quality of HBCBS influences consumer utilization behaviour. Socio-demographic characteristics of consumer influence consumer utilization behaviour. However maternal education and frequency of utilization (utilization frequency) were not enough factors to predict consumer utilization behaviour.

5.5 Implications for Management and Practice

The findings in this study suggest that institutional maternal mortality can be reduced drastically if the hospital integrated community-partnership in the quest of constantly improving the service delivery and meeting changing demands of consumers and not providers. Consumers will forever exercise their right to choose among alternative as propounded by Young's in his choice making model in healthcare. Healthcare managers should recognise that quality is indispensable and non-negotiable especially in healthcare industry. This concept and orientation can only make their institution have competitive advantage and thrive. Following from the low income earners utilization behaviour, healthcare fund managers should recognise that such schemes sustainability must at all-time be at the centre of operation.

It is imperative for hospital managers to enhance feedback systems and also feed such information into their training schemes. Consumers will obvious utilizes their services if there is enabling environment as championed by Andersen's behavioural model of health service utilization. Patients tends to form adaptive strategies like delay in seeking services or change provider or sought home remedy as indicated in young's choice making model. The believed in home treatment in this case services of traditional birth attendant (TBA) will make the consumer seek such service especially when there is access (no financial barrier/no rude staff or provider). That is to say the hospital's level of quality cannot be differentiated from the TBA's. The consumer does market scanning considering quality factor and affordability and arrived at a determination either too present late or promptly depending on the socio-demographic characteristics of the consumer as asserted in Andersen's behaviour model of health service utilization (Andersen R. M., 1995).

Also, of a need is for health administrators to see to it that employees are well taken care in terms of their motivation and other peculiar needs.

5.6 Implications for Theory

The overarching aim of the study was to establish the relationship between qualities of hospital-based childbirth services in Ghana and consumer utilization behaviour. The empirical findings out of this study have been valuable because they significance added to previous quality of hospital-based childbirth services and Healthcare utilization behaviour. The study found that quality of hospital-based childbirth service influences consumers' healthcare utilization behaviour. This study contributes greatly to literature on maternal mortality reduction strategies both in Ghana and in all developing countries battling with high maternal mortality. However, enabling factors such as socio-demographic characteristic opined to influence determination of healthcare utilization behaviour has been redefined by the study findings to be Age, income, parity, and marital status. However more needs to be done to ascertain the relevance of education and frequency of utilization in the healthcare utilization model for parturient women in future studies.

The findings in this study had lend empirical basis to the assertions and theories in literature that consumer socio-economic characteristics, quality obstetric care influence patients' utilization behaviour favourably or unfavourably. The study affirms the relevance of Andersen's behavioural model of health service utilization and Young's healthcare choice making model in today's healthcare.

5.7 Recommendations of the Study

1. It was recommended that the hospital set up functioning Quality assurance committee.
2. There should be at least quarterly assessment and evaluation of maternity care protocols. This must not only rest on maternal mortality auditing but most especially review of all challenging facility childbirth cases.
3. There should be regular in-service training for all staff on quality maternity services on regular basis at least on monthly basis.
4. It is highly recommended that the hospital employs integrated community-partnership in hospital-based childbirth services through consumer feedback systems, and consumer education on the importance of HBCBS.
5. As a matter of urgency, Fee-exemption policy to parturient women should be revived if national insurance health insurance scheme cannot salvage the challenges women go through in seeking critical and essential need of life.

5.8 Limitations of the Study

As with any study, this study was conducted amid some limitations. First the study focused on one geographical area and one hospital in Denkyembaour district in Eastern Region of Ghana. This elicited response from only residents in this district who have use the St. Dominic hospital for childbirth within the past one year prior to data collection. It is therefore important for future study to look at same phenomenon but among at least two hospitals either rural or urban. However, a nation- wide study of the phenomenon will be advised so that views of other labouring women could be captured as well as to obtain additional insight especially on the

variables that were insignificant like frequency of usage of the facility for childbirth and maternal education for stronger generalizability.

