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FACTORS INFLUENCING UTILIZATION OF HEALTH CARE SERVICES IN DANKU COMMUNITY, WA - UWR

BY

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10600420

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DECLARATION

I, Abubakr Ahmed Farhan hereby declare that apart from references to other people's work which have been duly acknowledged, this dissertation has been written independently by me and has not been submitted for the award of any degree in any institution.

…… …….

ABUBAKR AHMED FARHAN **DATE**

(STUDENT)

..…… ……

DR GENEVIEVE C. ARYEETEY **DATE**

(ACADEMIC SUPERVISOR)

DEDICATION

This piece of work is dedicated to the Most High God by whose grace, wisdom and guidance has seen me through this project.

To my wife Hussein Hamdia, my daughter Bongaamwini Zakira and entire family whose commitment, encouragement and endurance during my absence from home brought this work to a successful end.

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I am highly indebted to the research assistants who helped in collecting data for this study, without whom this study would not be a reality.

Finally, to the people of Danku for allowing me to embark on this study in their community, I say thank you.

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LIST OF ACRONYMS

AIDS	Acquired immunodeficiency syndrome
DPP	Doctor's Private Practice
EmONC	Emergency Obstetric and Neonatal Care
GHS	Ghana Health Service
GSS	Ghana Statistical Service
HIV	Human Immunodeficiency Virus
ILO	International Labor Organization
ITNs	Increase use of Insecticide Treated Nets
MDGs	Millennium Development Goals
NDPC	National Development Planning Commission
NFHS	National Family Health Survey
NHIS	National Health Insurance Scheme
OTC	Over the Counter
STIs	Sexually Transmitted Infections
UNDP	United Nations Development Program
UNHDR	United Nations Human Development Report
WHO	World Health Organization
WMA	Wa Municipal Assembly

DEFINITION OF OPERATIONAL TERMS

ITEM	DEFINITIONS
Health Services Utilization	The use of health services available to people to prevent, cure and promote health.
Health Policy	The collective actions carved to implement and achieve health care goals within a society.
Health effects	Causality, elevation, enabling and/or aggravation of a physical and/or efficient abnormality, with the effect that the defect produced has the probability of reducing the value and worth of life, contributing to an incapacitating illness, or resulting in early mortality.

ABSTRACT

Background:

Several factors influence health care utilization. Albeit a lot of the factors are comparable across geographies, their interrelation and impacts on peoples' actions is often peculiar to a population in the context of the setting they live in. The focus of this study was to assess factors influencing healthcare services utilization in Danku community in Wa Municipality, Upper West Region, Ghana.

Objective: The objective of this study was to assess the factors influencing health service utilization of healthcare services in Danku community in the Wa Municipality of the Upper West Region of Ghana. Specifically, it sought to determine different forms of health care services that households used when ill and assess the proportion of households that used formal health care services when ill. It also determined households' socioeconomic status and its influence on utilization and explored cultural and religious factors that influenced utilization.

Methods: A mixed method approach was applied to collect data. A descriptive cross-sectional study with simple random sampling technique was used for the quantitative study. The study population was adults living in the Danku Community. A sample size of 169 was used. A structured questionnaire was used to collect quantitative data. Data was processed using Microsoft excel and exported to STATA version 15 for analysis. Semi-structured interview guide was used for the qualitative study. Compilation sheet was used to organize and develop themes from the data. The qualitative study involved the use of Key Informant Interviews with heads of households.

Results:

Out of 169 respondents 90(70.3%) fell ill in the last one month and 70(77.8%) utilized a health facility. The mean age was 41.39 years. Factors found to be associated with health utilization was only Source of seeking care (AOR = 0.02, 95% CI 0.00 – 2.26, P = 0.003).

The study found that women do not have the autonomy to seek healthcare when ill because they have to ask for permission from their household heads and some respondents still believed that not all sicknesses are cured by orthodox medicine.

Conclusion:

The findings of this study demonstrates adequate utilization of health services in Danku community. Level of utilization of 77.8% was higher than as observed in literature (50%). Some similarities and variations in associated factors were established. There is the need to invest in improving the NHIS. A lot of patients (13.3%) prefer at home treatment and 17.8% still prefer OTC medications which affects health outcomes. Irregular openings, absenteeism and lack of medications at clinic is affecting utilization.

CHAPTER ONE

INTRODUCTION

1.0. Background to the study

The wellbeing of a society is intimately dependent on the health and survival of its people, more especially women and children. So it is universally acknowledged that when there is survival for women and children, then societies will progress (WHO, 2016). Universal access to primary health care is an intermediary goal by itself; as an essential human right (health), most regimes globally agree to supply health systems that enable equitable access to care for all citizens. Ghana is no exception as the country of focus in this study. Ghana's National Health Policy states that "every citizen has the basic right to adequate health care" GHS (2017).

Utilization of a healthcare facility or system could be dependent on socio–demographic factors, social structures, education, cultural and religious beliefs and practices, gender, women empowerment, politico-economic systems, environmental conditions, and the disease morphology and pattern and healthcare system itself. Through this way, it is possible know how individuals interact with, use the health care system and how they use their autonomy and choice to decide in the best interest of their households to consult different types of healers (M. Saeed Siddiqui, M. Khalid Siddiqui, 2011).

In spite of this, health systems in Ghana, as well as in many other parts of the world, are ineffectual in ensuring access to health care, which results in inequalities in health and health care utilization between different groups in society (Karim, Buse, Vaughan, Karim, & Buse, 2000; Syed Masud Ahmed, Alayne M. Adams & Bhuiya, 2000). This study attempted to

determine factors which affect and or influence health service access and utilization among the rural poor in Ghana, using a community in the Upper West Region as an example.

Previous research indicates that investing in supply-increasing interventions such as expanded service delivery does not necessarily increase *use* of services (Hjortsberg, 2003; Syed Masud Ahmed, Alayne M. Adams & Bhuiya, 2000; Thaddeus & Maine, 1994). Rather, it is advocated that policies aimed at increasing access and utilization should take on both a supply- and demand side approach. Empirical research shows that when ill, a variety of factors influence whether the individual seeks health care or not. These factors include socio-economic status, cultural and religious beliefs, geographical accessibility, disease pattern, waiting times, accessing, and receiving right treatment; as well as health system shortages that compromise the availability, accessibility or standard of care, Sexually Transmitted Infections such as Human Immunodeficiency Virus and Acquired Immuno-Deficiency Syndrome and other opportunistic infections (UNDP, 2012).

In Ghana however, the Ghana Health Service, which has the mandate to increase access to quality healthcare has worked tremendously to change this calamitous trend. Studying the past results and data available at the health sector, the success chalked can be attributed to improvement in general accessibility and utilization of healthcare services as well as concrete social interventions like the Health Insurance Scheme introduced in 2004.

This notwithstanding, a greater percentage of deaths resulting from inadequate utilization of healthcare services emanates from the poor communities. Although much has been done in research in the past, the Upper West Region still lag behind as women and children continue to die daily from preventable causes owing to medical healthcare accessibility problems. Reports indicate that the crude death rate for the Wa Municipality is 5.0 deaths per 1000. Accidents,

violence, homicide and suicide account for 7.4% of all deaths while other causes constitute 92.6% of deaths in the Municipality (GSS, 2014).

Danku, a community in the Wa Municipality, happens to be one of these communities with high rates of illnesses and deaths registered annually. This study therefore, sought to determine the factors influencing utilization of healthcare services in the Wa Municipality, with Danku as a case study.

1.1. Problem Statement

Universal health coverage is built around financial protection and access to comprehensive care for all individuals. The focus in many countries, including Ghana has been on financial protection while accessing health services. Nonetheless, eliminating financial impediments does not necessarily remove other access barriers to the use of health services (Lépine, Lagarde, & Le Nestour, 2018). Indeed, the coverage of a populations' access to health care needs is dependent on varied community and health service factors. Hence, expending in equitable and accessible utilization of health care services is a key block of any health development strategy.

In Danku, a community in the Upper West Region of Ghana, there's no health facility to provide adequate and high quality healthcare services and the residents resort to other forms of health services when ill. These include over-the counter medications, self-medications, unscientifically tested traditional or herbal medicines to cater for their health needs. In addition, to access health services, community members travel for about 8km to the Wa Municipal Hospital or a nearby community-Bamahu, to access formal health care services. In emergency situations like labour or accidents, resultant effects such as fetal distress, maternal and or neonatal mortalities, disabilities and general mortalities are likely to be recorded (Garenne, 2015).

A majority of residents in this community are poor peasant farmers. Studies show that the poor people have less odds to utilize health care as against the rich (D. Boateng & Awunyor-Vitor, 2013; Jehu-Appiah et al., 2011; Oxfam, 2013). Generally, poor communities are caught up in a vicious cycle of poverty and health related web as their disease burden increases resulting from increased distance from the nearest health facilities available with little or no utilization (Billi, Pai, & Spahlinger, 2007). Even though there is evidence about utilization rates and factors influencing it in the general population, not much is known about that of peri-urban communities in Ghana like Danku. Additionally, existing literature have shown that utilization among the poor is low (Good & Kimani, 1980; Wang, Yip, Zhang, Wang, & Hsiao, 2005)

This study thus determined factors influencing utilization levels among peri-urban dwellers in Ghana using Danku as a case study.

1.2. Justification of the study

Ghana's maternal and under-five mortality ratios remain unacceptably high irrespective of different magnitudes of efforts and initiatives by government and her development counterparts to reduce them. A huge population of women still die every year owing to pregnancy complications and problems such as: severe haemorrhage, eclampsia, pregnancy induced hypertension, infections, and incomplete or septic abortions (Bustreo et al., 2013). There must therefore, be collaborative efforts aimed at improving and maintaining the recent maternal and child survival specific and sensitive interventions which brought some improvement in the goal 4 and 5 of the Millennium Development Goals. Some of these interventions include: separating parents from their wards or children for effective NHIS coverage; increase use of Insecticide Treated Nets (ITNs); implementation of free maternal health services; and Emergency Obstetric and Neonatal Care (EmONC) (UNDP, 2012).

For all these interventions to achieve the desired results, access to quality and timely health care by new mothers and their children is crucial. However, access and consumption of health care services in the rural areas is still a major worry (UNDP, 2012).

The study therefore sought to bring to the fore possible causes or factors that have an influence on the utilization of health care services in the Wa Municipality with much concentration on rural inhabitants.

The outcome of this study will inform decision makers in the country as to whether or not to scale up the implementation of innovative schemes to other parts of the country in order to improve upon health condition of the rural people, more especially maternal and child health care services delivery. It will also add to the empirical studies on the subject and help bridge the gap in literature.

1.3. Objectives of the study

The objectives have been divided into general and specific as below.

1.3.1. General objective

The main aim of the study was to assess the factors influencing utilization of health care services in Danku, in the Upper West Region of Ghana.

1.3.2. Specific objectives

The specific objectives of the study were to:

1. To assess the different forms of health care services that households use when ill
2. To assess the proportion of households that use formal health care services when ill
3. To determine how socio-demographic/economic factors influence utilization
4. To explore how socio-cultural practices/factors influence healthcare utilization.

5. To assess how geographical/health facility factors influence healthcare utilization.

1.3.3. Research Questions

The main research question of the study is:

What are the factors influencing utilization of healthcare services in the Danku community?

Specifically, the study sought to address the following questions:

1. What are the different forms of health care services that households use when ill?
2. What proportion of households use formal health care services when ill?
3. Do household's socio-demographic/economic status have influence on healthcare utilization?
4. How does socio-cultural practices/factors influence utilization of healthcare service in Danku?
5. What are some of the geographic/facility factors that influence utilization of healthcare services in Danku?

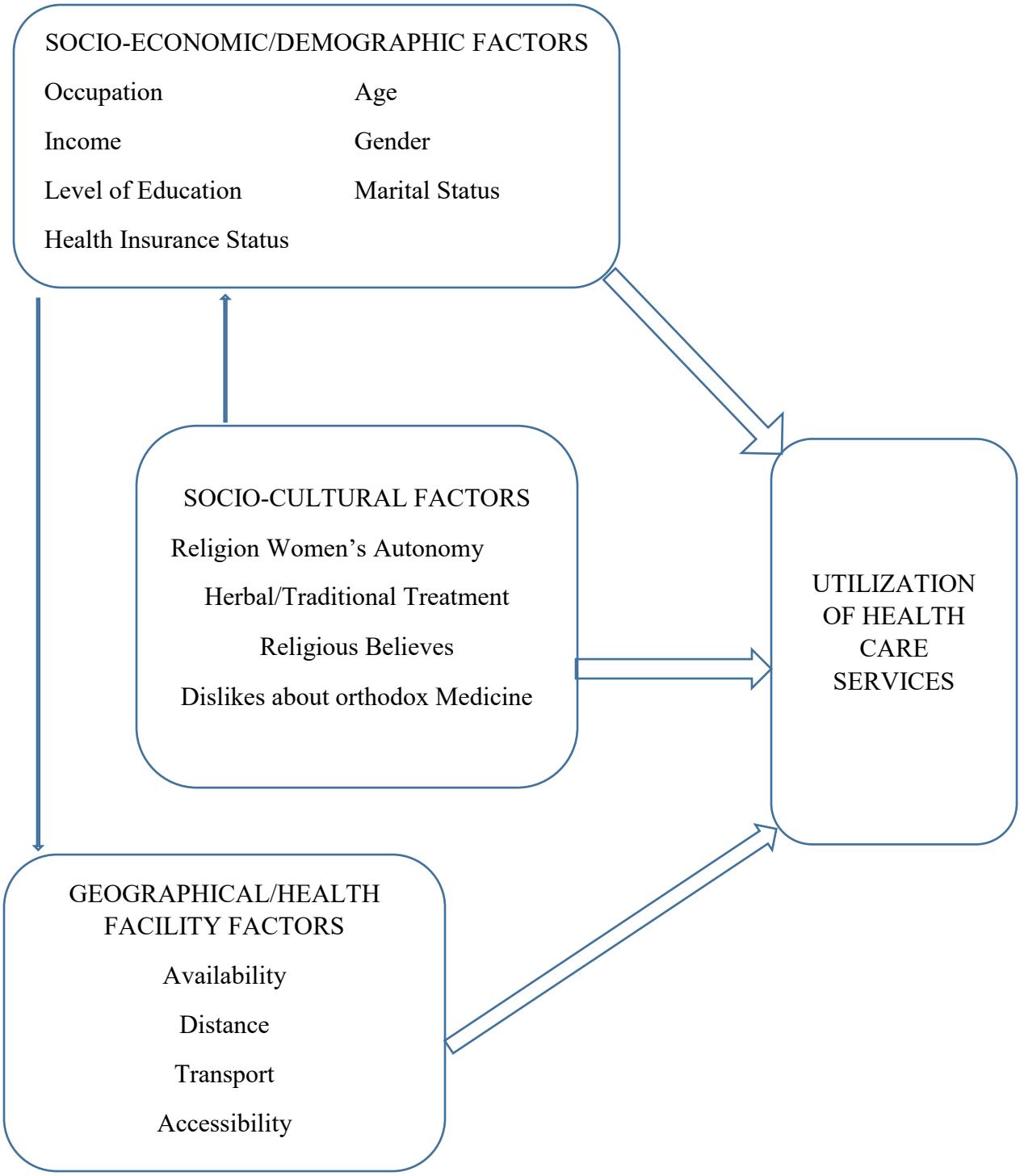
1.4. Conceptual Framework

The conceptual framework in figure 1.1 depicts the interactions between the various factors that influence utilization of health care services. The outcome variable was utilization of health care services. Utilization can be influenced by socio-demographic/economic, geographic or socio-cultural factors**.** One of the most critical factors that can influence utilization is the socio-economic or demographic characteristic of the individual such as age, marital status, occupation, educational status, source of care, and source of income. Age is a factor that can suggest a person's physical and mental ability to comprehend issues relating to health. These factors are the demographic characteristics. Socioeconomic factors largely determine the amount of utilization at a time of need. It influences utilization behavior because components such as perception, need and reaction towards symptoms: disease awareness; stimulus to recuperate, and

access to or choice of healthcare services (Morreale, 1998). Education and income most times leads to increased use of healthcare, especially preventive visits; conversely, well-informed people suffer less episodes of acute diseases (Morreale, 1998).