Furthermore, the model can be used in predicting behaviour intentions of prospective mothers and in addressing maternal mortality in a proactive manner rather than reactive as it has always been. In spite of all these, the results of the study are deemed reliable and representative of utilization behaviour of women in fertility age toward hospital-based childbirth services in the Denkyemba district in the Eastern region of Ghana.

5.9 Suggestion for Future Research

The study discovered the relationship between consumer perceived quality of hospital-based childbirth services and utilization behaviour. This makes it imperative for future study to look at health providers' factors like condition of services, quality of hospital-based childbirth services and consumer utilization behaviour.

Again, the study revealed that utilization of hospital-based childbirth services has statistically significant relationship with parity, income, age but no relationship with education and frequency of utilization of the services. It is therefore suggested that extensive study be conducted to either support these findings or otherwise for effective management of resources towards attainment of the sustainable development goal of reducing maternal mortality to less than 70 per 100,000 live births by 2030 as a reality.

Lastly, the study considered on one hospital as its primary focus in carrying out the study. It is therefore suggested that future studies consider at least two hospitals either from rural and urban origin.

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APPENDICES

Appendix I: Tests of Normality

Respondent	Kolmogorov-Smirnov		Shapiro-Wilk	
	Statistic	Sig.	Statistic	Sig.
Consumer	Overall	0.118	0	0
	Quality			
Provider	of	0.126	0.006	0.956
	HBCBS			0.01

Appendix II: Dependent variable coding

Respondent Category	Original Value	Internal Value
Consumer	Unfavourable Intention toward HBCBS	0
	Favourable intentions towards HBCBS	1

Appendix III: Independent categorical variable coding**Categorical Variables Codings^a**

		Frequency	Parameter coding
			(1)
Marital status recoded	Unmarried	152	1.000
	Married	225	.000
Income Recoded	Low income Earners	171	1.000
	High Income Earners	206	.000
Education Recoded	Basic Education	256	1.000
	Higher Education	121	.000
Age Recoded	Young Women in Fertility Age	189	1.000
	Elderly women in Fertility Age	188	.000

Appendix IV: Introductory letter for permission to collect data

	UNIVERSITY OF GHANA BUSINESS SCHOOL DEPARTMENT OF PUBLIC ADMINISTRATION AND HEALTH SERVICES MANAGEMENT	 University of Ghana Business School
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Ref. No.: *PAHS/26* 14th March, 2017

The Hospital Administrator
St. Dominic's Hospital
Box 59
Akwatia, E/R

Dear Sir/Madam,

LETTER OF INTRODUCTION

The bearer of this note, Mr. Solomon Mensah is a final year student of the University of Ghana Business School, Legon. He is undertaking a course leading to the award of Master of Philosophy in Health Services Management. As part of the requirements of the programme, he has chosen to research on the topic: *Quality of Hospital-Based Childbirth Services and Consumer Utilization Behaviour in the Denkyembuor District in the Eastern Region of Ghana.*

I would be most grateful if you could give him the necessary assistance to facilitate his data collection for his study.

Thanks for your cooperation.

Yours faithfully,

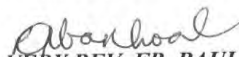
Dr. Patience A. Abor
Senior Lecturer/Supervisor

COLLEGE OF HUMANITIES

P. O. Box LG 78, Legon, Accra, Ghana.

• Telephone: +233 (0) 546 695 432	• Email: pahsm@ug.edu.gh	• Website: www.ug.edu.gh
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Appendix V: Permission granted by the hospital for data collection to begin

	NATIONAL CATHOLIC HEALTH SERVICE (DIOCESE OF KOFORIDUA)	St. Dominic Hospital P. O. Box 59, Akwatia. Eastern Region Ghana, West Africa.
	Tel: 024 - 3559076 E-mail: sdhosp2001@yahoo.com	
Our Ref: _____	Your Ref: _____	20..... 28 th March, 2017
 DR. PATIENCE A. ABOR THE SENIOR LECTURER/SUPERVISOR DEPARTMENT OF PUBLIC ADMINISTRATION AND HEALTH SERVICES MANAGEMENT UNIVERSITY OF GHANA BUSINESS SCHOOL P. O. BOX LG 78 LEGON, ACCRA		
 Dear Dr. Abor,		
<u>RE: LETTER OF INTRODUCTION</u>		
Your correspondence dated 14 th March, 2017 with reference number PAHS/26 concerning the above subject is hereby acknowledged.		
Your request for permission to enable Mr. Solomon Mensah who is under your supervision undertaking academic research on the topic " <i>Quality of Hospital-Based Childbirth Services and Consumer Utilization Behaviour in the Denkyembour District in the Eastern Region of Ghana</i> " to collect data from our facility has been granted.		
Thank You.		
 VERY REV. FR. PAUL ABANKWAH (FINANCIAL CONTROLLER)		
FOR: AG. HOSPITAL ADMINISTRATOR		
Cc: Clinical Coordinator, St. Dominic Hospital – Akwatia. Mr. Solomon Mensah, University of Ghana Business School, Legon.		
 MOTTO: IN GOD IS OUR HELP AND OUR HEALTH DOMINICAN		

Appendix VI: Research questionnaire for consumers only

CONSUMER (PATIENT) Questionnaire

Code.....

Date.....

Hello, I am SOLOMON MENSAH, from University of Ghana Business School. I will like to take your opinion on the quality of hospital-based birth services (maternity) in this district. I will like to ask you some questions and I assure you that nothing you tell me will be shared with anyone else without your prior consent. The information you provide will facilitate improvement in the quality of hospital-based childbirth services in the district and help reduce maternal mortality. You can refuse to participate in the interview or stop it anytime if you wish. Your refusal to participate will not in any way affect the services you and your family receive. With this, I would like your consent.

If you agree to participate in this study, please sign/ thumbprint here.....

SECTION A: Biographic data

1. Age...

☐ 15-19yrs ☐ 20-25yrs ☐ 26-29yrs ☐ 30-35yrs ☐ 36-40yrs ☐ 41-49ys

2. Including babies born dead how many pregnancies have you had so far?.....

3. Please your income per week is in the range of?

☐ below GH Cedis 50.00

☐ GH Cedis 50.00 - 100

☐ GH Cedis 101.00 – 200.00

☐ GH Cedis 201.00 – 400.00

☐ Above GH Cedis 400.00

4. Marital status.....

☐ single ☐ cohabitating ☐ married ☐ widowed ☐ divorce/separated

5. Please your level of education

☐ No formal education

☐ Primary/ JHS

☐ SHS

☐ Tertiary

6. Please how many times have you delivered in this hospital?.....

SECTION B

Please indicate your response to the following questions by ticking the corresponding box. 1 represents strong disagree, 2 represents disagree, 3 represents neither agree nor disagree, 4 represents agree, 5 represents strongly agree.

	QUESTIONS/INDEPENDENT VARIABLES	1	2	3	4	5
	RELIABILITY					
7	The facility insists on service free from complications (error free) in maternity services.					
8	The staff show sincere interest in solving patient's problems at the maternity ward.					