Geographical barriers/Health facility factors:

Economic and geographical accessibility mainly influence whether a woman actually reaches the health facility (Jat, Ng, & San Sebastian, 2011). Much is known and documented about accessibility issues confronting rural areas inhabitants whether in advanced countries (Andmvs, 2001), or under-developed countries (Mehrotra & Jarrett, 2002). Many other factors challenging those in the rural areas include less quality-care provision and the capacity of the available nearest health facilities. With restricted options for the rural population, limited choices become imposing on them, they tend to use any health facility nearest to them, over taking or no action at all, or possibly, they rather prefer alternative therapies (Eisenberg et al., 1998), traditional methods (Good & Kimani, 1980), and/or self-medications (McCombie, 2002; Swinkels & Schulpen, 1980). Several factors influences the choice of healthcare service, physical access to healthcare, availability of transport means and road networks. The distance barring the prospective patients from the nearest health facility is an important barrier to health utilization, especially in deprived or rural jurisdictions (NoorAli, Luby, & Rahbar, 1999).



Chapter One Figure 1.1. Conceptual Framework of factors influencing utilization of health care services.

CHAPTER TWO

LITERATURE REVIEW

2.0. Introduction

2.1. Overview

Utilization of healthcare

The choice of healthcare service provider and the subsequent utilization of healthcare services is a complex multifaceted process, especially in the context of a developing nation like Ghana. The National Population and Housing Census data highlights a perplexing scenario in Ghana that is characterized by low utilization rates of public healthcare services in most rural communities, most especially the three regions of the northern sector of the country. Therefore, given the relevance of public services in a welfare state like Ghana, the key question that lies at the heart of healthcare services scenario is related to the factors influencing the utilization of healthcare services. Data available shows that Wa Municipal has made some progress on mortality but still has a long way to go in attaining the Millennium Development goals (GSS, 2014). Out of the 10 districts across the upper west region, the Wa Municipal Assembly recorded the fourth highest in deaths related to accidents, violence, homicides, suicides and all other causes of 7.4% and 92.6% respectively out of total deaths of 538 recorded in the Wa Municipality from the total regional death records of 6,346 (GSS, 2014).

In the same year, deaths in households were 538 (crude birth rate of 5.02 per 1000) of the total deaths of 6,346 and a population of 107,214 and 702,110 for the municipality and region respectively.

Empirically, numerous research have been carried out in developing countries to identify the elements influencing the use of healthcare services (Peters et al., 2008). The evidence shows that the main common cause of underutilization of health care services has to do with cost (Castro-Leal, Dayton, Demery, & Mehra, 2000). However, the works of Garshong (2011), Mills et al. (2012), have outlined other barriers to health care accessibility.

Key access barriers found in Garshong and Akazili (2015), report included economic factors such as direct and indirect costs to seeking health care. Many health facilities are located long distances away from the population they serve. Travel time and cost, including waiting time deter many poor rural populations from seeking health care. Others include organizational factors with regards to availability of staff and equipment and frequent referrals, which many poor people find difficult to adhere to. Unpredictability of opening hours in small rural facilities is a challenge. Poor staff attitudes and lack of confidence in some health facilities in dealing with health needs of segments of the population deter use. Lack of awareness of entitlements and information on the Health Insurance subscription hinders use of health care (Agyepong et al., 2017).

2.2. Theoretical models to explain utilization of healthcare services

Researchers from different disciplines of economics, anthropology, epidemiology, public policy and management have explored the reasons behind utilization of healthcare services by an individual. There are diverse paradigms to explain healthcare services utilization. For instance, a psychological model based on social structure and individual medical orientation (Suchman, 1965), the health belief model based on the various perceptions and motivations of the individual (Rosenstock, 1974), and utility driven healthcare seeking decision steps model (Young, 1980), have been suggested.

With regard to the healthcare seeking behavior of an individual, the focus is on contextual elements related to the socio-economic conditions of the individual and the prevailing health system characteristics (Dusanee & Pranee, 2014).

Consequently, the focus of healthcare services utilization research from a behavioral perspective is on identifying the most appropriate factors (both individual and environmental) that may influence the choice of the healthcare services provider (Omu & Reynolds, 2012).

There are two major frameworks that have been proposed to explain the healthcare services utilization of an individual from the behavioral aspect. These are: Andersen and Newman model and the Kroeger's model (Andersen & Newman, 1973; Kroeger, 1983).

Considered as one of the seminal works in the area of health care services utilization, Andersen and Newman's (1973) framework envisage that an individual's use of health care depends on three components: predisposing, enabling and need/illness level. Predisposing component tries to explain the inclination of an individual towards use of health services prior to beginning of an illness episode. It consists of demographic, social structure and belief variables. Enabling component consists of variables that play a supporting role in fulfillment of an individual's need of health care. It consists of variables representing family attributes and community resources. Need/illness level focuses on the immediate grounds for use of health services by an individual. It consists of perceived illness and evaluated illness levels for the individual.

The second prominent framework is given by Kroeger (1983), who on the basis of a detailed literature review in the field of healthcare utilization proposed a conceptual framework suitable for both developed as well as developing countries. His framework consisted of patient characteristics, disorder characteristics, patients' perception and service characteristics as key characteristics of health care services utilization.

Patient characteristics' is similar to predisposing factors suggested by Andersen and Newman (1973). It included demographic and society related variables. Disorder characteristics consisted of the severity and nature of the disease. Patient's perception consisted of perceptions of expected benefits of treatment, perceptions about disorder type and perceptions about cause of the disease. Service characteristics consisted of variables representing systemic and enabling factors such as accessibility, appeal, acceptability, quality, communication and cost of health services. Kroeger (1983) identifies four different types of healthcare service resources available to a patient. These include the modern treatment, traditional healers, drug sellers and self/no treatment. He argues that meaningful approaches to understand healthcare utilization should take into consideration the cultural fabric of the geography and the subjects.

2.3. Factors influencing health care services utilization

These frameworks of healthcare services utilization (Andersen & Newman, 1973; Kroeger, 1983) have been applied on patients suffering from specific ailments as well as on the general usage of healthcare services (i.e. utilization of healthcare services without focusing on the nature of ailment). The present dissertation was concerned with general healthcare services utilization. The literature reviewed here deals with application of the established frameworks for general healthcare services usage. It is focused on terms of the determinants that are part of the said frameworks and that may influence an individual in making the choice for the healthcare services provider. Empirical studies have suggested a number of modifications in the above stated frameworks depending on the context where these studies have been carried out Yang & Hwang (2016). A review of these factors would assist in building the required framework for this dissertation.

2.3.1. Socio-demographic/economic characteristics and their influence on health care utilization

a) *Age and Gender*

Socio-demographics such as age and gender have a relationship with health services utilization. Andersen and Newman (1973), cited age as a demographic variable that may shape a person's choice to utilize health services. Earlier research conducted reported age to be associated with health utilization. Studies done in advanced countries indicated that a person's chances of utilizing healthcare increased with age for a person (Lahana, Pappa, & Niakas, 2011); (Jatrana & Crampton, 2009)-New Zealand; (Asada & Kephart, 2007)-Canada; (Forbes & Janzen, 2004)-Canada; (Hendryx, Ahern, Lovrich, & McCurdy, 2002); (Birch, Eyles, & Newbold, 1993)-Canada

Similar results are observed for studies done in developing nations such as Ecuador, Bangladesh, China, India, and Nepal (Amin, Shah, & Becker, 2010; Chakraborty, Islam, Chowdhury, Bari, & Akhter, 2003; X. Chen, Chen, Li, & Wang, 2009; Kavosi et al., 2017; Lopez-Cevallos & Chi, 2010; Majumder, 2006; Subedi, 1989; Vissandjée, Barlow, & Fraser, 1997).

Andersen and Newman (1973), recognized gender as important and classified among demographic variables under the predisposing component in their model describing an individual's utilization of health services. Kroeger (1983) also suggested gender as part of his model describing the utilization of health services.

Studies done in advanced nations have shown that women are more perceptive and responsive concerning their health needs because women are more concerned, active socially and dedicate more time and attention towards their health (Parslow, Jorm, Christensen, Jacomb, & Rodgers,

2004). Usually, women visit health facilities than men, which relates to higher morbidity amongst women. Gender inequalities negatively affect healthcare utilization. Outcomes of impact of gender on health utilization are of varied nature. Some authors report that females do not access health care services, whilst others found that gender has no effect on health utilization (Arcury et al., 2005; Asada & Kephart, 2007; Forbes & Janzen, 2004; Hendryx, Ahern, Lovrich, & Mccurdy, 2002; Jatrana & Crampton, 2009; Lahana et al., 2011).

Aside being accessible, factors such as finance status thus income, education, health insurance status, prevailing political issues enhance utilization of healthcare. Similar to many developed countries, studies done in developing countries show that gender is an important determinant of health services utilization (Ahmed et al., 2000; Thind, 2005). However, contrary to developed nations' findings, majority of these studies reveal that females have low odds to utilize healthcare services owing to social status issues. Taylor, Sarma, Parker, Reinke, and Faruquee (1983) found in rural India in a study that, health utilization levels within 15 – 49 years married women group variations didn't realize any significant differences.

In advanced countries, the aged have easier financial access to health services through risk protection from social security services. The situation is however, the opposite in poor countries as is same in the study area where financial risk protection mechanisms are either weak or not in place, rendering most of the aged helpless and relying on the benevolence of family and other close relatives.

In a Ghanaian rural district, a survey conducted on access together with utilization of health services by Buor (2004), indicated that the aged used health services less as compared with the youth. More visits to the clinic were recorded among those aged 20 and below than those older than that. Those older than 50years visited the clinic very seldom. The rationalization could be

that the aged mostly depend on the working age class for sustenance and livelihood; consequently, their resolve to use clinical services was restricted by either moral, physical or fiscal support.

b) *Religion on utilization*:

All religions have their own doctrines and peculiar impacts on peoples' and societal norms. Especially in the Ghanaian context, religious healers are regarded essential in health care delivery and this influences peoples decision to utilize health services or not. This is consistent with findings of Ghosh (2006), who found that Muslim women from rural India did not use contemporary maternal health services as equated to Hindu women. Comparable results were indicated by Thind (2005), on women's use of contraceptive services in rural Bihar, India. His findings indicated that Muslim women were less responsive to modern contraceptives and reproductive healthcare services. Bonu, Rani, and Baker (2003) using India's National Family Health Survey – 2 data, reported that Hindu women were more responsive and likely to seek healthcare services from private providers as compared with Muslim women for gynecological healthcare issues.

c) *Income*:

Habib and Vaughan (1986), in a study in rural Iraq, found that secondary and tertiary health services and private facilities realized a proportionate increase in utilization as income levels rose. Similarly in Indonesia, Economou, Nikolaou and Theodossiou (2008), also found that lower incomes were a hindrance to access and utilization of facilities. Studies determined in a study that the proletariat and poor have less access to health services in third world nations (Donnell, 2007; Peters et al., 2008). Occupation is a causal factor, because it is a determinant of income, hence a facilitating component. Work status is also an element of income or social

status. However, not much studies seem to have been done establishing the wedlock among work position, caliber of work and white-collar repute and utilization in emerging countries. More studies need to be done on those thematic areas (Montevecchi, 2012).

d) *Education*:

The educational level one attains influences one's health seeking behavior. It is an important determinant of health utilization. Demand for health services and educational level of an individual are positively correlated (Mohammadbeigi, Arsangjang, Mohammadsalehi, Anbari, & Ghaderi, 2015). The literate and educated people are more sensitive to their healthcare needs and are more responsive to utilization (Kalin, 2011).

Uneducated income earners have less odds of using health facilities as compared with the educated within same income category with them (McDonald & Pool, 2016; Wong, Popkin, Guilkey, & Akin, 1987).

Educated women have the tendency to visit a health facility as compared with the uneducated, and the woman's literacy level and the number of children living with her influence her choice of antenatal and post-partum care (J. Boateng & Flanagan, 2008). Of greater essence in determining utilization of health is the mothers' education and the educational levels of mothers are generally associated with outcomes such as neonatal deaths, best feeding practices, and judicious consumption of healthcare services (Cantarutti, Franchi, Monzio Compagnoni, Merlino, & Corrao, 2017). In the Philippines, Wong et al., (1987), found that enhanced knowledge of females was linked with high utilization of antenatal services. A study conducted by in Kenya, Egypt and Bolivia showed, knowledge levels greatly decided women use of reproductive health services (ILO, 2009).

In Ghana for instance, educational levels of mothers with children influences child immunization. As a proportion of 42.2% of uneducated mothers immunized children under their care against Polio, Measles, Diphtheria and Bacillus Calmette-Guerin between 2009 and 2012,

86.7% of educated mothers immunized their children. In Ghana, it is established that a strong and direct link exists between tetanus toxoid vaccinations and mothers educational level, an element that determines parental and children's health (GSS, 2014). Impact of mothers education and choice to use healthcare have positive correlates with better health outcomes for their children through better nourishment and health service utilization (Zewdie, 2014). A study in India determining the effects of educational level differences for mothers on boys and girl (Cantarutti et al., 2017), found that enhanced mother's educational levels decreased mortality below five years for both sexes among all ages.

e) *Health insurance*:

It is instrumental utilization, but much attention has not been given to it in strengthening it in most countries. In developing countries where insurance exists, utilization is usually higher for the insured patients.