9	The staff act timely when patient arrived at the maternity ward.					
10	The staff respond to patients' complaint timely.					
	RESPONSIVENESS					
11	Staff are never too busy to respond to patient's request					
12	Staff is always available at my bed side to assist me throughout the delivery process.					
13	Most of the staff explain procedures to my understanding.					
	ASSURANCE					
14	My baby and I feel safe in the delivery ward.					
15	Some staff slapped my thigh during the delivery process.					
16	Some staff insulted me during delivery process.					
17	My relatives feel welcome to the facility.					
	EMPATHY					
18	The staff in the facility ensure my privacy during delivery process					
19	Staff permit my relative/ husband to be by me during delivery					
20	Staff respect my beliefs and delivery preference during childbirth					
	TANGIBLES					
21	The delivery ward is clean and appealing at all times					
22	The staff uses modern equipment in the delivery process					
23	The facility has enough staff					
24	The facility has adequate supply of water					
25	Despite been a NHIS subscriber, one has to pay for some/all maternity services					
26	Monies paid in the facility are always receipted					

27	I have access to safe blood transfusion services at all times					
----	---	--	--	--	--	--

SECTION C.

Please tick only one that reflects your intentions toward future childbirth.

28. Which of the following will be your future action regarding Hospital-based childbirth?

☐ Give birth at home

☐ Delay in seeking services in this Hospital

☐ Report promptly at the same Hospital

☐ Change the health provider/ hospital

Appendix VII: Research questionnaire for providers (health workers) only.

QUESTIONNAIRE FOR HEALTH PROVIDERS ONLY

Code.....

Date.....

Hello, I am SOLOMON MENSAH, from University of Ghana Business School. I will like to take your opinion on the quality of hospital-based birth services (maternity) in the Denkyembuor district. I will like to ask you some questions and I assure you that nothing you tell me will be shared with anyone else without your prior consent. The information you provide will facilitate improvement in the quality of hospital-based delivery services in the district and help reduce maternal mortality. You can refuse to participate in the interview or stop it anytime if you wish. Your refusal to participate will not in any way affect your job in any way. With this, I would like your consent.

If you agree to participate in this study, please sign/ thumbprint here.....

SECTION A: Biographic Data

1. Please your age.....

2. Please your income by week is in the range of?

[] below GH Cedis 50.00

[] GH Cedis 50.00 - 100

[] GH Cedis 101.00 – 200.00

[] GH Cedis 201.00 – 400.00

[] Above GH Cedis 400.00

3. Including babies born dead, how many children do you have?

4. Years of practice.....

5. Marital status ☐ single ☐ cohabitating ☐ married ☐ divorce/ separated ☐
widow/ widower

6. Category of staff.....

☐ Ward assistants

☐ General nurse.....

☐ Midwife

☐ Doctor

☐ others

SECTION B

Please indicate your response to the following questions by ticking the corresponding box. 1 represents strong disagree, 2 represents disagree, 3 represents neither agree nor disagree, 4 represents agree, 5 represents strongly agree.

	QUESTIONS/ INDEPENDENT VARIABLES	1	2	3	4	5
	RELIABILITY					
7	I have at my disposal adequate tools to carry out safe delivery.					
8	Doctors are always available at the unit to intervene in complicated deliveries.					

9	There is always good working relationship between staff of all category in the maternity ward.					
10	I received regular in-service training from my employers.					
	RESPONSIVENESS					
11	Staff are never too busy to respond to patient's request or complaints.					
12	I feel motivated to carry out my duties without being called					
13	I explain procedures and findings to patient's understanding at all times.					
	ASSURANCE					
14	There is adequate security on the labour ward for both patients and staff.					
15	Some staff slapped patients' thigh during the delivery process when patient refuse to push.					
16	Some staff use offense words on the during delivery process					
17	Patients' relatives feel welcome to the facility.					
	EMPATHY					
18	There are enough materials to ensure patient's privacy during delivery process.					
19	Staff permit a relative/ husband to be by patient during childbirth process.					
20	Patient are free to decide whether to have C-section or vaginal delivery.					
	TANGIBLES					
21	The delivery ward is clean and appealing at all times.					
22	The staff uses modern equipment in the delivery process.					
23	The facility has enough staff.					
24	The facility has adequate supply of water.					

25	Despite being a NHIS subscriber, one has to pay for some services					
26	Monies paid in the facility are always receipted.					
28	We have access to safe blood transfusion services at all times.					