In Ghana, the national health insurance scheme significantly increased the proportion of pregnancies with at least four antenatal care visits with 7 percentage points and had a significant effect on skilled attended deliveries (10 percentage points) (Bonfrer, Breebaart, & Van de Poel, 2016). A study of the Bwamanda hospital insurance scheme in Zaire (Democratic Republic of the Congo), found that utilization was high among patients that were insured (Criel, Van der Stuyft, & Van Lerberghe, 1999). Supakankunti (2000), examining the prognosis of volitional health insurance in Thailand, established that high utilization rates of healthcare was due to the institution of the Health Card Programme. This led to improved attainable and gratification levels among the subscribers. Chen, Wen, and Li (2001), also concluded in a survey on the influence of health insurance on the utilization of healthcare services by expectant mothers in

Taiwan that the utilization of antenatal and pregnancy expensive care services greatly grew after the inception of the national health insurance plan.

2.3.2. Geographical/Health facility factors influencing utilization of healthcare services

This section presents literature on geographical/health facility factors influencing utilization of healthcare

(a) *Distance*:

Distance is one of the many factors that may interact with others to influence utilization. People are less likely to travel more than 5km to access care (Müller, Smith, Mellor, Rare, & Genton, 1998). In a study looking at the relationship between health utilization and distance in Papua New Guinea, it was established that utilization fell considerably as the distance increased (Müller et al., 1998). A proportionate 50% decrease in patients attendance to the facility was observed as the distance to the facility increased to 3.5 kilometres. In assessing clinic service inequalities in Chilimarca, Bolivia & Kinman (1999) found that in earmarked zones, clinic clients were clustered within the community enclave, as distance to clinics increased, there was an accompanying decrease in utilization. In Nigeria, Stock (1983), found that utilization per head decreased below tierce of 0-km rate as distance increased to 5kilometres from the dispensary.

Wilson et al., (1997) in a study conducted at Nsawam found that distance from home to the hospital was one of the many factors for low utilization rates. In the Jasikan District in Ghana, distance decay played a major role in health service utilization. Many factors get in the way with mileage disturbance such as social class status, high quality-care, the attributes and type of sickness. In rural Nigeria for example, people prefer to travel far distances for specialist consultations, or high quality care. Specialist services and good services provided can adjust distance-decay. Distance decay may also come to play during emergencies. In Western India, a research on gender discrimination in medical treatment for children under five years exposed that

parents were ready to seek care for their sons at a greater distance than they would do for their female children. This could be ethnic (Bailey & Phillips, 1990; Chappell, 1986; Feikin et al., 2009; Ganatra & Hirve, 1994; Stock, 1983).

(b) *Time accessibility*:

Time can have an effect on utilization in several ways such as transportation duration, waiting time at the facility and appointment waiting times with the consultant. In under-developed nations, time used to reach the facility and clinician response time was essential in measuring utilization Vissandjée et al., (1997). In under-developed countries, waiting times is not considered a classical component of the healthcare system (Al-Ghanim, 2004).

2.3.3. Socio-cultural factors influencing utilization of healthcare services

Studies conducted in developed countries have shown that culture is a significant variable in controlling healthcare utilization for an individual. Though the terms may be culture specific, empirics indicate that religious conviction or tradition play a role in determining health utilization (Arcury et al., 2005; Hendryx, Ahern, Lovrich, & Mccurdy, 2002; Jatrana & Crampton, 2009; Kushel, Gupta, Gee, & Haas, 2005; Lahana et al., 2011).

In India, Nigeria, and Ethiopia, Kroeger (1983), also found that children patronized traditional Medical Practitioners (TMPs) services, whilst Good and Kimani (1980), in India, established that females visited TMPs most. They constituted 55 to 60% of physician-client contact. Poverty, ignorance, and cultural practices could be the reasons. Ethno-medicine is inherently entrenched in deprived communities of under-developed nations where access is poor and there is less knowledge of scientific medicine. The study hasn't shown how socio-economic indicators and place of occupancy affects utilization.

In a work on women's access to healthcare by Ojanuga and Gilbert (1992), in emerging countries, they established the premise that several socio-cultural elements negatively impose upon the physical well-being and accessibility of suitable health care facilities of women. In

under-developed nations, women positions correlate with their utilization of healthcare services, since men who monopolize and dominate family rulings are strong determinants of health care utilization (Santow, 1995).

The review of the literature on the factors influencing health care services utilization such as access and utilization are peculiar to both, with comparative strengths, whereas some are explicit either one of the two. Whereas distribution or sufficient availability of health services, proximity, cost of care, salary have moderate effect on urban areas, they rather have strong effect on rural and or peri-urban areas; and whereas education doesn't strongly influence utilization in advanced countries, it is a key determinant in under-developed societies. Excellence of care has a mild impact in rural areas payable to high poverty levels, but has an imposing influence in urban areas. Also, religion and culture also have influence on utilization levels across a population.

2.4. Summary of the chapter

This chapter on review of literature revealed that copious amount of research was conducted on utilization of healthcare services and its determinants. Various explanations were available for utilization of health care services among rural, peri-urban and urban settings and included socio-demographics, socio-economic, physical, cultural, staff attitude and geographic factors. It is also evident that the determinants are not consistent in different regions and countries; they vary between and within different geographical locations. It is hoped that findings from this study may throw more light on how to improve access and healthcare utilization in the Upper West Region. The next chapter presents the methods applied to collect data for analysis in the study.

CHAPTER THREE

METHODS

3.1. Introduction

This chapter describes the procedures carried out to collect data for analysis so as to achieve the objectives of the study. This chapter therefore, provides information on sample size, sampling technique, the instruments for data collection, quality control and data analysis procedures.

3.2. Study Design

The design used for this study was a cross-sectional descriptive survey where data collection occurred at a single point in time for each household head (Fraenkel & Wallen, 2009).

Key informant interviews were also used to elicit responses from the respondents.

3.3. Study site

The study was conducted in Danku, a community situated approximately 8km away from the Wa Municipality, located in the southeastern part of the Wa Municipality of the Upper West Region. It shares boundaries with Bamahu to the west – a community in which the University for Development Studies is located and the Wa Senior High School to its west. The Municipality is located between latitude 1°40N to 2°45S and longitude 9°32 to 10°20W. Danku shares boundaries with Sing to the East, Kampaha to the North and Wa Central to the North - all in the Wa municipal area. It is a highly mobile resource-poor nucleated settlement, with most of the residents lacking access to clean water and adequate sanitation and without access to standard structured CHPS compound for healthcare access and poor road network (Gyimah, 2015).

The community has one enrolled nurse who doesn't report to work regularly.

3.4. Study population

The study population consisted of heads of households selected from the Danku community. It is a community with 1,299 people and households of 152 with 184 houses (GSS, 2014).

3.4.1. Inclusion criteria

The inclusion criteria involved household heads who were18 years or older and consented to participate and were residents in one of the households in the selected study area. These people should have stayed in Danku continuously for at least two (2) months in the preceding six (6) months to the study.

3.4.2. Exclusion criteria

The exclusion criteria included all household heads who were not residents of Danku but were not visitors and household heads who did not consent to participate in the study. Household heads who had not stayed in Danku for more than two (2) months in the preceding six months were also excluded.

3.5. Sampling

3.5.1. Sample Size determination

The sampling strategies have been explained below.

Sample size for the study was determined using Cochrain's formula (Lépine et al., 2018);

$$n = \frac{Z^2 \times PQ}{d^2}$$

where:

n = desired sample size

Z = the standard normal deviation, set at $\alpha = 0.05$ based on 95% confidence interval = 1.96

P = sample proportion (50% or 0.50)

d = the allowable margin of error = 0.05

thus, n = $\frac{(1.96)^2 \times 0.50 \times 0.2}{(0.05)^2}$ = 153.66

n = 154 + 10% (15) nonresponse rate = 169

Therefore, a minimum of 169 households were selected.

3.5.2. Sampling method

Systematic random sampling method was used in selecting households from the community to participate. A list of all houses within Danku were compiled as the sampling frame. An estimated 169 households were selected from the community for the study. The interval (K) was derived by dividing the number of households by the sample size. The first household was selected at random and the subsequent households were selected with the generated interval of eight(8). This pattern continued until all the households needed for the study were covered.

Four(4) key informants were also recruited for the key informant interviews. They comprised the Chief Imam of the area, Assembly Man, Enrolled Nurse and the Chief.

3.6. Study variables

The variables that were measured in the study were grouped into dependent and independent

Dependent variable: Utilization of health care services

The dependent variable, utilization, was measured as a binary variable by asking whether the respondent in the household fell sick and visited a health facility in the last one month preceding the interview. The responses to this question “Yes” or “No” are coded 1 and 0 respectively.

This variable was used to measure health care services utilization, with the code 1 representing utilization and 0 representing non-utilization.

Independent variables:

- Socio-demographic/economic characteristics including religion, choice of healthcare, socio-economic status.
- Geographical/Health facility factors: distance and transport to health facility
- Socio-cultural practices/factors

Chapter three Table 3.1: Variable description

Variable	Description	Scale of Measurement
Dependent Variable		
Utilization of health services	It took the value 1 if household members used a formal health care service when ill and 0 otherwise.	Binary
	Independent variables	
	Socio-demographic/economic variables	
Age	Age at last birthday	Continuous
Sex	Sex of household head	Categorical
Marital status	Marital status of respondent	Categorical
Religion	Religious status of respondent	Nominal
Language	Language(s) spoken by respondent	Nominal
Ethnicity	Tribe or ethnic group	Qualitative
Household Income	Amount of money received by household.	Continuous
Employment status	Form of employment of respondent	Nominal
Education	Highest level of formal education attained by respondent	Ordinal
Health seeking patterns of households	Explores or identifies various sources that households resort to when ill	Nominal
Choice of health care facility	Type of health care sought by respondent during illness	Nominal
Women autonomy, traditional healing, orthodox medicine dislike	Socio-cultural practices	Qualitative
Distance, means of transport	Geographical/Health facility	Qualitative and Nominal

3.7. Data collection methods and tools

Two research methods used to collect data have been explained below.

Structured questionnaires were used to collect quantitative data from 169 household heads. The questionnaires were designed in English, but the questions asked in the local dialect (Waale) for better understanding of participants who did not have any formal education. The questionnaires were constructed to reflect the variables of the study. The questionnaire was close-ended questions designed to elicit information regarding household factors influencing utilization of health care services by members of Danku. Each household head completed one questionnaire. Questionnaires were administered by the principal investigator and three research assistants. At the community, the purpose of the study was explained to the participants for their consent to be obtained before questionnaires were administered. The respondents were assured of confidentiality of information that was collected during the study. Those who agreed to participate in the study signed or thumb-printed a consent form (see appendix A). Each completed questionnaire was checked for completeness of information.

Qualitative Data

Key informant interviews were conducted to measure the effect of socio-cultural factors influencing utilization of healthcare services. The interviews were recorded using a mobile phone recorder.

3.8. Data processing and analysis

Quantitative Data Analysis

Data was processed using Microsoft excel and exported to STATA version 15 for analysis. Frequency tables and bar charts were used to indicate proportions of the results from the respondents. Logistic regression was used to find associations and those with significant associations were further analyzed using multiple logistic regression analysis. P-value of <0.05

was used as the acceptable p-value. Confidence intervals were also used to determine strength of associations where the P-value was insignificant.

Qualitative Data Analysis

The qualitative data was collected using a semi-structured interview guide. Four key informants were used as the participants at their respective residences. The duration of each interview were as follows: respondent 1 = 6mins, respondent 2= 5mins 46sec, respondent 3 = 7mins 08sec and respondent 4 = 5mins 23sec.

A compilation sheet was used to analyze the transcribed interviews and categorized into theme where codes developed.

3.9. Quality Assurance

Data was collected by a team comprising four members, the Principal Investigator (PI), and three Research Assistants (RAs). Three research assistants who spoke and understood the local language of the area and had been engaged in previous surveys were recruited to collect data for the study. A one-day training session was organized by the PI where the RAs were trained on issues of privacy and confidentiality, consent seeking before interview and how to ask questions on the questions.

Questionnaires returned were checked for mistakes and completeness. Data collected was keyed into both Microsoft Access and Microsoft Excel by two different entry clerks to check for data errors and ensure validity.

Qualitative data recorded were deleted from the mobile phone after transcription.

3.10. Ethical Clearance

Different strategies were used to ensure that ethical issues were addressed.

Ethical clearance was obtained from the Ghana Health Service (GHS) Ethical Review Committee for the study under Code GHS-ERC: 74/02/18.

Permission from the study site

Permission was also sought from the Wa Municipal Assembly before the study was conducted.

Informed Consent

Respondents signed a written or thumb printed a consent form after a detail explanation was made to them before they participated in the study. Participation in the study was voluntary and participants were allowed to answer or not to answer any individual question or all the questions. Participants were at liberty to withdraw from the study at any point in time of the study. However, participants were encouraged to fully participate to ensure that results from the study were a true reflection of the factors associated with utilizing health care services in Danku Community (see appendix A).

Confidentiality

To ensure confidentiality, the questionnaire was coded and names of respondents were not filled out on the questionnaire. Respondents were given the optimum privacy during filling of the questionnaires. Data collected in this study was strictly for research purposes and anonymity was ensured in dissemination of findings from the study since participants were not identified by their names.

Conflict of Interest

The researcher as the principal investigator declares that there was no conflict of interest in the study.

Potential Risk / Benefits

Aside the time that was spent in answering the questionnaire, the study posed no risk to the participants and there were no direct benefits of the study to the researcher. The findings added up to knowledge for the community's benefit and the nation at large.

3.11. Summary of the Chapter

This chapter outlined the strategies and methodology employed in gathering data and its analysis. The study used a mixed method with qualitative semi-structured interview guide collecting data on socio-cultural practices/factors influencing healthcare utilization, whereas structured questionnaire was used to collect quantitative data. A total sample size of 169 household heads who had stayed in the community for the past 1-6months were used for the study and must be an adult.

All participants' consent were sought, confidentiality of data was assured and both risks and benefits therein explained to them. Data collected was crosschecked for completeness and cleaned with Microsoft excel and then analysed with STATA version 15. Microsoft excel was used to generate graphs and tables. The next chapter presents the results/findings from the study.

CHAPTER FOUR

RESULTS

4.0. Introduction

This chapter of results is divided into six sections. Section one presents information on socio-demographic/economic characteristics of respondents who were involved in the study, describes their socioeconomic status and utilization of health care services. Section two describes choice of health facility when ill by households, and results on geographical/health facility factors that influence utilization of health services. Section three presents results on the socio-cultural practices/factors on utilization of health services.

4.1. Socio-demographic characteristics of respondents

One hundred and sixty-nine (169) household heads were interviewed in the Danku community. Of the 169 household heads, 93(55.03%) of them were females. The mean age of household heads was 41.39 years (SD 19.4) and a mean household size of 6.60. Most 50(29.6%) of the household heads were above 45years old. On average, there were 4 members per household (SD 3.1). The smallest household size was 1 and the largest household had 25 members. There were 169 households that were included in the study. Out of this number, 38(22.5%) of household members were between 18 and 25years, 49(28.9%) were between 26 and 35 years old, 32(18.9%) were between 36 and 45 years old and majority, 50(29.6%) were 45years old and above.

Chapter Four - Table 4.1: Socio-demographic/economic characteristics of respondents

Variable	Frequency	Percentage
Age of respondents		
18 – 25	38	22.5
26 – 35	49	28.99
36 – 45	32	18.93
45>	50	29.59
Household Children < 12years	11	6.51
Sex of Household Head		
Male	76	44.97
Female	93	55.03
Educational Level of Household Head		
No Schooling	81	47.93
Primary	19	11.24
Middle/JHS	32	18.93
SSS/Voc/Technical	22	13.02
Tertiary	15	8.88
Religion of Household Head		
Christianity	17	10.06
Islam	152	89.94
African Traditional Religion	-	-
Other(s)	-	-
Marital Status		
Married	132	78.11
Widow/Widower	15	8.88
Divorced	-	-
Single	22	13.02
Employment Status		
Yes	134	79.29
No	35	20.71
Type of Employment		
Artisan	39	23.08
Unemployed	35	20.71
Farmer	35	20.71
Trader	26	15.38
Government Employee	15	8.88
Student	8	4.73
Others	11	6.51
Ethnicity		
Dagaare	16	9.47
English	5	2.96
Sissale	2	1.18
Waale	146	86.39

The proportion of household heads without formal education was 81(48.5%). Of the 88(51.5%) household heads in Danku who had formal education, only 13(7.7%) had education beyond secondary school level. Close to 89.9%, (152) of household heads were Moslems. Most, 132 (78.1%) of the household heads were married.

A majority 134(79.3%) of the household heads were employed while 35(20.71%) were unemployed. Only 15(8.9%) of household heads were government employees (Table 2). Of the 35(20.7%) unemployed household heads, most 81(47.9%) of them had no formal education and most 50(29.6%) of them were above 45 years.

The Waale language constituted majority (86.4%) of the respondents as compared with Dagaabe, English and Sissale which constituted 9.5%, 2.3% and 1.2% respectively. The results are shown in table 4.1.

Chapter Four - Table 4.2: Visit to health facility and sociodemographic characteristics

Variable	Visited	Not visited	*P-value*
Age of respondents			
18 – 25	16(22.86)	3(15.00)	
26 – 35	21(30.00)	7(35.00)	
36 – 45	10(14.29)	2(10.00)	
45>	23(32.86)	8(40.00)	0.759
Sex of Household Head			
Male	26(37.14)	8(40.00)	
Female	44(62.86)	12(60.00)	0.816
Religion	7(10.00)	1(5.00)	
Christianity	63(90.00)	19(95.00)	
Islam			0.488
African Traditional Religion			
Educational Level			
No Schooling	34(48.57)	12(60.00)	
Primary	8(11.43)	0(0.00)	
Middle/JHS	16(22.86)	2(10.00)	
SSS/Voc/Tech	9(12.86)	3(15.00)	
Tertiary	3(4.29)	3(15.00)	0.153
Marital Status			
Married	56(80.00)	11(55.00)	
Widow/Widower	4(5.71)	4(20.00)	
Divorced	10(14.29)	5(25.00)	
Single			0.051
Type of Employment	19(27.14)	4(20.00)	
Artisan	17(24.29)	4(20.00)	0.938
Unemployed	10(14.29)	3(15.00)	
Farmer	11(15.71)	4(20.00)	
Trader	5(7.14)	2(10.00)	
Government Employee	3(4.29)	2(10.00)	
Student	5(7.14)	1(5.00)	
Others			
Ethnicity			
Dagaare	7(10.00)	1(5.00)	
English	2(2.86)	0(0.00)	
Sissale	2(2.86)	0(0.00)	0.618
Waale	59(84.29)	19(95.00)	
Insurance status			
Yes	68(97.14)	11(55.00)	
No	2(2.86)	9(45)	**<0.001**

4.1.1. Logistic Regression: Visit to health facility and socio-demographic characteristics

From the regression, households, which sought care from home were less likely to visit a health facility (OR 0.02; p=0.003; 95% CI 0.00 – 2.26). Though the crude odd ratios of other variables such as mode of payment for health services, insurance status, preferred place of visit and marital status were found to be significant, none except source of healthcare was found significant after adjusting and controlling for confounders. The results are shown in table 4.3

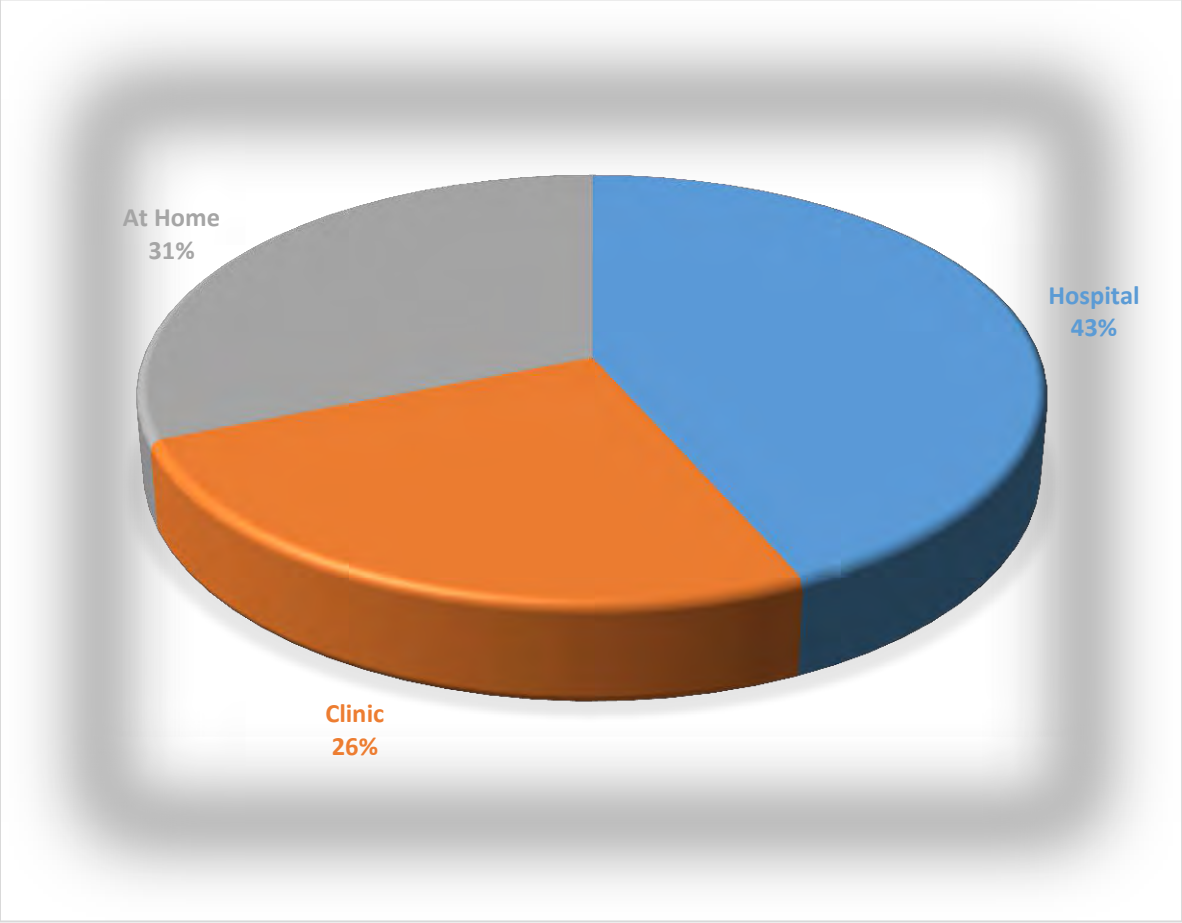
Chapter Four - Table 2.3: Logistic Regression: Visit to health facility and sociodemographic characteristics

Variable	Unadjusted OR(CI)	P-value	Adjusted OR(CI)	P-value
Marital Status				
Married (Ref)				
Widow/widower	0.4(0.11 - 1.38)	0.144		
Single	0.2(0.04 - 0.91)	**0.037**		
Source of care				
Hospital(Ref)				
Clinic				
At Home	0.01(0.00 - 0.10)	**<0.001**	0.02(0.00 - 2.26)	**0.003**
Preferred Place of Visit				
Hospital (Ref)				
Clinic	0.3(0.08 - 1.19)	0.088		0.071
At Home	0.03(0.01 - 0.14)	**<0.001**		0.34
Insurance Status				
No(Ref)				
Yes	27.82(5.29 - 146.20)	**<0.001**		0.261
Mode of Payment				
NHIS				
Out of Pocket	0.22(0.07 - 0.69)	**0.009**	2.71(0.19 - 37.82)	0.458

4.2. Forms of health care services used by households

The study data showed that 90(53.3%) household members were ill in the last one month. Out of this, 70(77.8%) visited a health facility whilst 20(22.2%) did not utilize any health facility.

Out of the 169 household heads, majority 128(75.7%) of their members fell ill within the last one to four months. Twenty one(12.4%) had their last time illness being more than one year. Sixteen(9.5%) and four(2.4%) also had their last time of illness being 5-8months and 9-12months respectively.



Chapter Four - Figure 4.1: Forms of health care services used by households.

In the last one month, of the ninety that fell ill, they resorted to different forms of healthcare services for treatment. The results showed that majority 39(43.3%) utilized the hospital, 23(3%) sought care from a clinic or Doctor's Private Practice, those who got care from home also took a greater proportion of 28(31%). The results are indicated in figure 4.1.

4.3. Proportion of Households that used formal health care

Out of the total number of 90 people who fell ill within the last one month, 39(43.3%) visited the hospital whilst 23(25.6%) visited a clinic. In all, a majority 62(68.9%) of those who fell ill utilized a formal healthcare services. The results are displayed in table 4.4.

Chapter Four - Table 4.4: Proportion of Households that used formal health care

Formal Services	Freq	Percent (%)
Clinic	23	25.56
Hospital	39	43.33

4.4. Socioeconomic status and its influence on utilization

Chapter Four - Table 4.5: Socioeconomic Status and utilization

Variable	Freq	Percent	P-value
Quantiles of Wealth Score	**Freq.**	**Percent**	0.782
Poorest	34	20.12	
Poor	34	20.12	
Middle Rich	34	20.12	
Rich	34	20.12	
Richest	33	19.53	
Income Category	**Freq.**	**Percent**	0.902
500 and Below	160	94.67	
501 – 1000	8	4.73	
1001 and Above	1	0.59	
Main Cooking Fuel	**Freq.**	**Percent**	0.297
Charcoal	57	33.73	
Charcoal Firewood	20	11.83	
Charcoal Firewood Gas	1	0.59	
Charcoal Gas	3	1.78	
Firewood	79	46.75	
Gas	9	5.33	
Source of Drinking Water	**Freq.**	**Percent**	0.679
Pipe Connected to Home	9	5.33	
Public Stand pipe	83	49.11	
Sachet Water	2	1.18	
Well with Pump	73	43.2	
Well without pump	2	1.18	
Wall Material	**Freq.**	**Percent**	0.398
Cement and Sand	152	89.94	
Mud	17	10.06	
Floor Material	**Freq.**	**Percent**	0.881
Cement	105	62.13	
Plastic Carpet	35	20.71	
Sand	12	7.1	
Tiles	16	9.47	
Woollen Carpet	1	0.59	

In table 4.6, the logistic regression for crude and adjusted odds ratios were not found to have significant association between socioeconomic status and healthcare utilization. However, after

adjusting and controlling, the type of wall material (mud), main cooking fuel (Gas), and income category(¢501 – ¢1000) had odds of 1 respectively. The results are shown in table 4.6.

Chapter Four - Table 4.6: Logistic Regression of Socioeconomic status and its influence on utilization

Variable	Unadjusted OR(CI)	P-value	Adjusted OR(CI)	P-value
Income Category	2.74(0.27- 27.7)	0.393		
¢500 and below(Ref)				
¢501 – ¢1000			1	
¢1001 and above				
Main Cooking Fuel	1.23(0.38 - 3.9)	0.732		
Charcoal (Ref)				
Firewood			0.34(0.01 - 7.74)	0.498
Gas			1	
Drinking Water	1.61(0.91- 2.83)	0.101		
Public Standpipe(Ref)				
Well with Pump				
Pipe to your Home				
Well without Pump				
Others				
Wall Material	0.11(0.00- 2.39)	0.16		
Cement and Sand(Ref)				
Mud			1	
Floor Material	0.69(0.28- 1.75)	0.439		
Cement(Ref)			6.34(0.25-126.71)	0.261
Plastic Carpet				
Sand				
Tiles				
Woollen Carpet				
Wealth quintiles	1.12(0.79- 1.59)	0.503		
Poorest(Ref)				
Poor			2.19(0.48 - 10.05)	0.314
Middle Rich			1.42(0.34 - 5.94)	0.629
Rich			2.63(0.46 - 14.96)	0.277
Richest			1.53(0.37 - 6.35)	0.557

P-value (0.05)

4.4.1. Household income and expenditure on health care

On average, each household had about 3 (SD 2.5) persons who earned income on monthly basis. The total annual household income specific from all the households was GH¢171,000.00 (US$37,116.62). The mean monthly household income specific was GH¢84.32 (US$18.30) (SD192.38). The least earning household had an annual household income specific of GHS 0.00 (US$ 0.00) and the highest was GH¢12,000.00 (US$2,604.68).

Majority of the household heads 160(94.7%) received monthly income between GH¢0.00 and GH¢500.00. Eight(4.7%) household heads receive income between 501 and 1000 and only 1(0.6%) household head received income above 1001.

The mean cost of payment for health care services per month was GH¢149.9882(SD 555.45)
The total annual household health care expenditure from all the households was GH¢304,176.00(US$146,0044.8) of a total monthly income of GH¢25,348 (US$ 586,364.90). The mean annual total expenditure per household was GH¢1,011.83 (US$219.62).

The highest household health care expenditure was GH¢7,000(US$ 1519.4) and the least spending was GH¢0.00(US$0.00). (US$ 1=GHS4.6809 ≈GHS 4.6855; (BOG, 2018). Out of the 169 household heads, 164(86.4%) were enrolled unto the NHIS with a significant association (P-value <0.001) with utilization of health care and 696(62.3%) were actively enrolled. After adjusting, insurance status was not significant (aOR 2.71; CI 0.19 – 37.82; P 0.458).

4.5. Influence of socio-cultural practices and factors on utilization of health services

Cultural leanings describe who people are, how they live with the world around them and how they act in certain circumstances, and can be considered a permutation of religious beliefs, socially accepted norms and traditions. Culture and religion are regarded as key determinants in health utilization. The cultural and religious dictums of a person either poses as a barrier or motivator to utilize health services. Culture affects people, especially women on access to health services, which have negative outcomes for future generations.

4.5.1. Traditional healing or treatment

In reference to this, one of the respondents said, “some people when they are affected by stroke, they say they won’t go to hospital but they are always doing herbal treatment, especially in the villages eherh, but when you ask them, they say as for stroke illness, it’s only traditional treatment that can cure it” (**DR-1**)

Another said “Yes, some of these strokes are treated with herbs but doctors can’t treat them" (**DR-2**)

“Every individual and the luck. Some get cured by orthodox medicine whilst with others, if not the herbs, you can’t get cured by orthodox medicine. All depends on luck otherwise, I can’t say this particular illness is cured by traditional medicine that orthodox medicine can’t cure. Luck is always with people: some get cured by orthodox medicine and others get cured by herbs” (**DR-1**)

On the contrary, a health worker said “Arhm, no actually, there’s no disease like that" **(DR-4)**

4.5.2. Women’s autonomy

Respondents when asked whether women could freely seek care without the consent of the husbands or the household heads in the community, said the woman was dependent on the man and should always tell the man before seeking care from a health facility. The following narratives were given to support their claims.

"The husband expect the wife to tell him that oh I'm sick or the child is sick before you can take the person to the hospital. If you bypass the husband and then take the person to the hospital, I think it's a headache. Some will blame you a lot for not telling him or her" (**HP-1**).

"I think for women, if you have a wife and she has any issue, she has to see the husband before she goes" (**DR-3**).

"Any woman who's married by a man, and she also agrees that it's the man that married her, when she is sick, she has to tell the husband" (**DR-2**).

4.5.3. Religious and traditional beliefs affecting health utilization.

From the study, it showed that neither religion nor traditional beliefs was a hindrance to health utilization.

Below is what they said:

"As we sit now, it was in the olden days that those issues existed but now that there's enlightenment, nobody does that" (**DR-1**).

"No, there's no traditional or religious beliefs or issues preventing us from seeking or utilizing care because if you have ill health, you can't do religious activities" (**DR-2**)

4.5.4. Dislikes about orthodox medicine

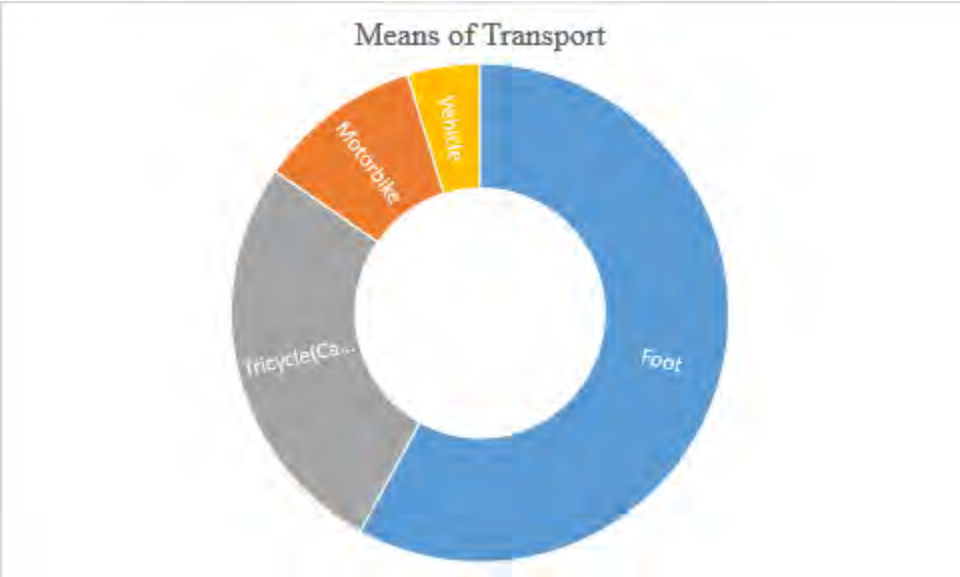
A set of defined likes or dislikes could make people prefer alternative medicine to the formal health sector that could otherwise affect their levels of formal health services utilization. Set of dislikes for one category could also serve as a motivator to the other. The respondents had this to say:

"No, we don't have any dislike for the formal healthcare system because if we say we have any dislike about the formal healthcare system, then we are lying" (**DR-2**).

"We don't have any option to say we like anything about orthodox medicine. It's always our first thing we do then when it fails, we now resort to our herbs" (**DR-1**).

4.6. Geographic factors

Majority 98(57.9%) of the household heads used foot/walking as their means to reach the nearest health facility followed by use of tricycle(Camboo), which constituted 45(26.6%) of the responses. The use of motorbike took a portion of 18(10.6%) whilst those who used vehicle were 8(4.7%). The study results also showed that there was no significant association between visit to health facility by ill person and means of transport to nearest health facility (P-value=0.622). Majority 45(64.3%) of those who utilized a health facility went by foot. They also constituted the majority 15(75%) among those who did not visit any health facility when ill. The results are shown in figure 4.2.



Chapter Four - Figure 4.2: Means of transport to the nearest health facility

4.5.1: Distance to the nearest health facility

The least time used to reach the nearest health facility was 1 minute and the maximum time was 65mins with a mean of 13.21839 (SD=14.9676). Majority, 114(67.5%) spent 1 to 10mins to reach the nearest facility.

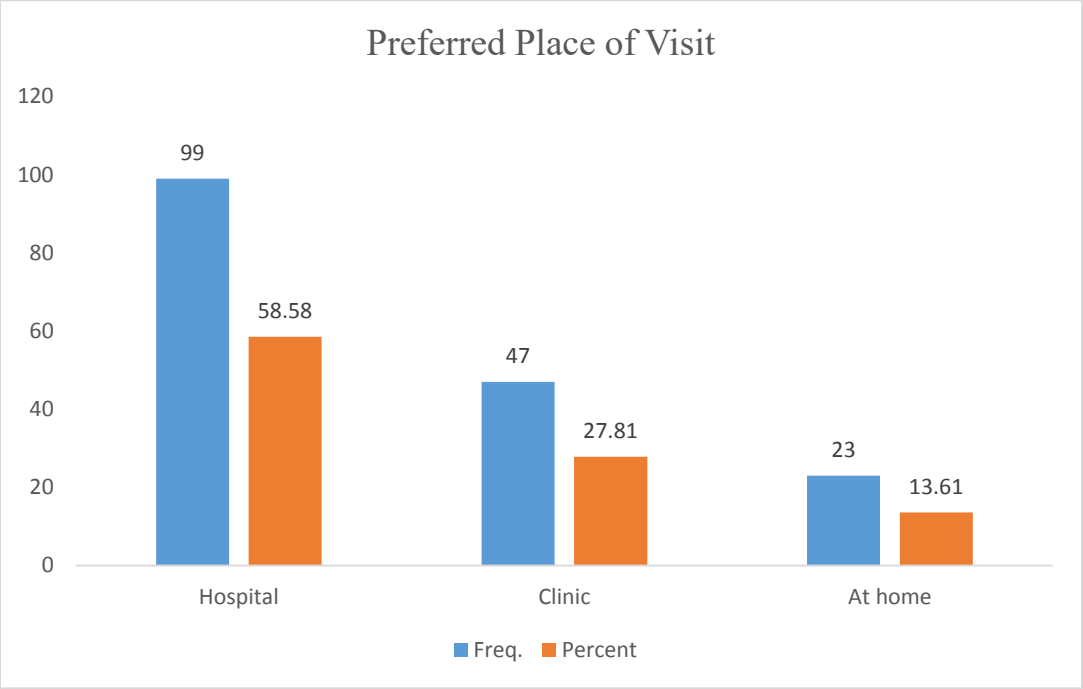
There was no association between distance and visit to health facility (P-value=0.6). the results are shown in table 4.7.

Chapter Four - Table 4.7: Distance to nearest health facility

Time spent (mins)	Freq	Percent
1 to 10	114	67.45
11 to 20	15	8.87
21 to 30	29	17.16
31 to 40	2	1.18
41 to 50	2	1.18
51 >	7	4.14

4.5.2. Preferred place of visit

When asked where they would like to go for treatment when ill, majority 99(58.6%) preferred the hospital, 47(27.8%) chose clinic, and 23(13.6%) preferred being at home for treatment. The results are outlined in figure 4.3.



Chapter Four - Figure 2.3: Preferred Place of Visit when ill

4.7. Summary of the Chapter

The findings showed that mean age was 41years with mean household size of 7. Literacy level in the community was 51.4% and 79% being employed. Utilization level was seen to be 77%. The monthly mean cost of payment for healthcare was GH¢150. Women do not have the independence of seeking healthcare without their household heads prior permission. Many still about an hour before reaching the nearest health facility on foot. Source of care was the only variable found to be significantly associated (p=0.003) with health utilization after adjusting and controlling for confounders. The next chapter presents the discussions of the findings.

CHAPTER FIVE

DISCUSSIONS OF FINDINGS

5.0 Introduction

Binary logistic regression model was used with healthcare utilization as the dependent variable. Health care service utilization was measured as a binary variable among those who fell sick in the past three months. The socio-economic and cultural factors that determine health care service utilization were identified based on (Andersen & Newman, 1973) and are applied to explain the findings of the study especially of the qualitative study.

The study sought to determine factors influencing utilization of healthcare services in the Danku community of the Wa Municipality of Upper West Region. A considerable number of indigents (78%) utilized health care through different means and sources such as hospital, clinics, at home among others determined by socio-economic status and distance cum mean time of 13mins to reach the nearest health facility. Average spending on health was ¢84.32.

5.1. The different forms of health care services households used when ill

The study revealed that household heads used a multiplicity of health services when ill. The varied forms utilized were at home, clinic and hospital. Amongst these various forms, majority (43.3%) utilized the hospital as their first source of care. This is consistent with a study conducted in Dejen District of Euthopia where 45.4% of adults utilized hospital services (Dagnew, Tessema, & Hiko, 2009). A study conducted in the US also recorded a utilization rate for hospital services at 41.0% (Douthit, Kiv, Dwolatzky, & Biswas, 2015), which was found to be consistent with the field data. Twenty three (23.3%) also visited the clinic for health care as their first point of health care. However, this figure was lower than a report of a study done in

Ghana, which recorded clinic utilization rate to be 63.9% (Yawson, Malm, Adu, Wontumi, & Biritwum, 2012).

Most of the community members enumerating some challenges they faced in utilizing healthcare described the room used as the clinic as dilapidated, no medical equipment, no consumables and inadequate staffing. It also doesn't work in the night, hence, the desire for most households to travel to the Wa Regional Hospital for health utilization.

In the last one month, ninety(53.3%) households that had persons ill with seventy-seven (77.8%), who visited a health facility was consistent with a study conducted in Arusha, Tanzania with 75% of individuals that had utilized modern health services (Masatu, Klepp, Ph, & Kvåle, 2001).

5.2. Proportion of households that used formal health care services

Within the last one month, ninety household heads reported of illness(es) within their respective families. Eighty-eight (88.9%) used a form of formal health care services. Most, thirty-nine (43.33%) utilized hospital services, twenty-three (25.56%) used a clinic. Bazie & Adimassie, (2017) found that utilization rate of formal or modern health services in Dessie, Euthopia, was 41.8%, far lower as observed in this study. The possible explanation for the high utilization rates being significantly linked with health insurance status of clients is that as more and more people are actively enrolled unto the NHIS, utilization rates increase. This assertion is in line with Kwasi et al., (2016) findings that 84.83% of insured clients in Ghana utilized formal health services. The Chi-square results also suggested that 86.4% was enrolled unto the NHIS, which determined their use of formal health care services as 97.1% of insured households utilized formal health care services.

5.3. Influence of Households' socioeconomic status on utilization

In a similar study in Israel, Filc, Davidovich, Novack, and Balicer, (2014) showed that people with lower socioeconomic utilized more health services than those with higher socioeconomic status though the gap in visits was marginal. This has shown to be coherent with this study as the poorest 22.9% visited a health facility compared to the richest with utilization rate of 20%.

Findings from a binational health survey from Canada and the USA showed that education, income and insurance status were associated with visitations to the hospital but did not influence rates of hospitalizations (Blackwell, Martinez, Gentleman, Sanmartin, & Berthelot, 2009). Their findings conform with this study's findings of significant association showing insurance status and influence on utilization (*P-value= <0.001)* as those insured had odds of 27.82 more times likely to utilize healthcare than the uninsured (95% CI of 5.29 – 146.2). Saeed et al., (2016), in their study also revealed that most respondents visited health facilities either irregularly (43.5%) or rarely (43.3%) but those with active insurance enrolment utilized healthcare more than those without active insurance cover.

Using a binary logistic regression model by Kalule-Sabiti, Amoateng, and Ngake (2014), Ugandan urban women in a similar study with educational attainment had a positive correlation with antenatal care visit. In a study in Pakistan, using a multivariate logistic regression analysis by Fatmi and Avan (2002), women living in homes with electricity and whose husbands had white-collar jobs utilized antenatal care services more (AOR =2.4; 95% CI 1.2-4.6 compared with women with husbands in blue-collar jobs.

The Ghana's national health insurance scheme was developed to protect individuals against financial drain when seeking care. Nevertheless, acute and chronic challenges stalls universal

coverage as well as inadequacy of care for the aged who were not in formal sector employment (National Health Insurance Authority, 2013; Yawson, 2013). Reviewing this policy would improve access to and utilization of healthcare especially among the elderly in Ghana.

Income quintile analysis presented a virtually even spread of the five categorization of participants in each income quintile with those in the poorest category (22.9%) utilizing healthcare services more against the richest (20%) who utilized formal healthcare. The analysis showed a binomial distribution of their wealth score from -5 - 7 with a cluster of the households densely populated at -3 - 0.

5.4. Influence of socio-cultural practices/factors on utilization of health services

The influence of culture on healthcare is vast and affects people's perceptions of health, illnesses, death, beliefs about causes of disease, where to seek healthcare and the types of treatment they prefer. In a study by Omu and Reynolds (2012), in Kuwait, religious beliefs, limited education and public information about strokes were found to have hindered utilization levels. This agrees with this study that some respondents still believed that strokes, epilepsies and other illnesses were not curable by orthodox medicine except traditional or herbal medicine.

Cultural differences can be due to geographical distances, religions, language etc. Indicators such as physical activity levels, religious beliefs and nutrition are directly affected by peoples lifestyle and consequently by their culture. Generally, females are more inclined to utilize healthcare services as compared with men and women's autonomy is positively associated with health utilization (Tiruneh, Chuang, & Chuang, 2017). This is however, in sharp contrast with this study as respondents suggested that women must seek permission from either the husband or the household head before heading to a health facility to seek care. This variation could be due to

geographical differentials such as culture, literacy levels, socio-economic status, individual level autonomy, community level autonomy, among others.

It is not in doubt that cultural factors undermine women's desire to use health care in Ghana, it is important not to overly assign a deterministic power to them. It is so because culture itself is dynamic, and as shown by this piece, the means by which culture utilizes its influence on access are sometimes unclear and malleable (Omu & Reynolds, 2012).

Traditional or herbal treatment plays a considerable role in health care systems of both developed and developing nations (Abdullahi, 2011). Traditional healing can satisfy health care needs by improving access to alternate choices of care, especially in rural areas. This explains why some people still prefer to seek care for strokes, epilepsies, scorpion bites etc, at the hands of herbalists. It is increasingly adopted around the world because it has demonstrated beneficial health results and has existed as a health care resource in most settings (Iwu & Gbodossou, 2000). In particular, its practices have been linked with historical circumstances, social contexts, and the cultural beliefs of indigenous people (Omu & Reynolds, 2012). Analysis showed that respondents still had perceptions of illnesses that still can't be cured with orthodox medicine. Respondents gave examples such as strokes and epilepsy though some believe all illnesses can be cured by orthodox medicine. It is estimated that about 80 % of Ghanaians rely on herbal preparation for Primary Health Care as a result of affordability, easy access and cultural beliefs (Saeed et al., 2016). Our study however, found relatively lower proportions for the use of herbal or traditional treatment.

5.5. Geographical/Health facility factors and health utilization

Distance and transportation have been considered as primary and essential for access to healthcare especially in less developed communities where travel distances are great (Akosua & Harvey, 2014). This study considered transportation and distance that could impede or enable healthcare utilization. A study on rural and small urban areas by Keyvanara et al., (2017), found that distance and transportation were not significant with utilization, which agrees with this study that both transport and distance were of no significance in utilizing healthcare. Majority 68.6% of those who visited a health facility used about 1 – 10mins. The result, therefore, indicates that utilization of public health facilities within reach multiplied with distance to medical centres. Thus, rural households self-medicate and use traditional care nearer to them. This is expected to reduce their cost of transportation and rigour of accessibility to orthodox health care services. This implies that the rate of distance decay or an increase in time spent leads to a decrease in the utilization of health facility and the rural dwellers will show a preference for self-medication treatment (Oluwakemi & Opaluwa, 2011). This accounts for the 13.3% and 18% of households that sought treatment from home and Over The Counter respectively when ill.

In a similar study by Ranstad et al., (2017), using logistic regression to determine the effect of geographical location and shorter distance to health facility, it was found that it had positive relation on active listing on PHC.

5.6. Summary of the chapter

The results indicated that age, sex, social status, marital status, education, ethnicity, religion, and family size, employment, and type of occupation though they were statistically insignificant in determining health care service utilization in Danku though majority were within the category of those with less monthly income. Geographic/Health facility factors have also been seen to be associated with utilization. The logistic regression analysis model findings showed great consistency with existing literature as cited.

Many as observed from the key informant interviews still believed that women should seek permission from their household heads before utilizing healthcare which undoubtedly affects utilization. Some still believed that not all sicknesses could be cured by orthodox medicine hence, their resort to traditional medicine.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.0. Introduction

This chapter presents the summary, conclusion and recommendations based on the objectives and findings of this study. The contribution to knowledge, limitations to the study and future research have also been presented.

6.1. Summary of the study

This study sought to assess factors influencing utilization of healthcare services in a peri-urban community in Ghana, Danku of the Wa Municipal Assembly. Its specific objectives such as socio-demographic/economic factors, geographical/health facility factors, socio-cultural practices/factors were used to measure its main objective though most findings were found to be insignificant. The study showed that utilization level was 77%. Many do not have effective means of transport to access healthcare as they resort to walking.

However, it found that most respondents still travelled far distance to access healthcare as a result of dilapidated clinic structure, no consumables, inadequate staff coupled with staff absenteeism, no night shift cover, etc. These were enumerated as challenges faced during the interviews.

The Andersen and Newman's theoretical models were used to explain the findings of the study.

6.2. Conclusion

Level of utilization of 77.8% was higher than as observed in literature (50%). Some similarities and variations in associated factors were established. There is the need to invest in improving the NHIS. A lot of respondents, (13.33%) prefer at home treatment and 17.8% still preferred OTC medications, which could affect health outcomes. Irregular openings, absenteeism and lack of medications at clinic were affecting utilization.

6.3. Recommendations

The following recommendations are made based on the findings.

- With the high utilization of formal healthcare services without a properly functioning clinic, the Municipal Director and team should commend the community for the importance they attached to their health.
- Scaling-up and strengthening of Community-Based Health Planning and Services (CHPS) and active community participation in CHPS activities should be intensified in approved zones.
- A lot of people still preferred home treatment such as OTC and herbal or traditional treatment. Education should be intensified to reduce adverse drug events.
- Behaviour Change Communication (BCC) or Information, Education and Communication (IEC) should be used to target husbands and household heads on women autonomy to utilize healthcare.
- A well-furnished health facility should be built for the people of Danku.

6.5. Limitations

The cross-sectional nature of the study limits the use of the study findings to establish causal associations. This makes it unable to emphatically state that the factors identified in this study were the causes of utilization of healthcare services in Danku. Moreover, some of the respondents might have over or under reported their income or expenditure and since it was a retrospective study, the responses given may be subject to recall bias.

6.6. Future Research

Future research should establish links between place and use of health facility. Different study designs could also be used to assess factors influencing healthcare utilization.

REFERENCES:

Abdullahi, A. A. (2011). Trends and challenges of traditional medicine in Africa. *African Journal of Traditional, Complementary and Alternative Medicines*, *8*(5 SUPPL.), 115–123. https://doi.org/10.4314/ajtcam.v8i5S.5

Agyepong, I. A., Sewankambo, N., Binagwaho, A., Coll-seck, A. M., Corrah, T., Ezeh, A., … Kilonzo, N. (2017). The Lancet Commissions The path to longer and healthier lives for all Africans by 2030 : the Lancet Commission on the future of health in sub-Saharan Africa. *The Lancet*, *6736*(17). https://doi.org/10.1016/S0140-6736(17)31509-X

Akosua, V., & Harvey, A. (2014). Socio-economic and Cultural Determinants of Health Care Services Utilization in Ghana. https://digitalscholarship.unlv.edu/cgi/viewcontent.cgi?article=3267&context=thesesdissertations

Al-Ghanim, S. A. (2004). Factors Influencing the Utilisation of Public and Private Primary Health Care Services in Riyadh City. *JKAU: Econ. & Adm*, *19*(1), 3–27.

Amin, R., Shah, N. M., & Becker, S. (2010). Socioeconomic factors differentiating maternal and child health-seeking behavior in rural Bangladesh: A cross-sectional analysis. *International Journal for Equity in Health*, *9*, 9. https://doi.org/10.1186/1475-9276-9-9

Andersen, R; Newman, J. (1973). Societal and Individual Determinants of Medical Care Utilization in the United States Author (s): Ronald Andersen and John F . Newman Source : The Milbank Memorial Fund Quarterly . Health and Society , Vol . 51 , No . 1 (Winter , Published by : Wiley o. *The Milbank Memorial Fund Quarterly*, *51*(1), 95–124.

Andersen, R., & Newman, J. (1973). Societal and individual determinants of medical care utilization in the United States. *Milbank Quarterly*, *51*. https://doi.org/10.2307/3349613

Andmvs, G. R. (2001). Demographic and Health Issues in Rural Aging: A Global Perspective. *The Journal of Rural Health*, *17*(4), 323–327. https://doi.org/10.1111/j.1748-0361.2001.tb00281.x

Arcury, T. A., Gesler, W. M., Preisser, J. S., Sherman, J., Spencer, J., & Perin, J. (2005). The Effects of Geography and Spatial Behavior on Health Care Utilization among the Residents of a Rural Region. *Health Services Research*, *40*(1), 135–156. https://doi.org/10.1111/j.1475-6773.2005.00346.x

Asada, Y., & Kephart, G. (2007). Equity in health services use and intensity of use in Canada. *BMC Health Services Research*, *7*(1), 41. https://doi.org/10.1186/1472-6963-7-41

Bailey, W., & Phillips, D. R. (1990). Spatial patterns of use of health services in the Kingston metropolitan area, Jamaica. *Social Science & Medicine (1982)*, *30*(1), 1–12.

Bazie, G. W., & Adimassie, M. T. (2017). Modern health services utilization and associated factors in North East Ethiopia. *PLoS ONE*, *12*(9), e0185381. https://doi.org/10.1371/journal.pone.0185381

Billi, J. E., Pai, C.-W., & Spahlinger, D. A. (2007). The effect of distance to primary care physician on health care utilization and disease burden. *Health Care Management Review*, *32*(1). http://journals.lww.com/hcmrjournal/Fulltext/2007/01000/The_effect_of_distance_to_primary_care_physician.4.aspx

Birch, S., Eyles, J., & Newbold, K. B. (1993). Equitable access to health care: Methodological extensions to the analysis of physician utilization in Canada. *Health Economics*, *2*. https://doi.org/10.1002/hec.4730020203

Blackwell, D. L., Martinez, M. E., Gentleman, J. F., Sanmartin, C., & Berthelot, J.-M. (2009). Socioeconomic Status and Utilization of Health Care Services in Canada and the United States: Findings From a Binational Health Survey. *Medical Care*, *47*(11). https://journals.lww.com/lww-medicalcare/Fulltext/2009/11000/Socioeconomic_Status_and_Utilization_of_Health.5.aspx

Boateng, D., & Awunyor-Vitor, D. (2013). Health insurance in Ghana: evaluation of policy holders' perceptions and factors influencing policy renewal in the Volta region. *International Journal for Equity in Health*, *12*(1), 50. https://doi.org/10.1186/1475-9276-12-50

Boateng, J., & Flanagan, C. (2008). Women's access to health care in Ghana: Effects of education, residence, lineage and self-determination. *Biodemography and Social Biology*, *54*(1), 56–73. https://doi.org/10.1080/19485565.2008.9989132

BOG. (2018). Daily Interbank FX Rates. Retrieved July 13, 2018, from http://www.bog.gov.gh/markets/daily-interbank-fx-rates

Bonfrer, I., Breebaart, L., & Van de Poel, E. (2016). The Effects of Ghana's National Health Insurance Scheme on Maternal and Infant Health Care Utilization. *PLOS ONE*, *11*(11), e0165623. https://doi.org/10.1371/journal.pone.0165623

Bonu, S., Rani, M., & Baker, T. D. (2003). The impact of the national polio immunization campaign on levels and equity in immunization coverage: Evidence from rural North India. *Social Science and Medicine*. https://doi.org/10.1016/S0277-9536(03)00056-X

Buor, D. (2004). *Accessibility and utilisation of health services in Ghana*. http://www.nivel.nl/Accessibility

Bustreo, F., Say, L., Koblinsky, M., Pullum, T. W., Temmerman, M., & Pablos-Méndez, A. (2013). Ending preventable maternal deaths: The time is now. *The Lancet Global Health*, *1*(4), 2010–2011. https://doi.org/10.1016/S2214-109X(13)70059-7

Cantarutti, A., Franchi, M., Monzio Compagnoni, M., Merlino, L., & Corrao, G. (2017). Mother's education and the risk of several neonatal outcomes: an evidence from an Italian population-based study. *BMC Pregnancy and Childbirth*, *17*(1), 221. https://doi.org/10.1186/s12884-017-1418-1

Castro-Leal, F., Dayton, J., Demery, L., & Mehra, K. (2000). Public spending on health care in Africa: do the poor benefit? *Bull World Health Organ*, *78*.

Chakraborty, N., Islam, M. A., Chowdhury, R. I., Bari, W., & Akhter, H. H. (2003). Determinants of the use of maternal health services in rural Bangladesh. *Health Promotion International*, *18*(4), 327–337.

CHAPPELL, J. E. (1986). David M. Smith, Where the Grass Is Greener; Living in an Unequal World. *Antipode*, *18*(1), 115–122. https://doi.org/10.1111/j.1467-8330.1986.tb00357.x

Chen, L.-M., Wen, S. W., & Li, C.-Y. (2001). The Impact of National Health Insurance on the Utilization of Health Care Services by Pregnant Women: The Case in Taiwan. *Maternal and Child Health Journal*, *5*(1), 35–42. https://doi.org/10.1023/A:1011345801673

Chen, X., Chen, H., Li, D., & Wang, L. (2009). Early childhood behavioral inhibition and social and school adjustment in Chinese children: A 5-year longitudinal study. *Child Development*. Chen, Xinyin: Department of Psychology, University of Western Ontario, London, ON, Canada, N6A 5C2, xchen@uwo.ca: Wiley-Blackwell Publishing Ltd. https://doi.org/10.1111/j.1467-8624.2009.01362.x

Criel, B., Van der Stuyft, P., & Van Lerberghe, W. (1999). The Bwamanda hospital insurance scheme: effective for whom? A study of its impact on hospital utilization patterns1Note: The present paper was presented by Bart Criel at the international conference `Economics of health insurance in low and middle income . *Social Science & Medicine*, *48*(7), 897–911. https://doi.org/https://doi.org/10.1016/S0277-9536(98)00391-8

Dagnew, T., Tessema, F., & Hiko, D. (2009). ORIGINAL ARTICLE HEALTH AND REPORTED SATISFACTION AMONG ADOLESCENTS IN DEJEN DISTRICT , ETHIOPIA : A CROSS-SECTIONAL STUDY. https://www.researchgate.net/publication/273156561_Health_Service_Utilization_and_Reported_Satisfaction_among_Adolescents_in_Dejen_District_Ethiopia_A_Cross-Sectional_Study/download

Donnell, O. O. (2007). Access to health care in developing countries : breaking down demand side barriers. *Cad Saude Publica.*, *23*(12), 2820–2834. https://doi.org/S0102-311X2007001200003 [pii]

Douthit, N., Kiv, S., Dwolatzky, T., & Biswas, S. (2015). Exposing some important barriers to health care access in the rural USA. *Public Health*, *129*(6), 611–620. https://doi.org/10.1016/j.puhe.2015.04.001

Dusanee, S., & Pranee, L. (2014, February 21). Traditional Health Services Utilization among Indigenous Peoples. *The Wiley Blackwell Encyclopedia of Health, Illness, Behavior, and Society*. https://doi.org/doi:10.1002/9781118410868.wbehibs030

Economou, A., Nikolaou, A., & Theodossiou, I. (2008). Socioeconomic status and health-care utilization: a study of the effects of low income, unemployment and hours of work on the demand for health care in the European Union. *Health Services Management Research*, *21*(1), 40–59. https://doi.org/10.1258/hsmr.2007.007013

Eisenberg, D. M., Davis, R. B., Ettner, S. L., Appel, S., Wilkey, S., Rompay, M. Van, & Kessler, R. C. (1998). Trends in Alternative Medicine Use in the United States , 1990-1997 Results of a Follow-up National Survey, *280*(18).

Fatmi, Z., & Avan, B. I. (2002). Demographic, socio-economic and environmental determinants of utilisation of antenatal care in a rural setting of Sindh, Pakistan. *JPMA. The Journal of the Pakistan Medical Association*, *52*(4), 138–42. http://www.ncbi.nlm.nih.gov/pubmed/12174476

Feikin, D. R., Nguyen, L. M., Adazu, K., Ombok, M., Audi, A., Slutsker, L., & Lindblade, K. A. (2009). The impact of distance of residence from a peripheral health facility on pediatric health utilisation in rural western Kenya. *Tropical Medicine and International Health*, *14*(1), 54–61. https://doi.org/10.1111/j.1365-3156.2008.02193.x

Filc, D., Davidovich, N., Novack, L., & Balicer, R. D. (2014). Is socioeconomic status associated with utilization of health care services in a single-payer universal health care system ?, 1–8. https://doi.org/10.1186/s12939-014-0115-1

Forbes, D. A., & Janzen, B. L. (2004). Comparison of rural and urban users and non-users of home care in Canada. *Canadian Journal of Rural Medicine : The Official Journal of the Society of Rural Physicians of Canada = Journal Canadien de La Medecine Rurale : Le Journal Officiel de La Societe de Medecine Rurale Du Canada*, *9*(4), 227–235.

Fraenkel, J. R., & Wallen, N. E. (2009). *How to Design and Evaluate Research in Education*. *Qualitative Research*. www.mhhe.com

Ganatra, B., & Hirve, S. (1994). Male bias in health care utilization for underfives in a rural community in western India. *Bulletin of the World Health Organization*, *72*(1), 101–104.

Garenne, M. (2015). Maternal mortality in Africa: Investigating more, acting more. *The Lancet Global Health*, *3*(7), e346–e347. https://doi.org/10.1016/S2214-109X(15)00027-3

Garshong, B. (2011). Benefit incidence of health services in Ghana and access factors influencing benefit distribution. https://open.uct.ac.za/bitstream/handle/11427/9453/thesis_hsf_2011_garshong_b.pdf?sequence=1

Garshong, B., & Akazili, J. (2015). Universal Health Coverage Assessment Ghana. *Healthnet Consult, Uganda*, (July), 1–12. https://doi.org/10.13140/RG.2.1.1174.7683

Ghana Health Service (GHS). (2017). Ghana Health Service 2016 Annual Report, (June), 1–129. https://www.ghanahealthservice.org/downloads/GHS_ANNUAL_REPORT_2016_n.pdf

Ghosh, D. (2006). Effect of mothers' exposure to electronic mass media on knowledge and use of prenatal care services: A comparative analysis of Indian States. *Professional Geographer*, *58*(3), 278–293. https://doi.org/10.1111/j.1467-9272.2006.00568.x

Good, C. M., & Kimani, V. N. (1980). Urban traditional medicine: a Nairobi case-study. *East African Medical Journal*, *57*(5), 301–317.

GSS. (2014). Ghana Demographic and Health Survey, 1–540. http://www.statsghana.gov.gh/docfiles/publications/2014 GDHS Report.pdf

GSS. (2014). Wa municipality. *District Analytical Report Wa Municipality*. http://www.statsghana.gov.gh/docfiles/2010_District_Report/Upper West/WA MUNICIPAL.pdf

Gyimah, C. (2015). THE INTERNATIONAL JOURNAL OF HUMANITIES & SOCIAL STUDIES Challenges and Prospects of Urban Growth on Peri-urban Indigenous Communities : The Case of Danko Community in the Wa Municipal Area Abstract :, *3*(4), 174–182.

Habib, O. S., & Patrick Vaughan, J. (1986). The determinants of health services utilization in Southern Iraq: A household interview survey. *International Journal of Epidemiology*, *15*(3), 395–403. https://doi.org/10.1093/ije/15.3.395

Hendryx, M. S., Ahern, M. M., Lovrich, N. P., & Mccurdy, A. H. (2002). Access to Health Care and Community Social Capital, (1), 85–101.

Hendryx, M. S., Ahern, M. M., Lovrich, N. P., & McCurdy, A. H. (2002). Access to health care and community social capital. *Health Services Research*, *37*(1), 87–103. https://www.ncbi.nlm.nih.gov/pubmed/11949928

Hjortsberg, C. (2003). Why do the sick not utilise health care? The case of Zambia. *Health Economics*, *12*(9), 755–770. https://doi.org/10.1002/hec.839

ILO. (2009). *Gender equality at the heart of decent work*. *International Labour Conference*. http://www.ilo.org/wcmsp5/groups/public/@ed_norm/@relconf/documents/meetingdocument/wcms_105119.pdf

Iwu, M. M., & Gbodossou, E. (2000). The role of traditional medicine. *The Lancet*, *356*, S3. https://doi.org/10.1016/S0140-6736(00)91989-5

Jat, T. R., Ng, N., & San Sebastian, M. (2011). Factors affecting the use of maternal health services in Madhya Pradesh state of India: A multilevel analysis. *International Journal for Equity in Health*. https://doi.org/10.1186/1475-9276-10-59

Jatrana, S., & Crampton, P. (2009). Author ' s personal copy Primary health care in New Zealand : Who has access ? https://doi.org/10.1016/j.healthpol.2009.05.006

Jehu-Appiah, C., Aryeetey, G., Spaan, E., Hoop, T., Agyepong, I., & Baltussen, R. (2011). Equity aspects of the National Health Insurance Scheme in Ghana: who is enrolling, who is not and why? *Soc Sci Med*, *72*. https://doi.org/10.1016/j.socscimed.2010.10.025

Kalin, Y. (2011). Access to and Utilization of Health Services in Rural Bangladesh, (September). https://lup.lub.lu.se/student-papers/search/publication/2163324

Kalule-Sabiti, I., Amoateng, A., & Ngake, M. (2014). *The Effect of Socio-demographic Factors on the Utilization of Maternal Health Care Services in Uganda*. *African Population Studies* (Vol. 28). https://doi.org/10.11564/28-1-504

Karim, E., Buse, K., Vaughan, J. P., Karim, E., & Buse, K. (2000). Health care systems in transition III . Bangladesh , Part I . An overview of the health care system in Bangladesh Health care systems in transition III . Bangladesh , Part I . An overview of the health care system in Bangladesh, (April). https://doi.org/10.1093/pubmed/22.1.5

Kavosi, Z., Rashidian, A., Pourreza, A., Majdzadeh, R., Pourmalek, F., Hosseinpoor, A. R., … Arab, M. (2017). Inequality in household catastrophic health care expenditure in a low-income society of Iran, (November), 613–623. https://doi.org/10.1093/heapol/czs001

Keyvanara, M., Karimi, S., Mohamadi, M., & Bahrami, S. (2017). Impact of cultural factors on the elderly utilization from healthcare services provided by Isfahan University of Medical Sciences ' Hospitals - 2014. https://doi.org/10.4103/2395-2296.179074

Kinman, E. L. (1999). Evaluating health service equity at a primary care clinic in Chilimarca, Bolivia. *Social Science and Medicine*, *49*(5), 663–678. https://doi.org/10.1016/S0277-9536(99)00147-1

KROEGER, A. (1983). Health Interview Surveys in Developing Countries: A Review of the Methods and Results. *International Journal of Epidemiology*, *12*(4), 465–481. Retrieved from http://dx.doi.org/10.1093/ije/12.4.465

Kushel, M. B., Gupta, R., Gee, L., & Haas, J. S. (2005). Housing Instability and Food Insecurity as Barriers to Health Care Among, *94143*, 99–100. https://doi.org/10.1111/j.1525-1497.2005.00278.x

Kwasi, S., Duku, O., Asenso-boadi, F., Nketiah-amponsah, E., & Arhinful, D. K. (2016). Utilization of healthcare services and renewal of health insurance membership : evidence of adverse selection in Ghana. *Health Economics Review*. https://doi.org/10.1186/s13561-016-0122-6

Lahana, E., Pappa, E., & Niakas, D. (2011). Do place of residence and ethnicity affect health services utilization? evidence from greece. *International Journal for Equity in Health*, *10*(1), 16. https://doi.org/10.1186/1475-9276-10-16

Lépine, A., Lagarde, M., & Le Nestour, A. (2018). How effective and fair is user fee removal? Evidence from Zambia using a pooled synthetic control. *Health Economics (United Kingdom)*, *27*(3), 493–508. https://doi.org/10.1002/hec.3589

Lopez-Cevallos, D. F., & Chi, C. (2010). Health care utilization in Ecuador: a multilevel analysis of socio-economic determinants and inequality issues. *Health Policy and Planning*, *25*(3), 209–218. https://doi.org/10.1093/heapol/czp052

M. Saeed Siddiqui, M. Khalid Siddiqui, A. A. S. (2011). HEALTH SEEKING BEHAVIOR OF THE PEOPLE. https://www.researchgate.net/publication/216455397_HEALTH_SEEKING_BEHAVIOR_OF_THE_PEOPLE

Majumder, A. (2006). Utilisation of Health Care in North Bengal : A Qualitative Study on Preference for a Care with Respect to, *8*(ill), 33–41. http://krepublishers.com/02-Journals/T-Anth/Anth-08-0-000-000-2006-Web/Anth-08-1-001-074-2006-Abst-PDF/Anth-08-1-033-041-2006-328-Majumder-A/Anth-08-1-033-041-2006-328-Majumder-A-Text.pdf

Masatu, M. C., Klepp, K., Ph, D., & Kvåle, G. (2001). Use of Health Services and Reported Satisfaction Among Primary School Adolescents in Arusha , Tanzania, *1991*(4), 278–287.

McCombie, S. C. (2002). Self-treatment for malaria: the evidence and methodological issues. *Health Policy and Planning*. https://doi.org/10.1093/heapol/17.4.333

McDonald, P., & Pool, I. (2016). Jack Caldwell 1928–2016. *Population Studies*, *70*(2), 141–148. https://doi.org/10.1080/00324728.2016.1189648

Mehrotra, S., & Jarrett, S. W. (2002). Improving basic health service delivery in low-income countries: “voice” to the poor. *Social Science & Medicine (1982)*, *54*(11), 1685–1690. https://www.ncbi.nlm.nih.gov/pubmed/12113450

Mills, A., Ataguba, J. E., Akazili, J., Borghi, J., Garshong, B., Makawia, S., … Mcintyre, D. (2012). Equity in fi nancing and use of health care in Ghana , South Africa , and Tanzania : implications for paths to. *The Lancet*, *380*(9837), 126–133. https://doi.org/10.1016/S0140-6736(12)60357-2

Mohammadbeigi, A., Arsangjang, S., Mohammadsalehi, N., Anbari, Z., & Ghaderi, E. (2015). Education-related Inequity in Access and Utilization of Oral Health Care in Iran. *Journal of Family Medicine and Primary Care*, *4*(1), 35–38. https://doi.org/10.4103/2249-4863.152248

Montevecchi, G. (2012). Factors Influencing Access To Health Care Services in Labrador. Retrieved from http://www.exec.gov.nl.ca/rural/whatweredoing/cbr_reports/5. Factors Influencing Access to Health.pdf

Morreale, M. (1998). Fact Sheet: What Factors Can Influence Health Care Utilization?, 1996–2005. Retrieved from https://fhs.mcmaster.ca/nru/Working Papers & Fact Sheets/factsheets/Whatfactorscaninfluence.pdf

Müller, I., Smith, T., Mellor, S., Rare, L., & Genton, B. (1998). The effect of distance from home on attendance at a small rural health centre in Papua New Guinea. *International Journal of Epidemiology*, *27*(5), 878–884. https://doi.org/10.1093/ije/27.5.878

National Health Insurance Authority. (2013). 2013 Annual Report. http://www.nhis.gov.gh/files/2013 Annual Report-Final ver 29.09.14.pdf

NoorAli, R., Luby, S., & Hossein Rahbar, M. (1999). Does Use of a Government Service depend on Distance from the Health Facility? *Health Policy and Planning*, *14*(2), 191–197. http://dx.doi.org/10.1093/heapol/14.2.191

Ojanuga, D. N., & Gilbert, C. (1992). Women's access to health care in developing countries. *Social Science & Medicine (1982)*, *35*(4), 613–617.

Oluwakemi, O., & Opaluwa, H. I. (2011). Effect of Distance on Utilization of Health Care Services in Rural Kogi State , Effect of Distance on Utilization of Health Care Services in Rural Kogi State , Nigeria, (November 2010). https://doi.org/10.1080/09709274.2011.11906385

Omu, O., & Reynolds, F. (2012). Health professionals' perceptions of cultural influences on stroke experiences and rehabilitation in Kuwait. *Disability and Rehabilitation*, *34*(2), 119–127. https://doi.org/10.3109/09638288.2011.591883

Oxfam, G. (2013). Achieving a Shared Goal: Free Universal Health Care in Ghana. *Health Care*. https://www.oxfam.org/sites/www.oxfam.org/files/rr-achieving-shared-goal-healthcare-ghana-090311-en.pdf

Parslow, R., Jorm, A., Christensen, H., Jacomb, P., & Rodgers, B. (2004). Gender differences in factors affecting use of health services: an analysis of a community study of middle-aged and older Australians. *Social Science & Medicine (1982)*, *59*(10), 2121–2129. https://doi.org/10.1016/j.socscimed.2004.03.018

Peters, D. H., Garg, A., Bloom, G., Walker, D. G., Brieger, W. R., & Hafizur Rahman, M. (2008). Poverty and access to health care in developing countries. *Annals of the New York Academy of Sciences*, *1136*, 161–171. https://doi.org/10.1196/annals.1425.011

Ranstad, K., Midlöv, P., & Halling, A. (2017). Socioeconomic status and geographical factors associated with active listing in primary care: A cross-sectional population study accounting for multimorbidity, age, sex and primary care. *BMJ Open*, *7*(6), 1–11. https://doi.org/10.1136/bmjopen-2016-014984

Rosenstock, I. M. (1974). Historical Origins of the Health Belief Model. *Health Education Monographs*, *2*(4), 328–335. https://doi.org/10.1177/109019817400200403

Saeed, B. I. I., Yawson, A. E., Nguah, S., Agyei-baffour, P., Emmanuel, N., & Ayesu, E. (2016). Effect of socio-economic factors in utilization of different healthcare services among older adult men and women in Ghana. *BMC Health Services Research*, 1–9. https://doi.org/10.1186/s12913-016-1661-6

Santow, G. (1995). Social roles and physical health: the case of female disadvantage in poor countries. *Social Science & Medicine (1982)*, *40*(2), 147–161. https://doi.org/10.1016/0277-9536(94)E0069-5

Stock, R. (1983). Distance and the utilization of health facilities in rural Nigeria. *Social Science & Medicine (1982)*, *17*(9), 563–570. https://www.ncbi.nlm.nih.gov/pubmed/6879255

Subedi, J. (1989). Modern health services and health care behavior: a survey in Kathmandu, Nepal. *Journal of Health and Social Behavior*, *30*(4), 412–420. https://www.ncbi.nlm.nih.gov/pubmed/2600384

Suchman, E. A. (1965). Social Patterns of Illness and Medical Care Author (s): Edward A . Suchman Source : Journal of Health and Human Behavior , Vol . 6 , No . 1 (Spring , 1965), pp . 2-16 Published by : American Sociological Association Stable URL : http://www.jstor.org/s, *6*(1), 2–16.

Supakankunti, S. (2000). Future prospects of voluntary health insurance in Thailand. *Health Policy and Planning*, *15*(1), 85–94. https://www.ncbi.nlm.nih.gov/pubmed/10731239

Swinkels, W. J., & Schulpen, T. W. (1980). Machakos Project Studies. Agents affecting health of mother and child in a rural area of Kenya. XX. A dynamic approach to the utilization of health services in a rural area of Machakos, Kenya. *Tropical and Geographical Medicine*, *32*(4), 350–357.

Syed Masud Ahmed, Alayne M. Adams, M. C., & Bhuiya, A. (2000). Gender, socioeconomic development and health-seeking behaviour in Bangladesh. *Social Science & Medicine*, *51*(3), 361–371. https://doi.org/10.1016/S0277-9536(99)00461-X

Taylor, C. E., Sarma, R. S. S., Parker, R. L., Reinke, W. A., & Faruquee, R. (1983). *Child and maternal health services in rural India. The Narangwal experiment. 2. Integrated family planning and health care.* Baltimore, USA: Johns Hopkins University Press.

Thaddeus, S., & Maine, D. (1994). Too far to walk: Maternal mortality in context. *Social Science & Medicine*, *38*(8), 1091–1110. https://doi.org/https://doi.org/10.1016/0277-9536(94)90226-7

Thind, A. (2005). Female sterilisation in rural Bihar: what are the acceptor characteristics? *The Journal of Family Planning and Reproductive Health Care / Faculty of Family Planning & Reproductive Health Care, Royal College of Obstetricians & Gynaecologists*. https://doi.org/10.1783/0000000052972762

Tiruneh, F. N., Chuang, K., & Chuang, Y. (2017). Women ' s autonomy and maternal healthcare service utilization in Ethiopia, 1–12. https://doi.org/10.1186/s12913-017-2670-9

UNDP. (2012). Annual Report 2011 / 2012, *84*(November 2010). http://www.undp.org/content/undp/en/home/librarypage/corporate/annual-report-2011-2012--the-sustainable-future-we-want.html

Vissandjee, B., Barlow, R., & Fraser, D. W. (1997). Utilization of health services among rural women in Gujarat, India. *Public Health*, *111*(3), 135–148.

Vissandjée, B., Barlow, R., & Fraser, D. W. (1997). Utilization of health services among rural women in Gujarat, India. *Public Health*, *111*(3), 135–148. https://doi.org/https://doi.org/10.1016/S0033-3506(97)00572-6

Wang, H., Yip, W., Zhang, L., Wang, L., & Hsiao, W. (2005). Community-based health insurance in poor rural China: the distribution of net benefits. *Health Policy Plan*, *20*. https://doi.org/10.1093/heapol/czi045

WHO. (2016). WHO Recommendation on Antenatal care for positive pregnancy experience. *WHO Recommendation on Antenatal Care for Positive Pregnancy Experience*, 152. https://doi.org/ISBN 978 92 4 154991 2

Wilson, J. ., Collison, A. H. ., Richardson, D., Kwofie, G., Senah, K. ., & Tinkorang, E. . (1997). The maternity waiting home concept: the Nsawam, Ghana experience. *International Journal of Gynecology & Obstetrics*, *59*(S2), S165–S172. https://doi.org/10.1016/S0020-7292(97)00162-8

Wong, E. L., Popkin, B. M., Guilkey, D. K., & Akin, J. S. (1987). Accessibility, quality of care and prenatal care use in the Philippines. *Social Science & Medicine (1982)*, *24*(11), 927–944.

Yang, P. Q., & Hwang, S. H. (2016). Explaining Immigrant Health Service Utilization: A Theoretical Framework. *SAGE Open*, *6*(2). https://doi.org/10.1177/2158244016648137

Yawson, A. E. (2013). Yawson AE, Nimo KP, Biritwum RB. Challenges of Health Care Delivery at a Municipal Health Facility under Ghana's National Health Insurance Scheme. Postgraduate Medical Journal of Ghana. 2013; 2 (2): 56-64. *POSTGRADUATE MEDICAL JOURNAL OF GHANA*, *2*, 56–64.

Yawson, A. E., Malm, K. L., Adu, A. A., Wontumi, G.-M., & Biritwum, R. B. (2012). Patterns of Health Service Utilization at a Medical School Clinic in Ghana. *Ghana Medical Journal*, *46*(3), 128–135.

YOUNG, J. C. (1980). a model of illness treatment decisions in a Tarascan town. *American Ethnologist*, *7*(1), 106–131. https://doi.org/10.1525/ae.1980.7.1.02a00070

Zewdie, S. A. (2014). Spatial Analysis of Child Mortality in South Africa in Relation to Poverty and Inequality : Evidences from the 2011 census. https://open.uct.ac.za/handle/11427/13078

APPENDICES

Appendix A: Study Questionnaire

ACCESS TO AND UTILIZATION OF HEALTH CARE

Title of study: Factors influencing utilization of health care service in in Danku Community of the Wa Municipal Assemble.

We are conducting a study on the Utilization of health Services in Wa Municipality. Your input will help us identify the factors responsible for poor utilization or otherwise of general health services. Participation is voluntary: that is you may decide to participate or not. If you agree to participate then you will answer a few questions that I will ask you, and this will last for about 15 minutes. Any information you give will highly be kept confidential and used only for the study. For Verification or Additional Information about this study you may contact:

The chairman, Ghana Health Service Ethical review committee, P. O. Box MB 190

Accra, Ghana. Tel: *+233-302-681109*

School of Public Health, College of Health Sciences, University of Ghana

The Municipal Health Directorate, UW/R- Wa.

If you agree to participate in the study, please sign / thumbprint

Signature/thumbprint of respondent…….. Date……

Signature .

investigator……Date…….

Appendix A - Table 1. Questionnaire

Questionnaire number:	
Respondent code:	Date:
House number/Name:	Time interview started:
Language of interview:	Time interview ended:

SECTION A. DEMORGRAPHIC CHARACTERISTICS

	VARIABLE	RESPONSE	CODE
D1	Level of education	1. No Schooling [ ] 2. Primary [ ] 3. Middle/JHS [ ] 4. SHS/Technical/Vocational [ ] 5. Tertiary [ ]	……
D2	Age at last birthday	.....	……
D3	Gender	1. Male [ ] 2. Female [ ]	……
D4	Religion	1. Christian [ ] 2. Islam [ ] 3. Traditional believer [ ] 4. Other, specify ……	……
D5	Marital Status	1. Married [ ] 2. Not married [ ]	……
D6	Employment status	1. Student [ ] 2. Unemployed [ ] 3. Farmer [ ] 4. Trader [ ] 5. Government employee [ ] 6. Non-government employee[ ] 7. Other, specify……	……
D7	Language	1. Waale [ ] 2. Sissala [ ] 3. Dagaare [ ] 4. English [ ]	……

D8	How many individuals do you have in your household? *(Have a separate sheet that will list the names, confirm with the interviewee*)	…….	……
D9	How many household members are children <12 years?	…….	……
D10	How many people within the household earn income?	……..….....	……
D11	What is the total household monthly income (specific) (*i.e. sum the monthly income of those who earn money in the hh*)	……..……	……
D12	Total household income in a month (categories) (*To be used when specific total hh income cannot be determined*)	1. Below 500 [ ] 2. 501 – 1000 [ ] 3. 1001 and above [ ]	……

SECTION B: COVERAGE AND HEALTH CARE UTILIZATION

	QUESTION	RESPONSE	CODE
C13	When was the last time you or any member of the household fell ill?	1. One(1) to four(4) months ago [ ] 2. Five (5) to eight(8) months ago [ ] 3. Nine(9) to twelve (12) months ago [ ] 4.Twelve and above [ ]	……
C14	In the last month, has any member of the household fallen ill?	1. Yes [ ] 2. No [ ]	……..
C15	If yes to the above, did the person visit any health facility?	1. Yes [ ] 2. No [ ]	……
C16	How many family members were ill in the last one month?	……	……
C17	What signs and symptoms did person 1 have?	1. Difficulty in breathing [ ] 2. Diarrhea [ ] 3. Fever [ ] 4. Headache [ ] 5. General Bodily Pains [ ] 6. Chest Pains [ ]	[ ] [ ] [ ] [ ] [ ]
C18	What signs and symptoms did person 2 have?	1. Difficulty in breathing [ ] 2. Diarrhea [ ] 3. Fever [ ] 4. Headache [ ] 5. General Bodily Pains [ ] 6. Chest Pains [ ]	[ ] [ ] [ ] [ ] [ ] [ ]
C19	How many places did you seek care for person 1	……	……..

	QUESTION	RESPONSE	CODE
C20	In the last time person 1 was sick, what were the sources of care in order in which care was sought (first source, second, third source	A. Hospital [ ] B. Clinic [ ] C. Doctor's private practice [ ] D. Traditional healer/prophet[ ] E. At home [ ] F. OTC [ ] G. Faith clinic [ ] H. Indifference [ ]	[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
C21	What did they diagnose as the illness of person 1	……..	……..
C22	What did they diagnose as the illness of person 2	……..	…….
C23	What is your preferred place of visit when you or any family member falls ill?	1. Hospital [ ] 2. Clinic [ ] 3. Doctor's private practice [ ] 4. Traditional healer/prophet [ ] 5. At home [ ] 6. OTC [ ] 7. Faith clinic [ ] 8. Indifference [ ]	……
C24	Are you or any household member currently insured on NHIS? *(Check for a valid ID card)*	1. Yes [ ] 2. No [ ]	……
C25	How many of them are actively or currently enrolled? *(Check for a valid ID card)*	……	……...
C26	How do you pay for health care services?	1. Out of Pocket Payment [ ] 2. NHIS [ ] 3. Private Health Insurance [ ]	……
C27	How much do you pay for health care services? *(This question is for both the insured and uninsured)*	GH¢……..	GH¢……
C28	What service(s) did you pay for?	1. Lab services [ ] 2. Consultations [ ]	……

	QUESTION	RESPONSE	CODE
		3. Medicines [ ] 4. Other, specify……..	
C29	How far is the nearest health facility from your household?	…….hours……..mins	
C30	How far is your household from the nearest health facility (km or miles)?	1. ……(km) 2. ..…….(miles)	……
C31	What is your means of transport to the nearest health facility?	1. Foot [ ] 2. Bicycle [ ] 3. Motorcycle [ ] 4. Vehicle [ ]	……
C32	Do you or any household member own any of the following items (1=yes, 0=No) 1. Land 2. Livestock 3. House 4. Radio 5. Electricity 6. Television 7. Bicycle 8. Motor cycle 9. Car 10. Fridge/freezer 11. Mobile phone 12. Computer 13. VCD/DVD 14. Iron 15. Fan 16. Toilet facility in house 17. Bed 18. Mattress 19. Couch	1. [ ] 2. [ ] 3. [ ] 4. [ ] 5. [ ] 6. [ ] 7. [ ] 8. [ ] 9. [ ] 10. [ ] 11. [ ] 12. [ ] 13. [ ] 14. [ ] 15. [ ] 16. [ ] 17. [ ] 18. [ ] 19. [ ]	1. [ ] 2. [ ] 3. [ ] 4. [ ] 5. [ ] 6. [ ] 7. [ ] 8. [ ] 9. [ ] 10. [ ] 11. [ ] 12. [ ] 13. [ ] 14. [ ] 15. [ ] 16. [ ] 17. [ ] 18. [ ] 19. [ ]
C33	What is the basic floor material of your dwelling	1. Plastic Carpet [ ] 2. Woolen carpet [ ] 3. Cement [ ] 4. Sand [ ] 5. Tiles [ ]	……
C34	What is the wall material of your dwelling?	1. Sand [ ] 2. Cement [ ] 3. Mud [ ]	……

	QUESTION	RESPONSE	CODE
C35	What is the source of drinking water of this household?	1. Well with pump [ ] 2. Well without pump [ ] 3. Pipe connected to your home[ ] 4. Public standpipe [ ] 5. Water pumped into dwelling [ ] 5. Other (specify)……..	……
C36	What is your main fuel for cooking?	1. Charcoal [ ] 2. Firewood [ ] 3. Gas [ ]	……
C37	What are some of the challenges to utilization of health services in this community	…….. …….. …….. ……..	

SECTION C: INFLUENCE OF CULTURE ON UTILIZATION

How important to you is taking care of your health

What are the common illnesses in this community?

What do you believe are the causes of these illnesses?

Who are mostly affected by these common illnesses?

How do you seek care for these common illnesses?

Probe for

1. Home or self medication
2. Traditional treatment involving consultation with soothsayers or healers
3. Use of formal care

Are there diseases in this community that can be treated only with traditional healing or treatment and what are they?

What affects your ability to receive medical services when you need them? (e.g., transport, health insurance, finances, language, etc.)

Where do most community members seek care when they are ill?

Why do they prefer those places?

When women are ill, can they seek care without the permission of the landlord or household head. Why and why not?

Why do pregnant women not deliver at health facilities?
Probe respect for privacy lacking

What are the religious and traditional beliefs affecting health seeking in this community? Probe

Does your community or society have a set of defined likes or dislikes about the formal healthcare system that may motivate you to prefer alternative medicine or not utilize healthcare?

What do you think should be changed in the healthcare system to make it easier for you to receive healthcare? (e.g., local transportation or accessibility, decreased cost/affordability)

Appendix B: Participants Consent Form

Form number [ ]

Project tittle

FACTORS INFLUENCING UTILIZATION OF HEALTH CARE SERVICES IN DANKU COMMUNITY – WA, UWR

Section A. Name and address of Principal Investigator

Abubakr Ahmed Farhan, Department of Health Policy Planning and Management, University of Ghana, Legon- Accra.

Mobile: 0206737047 / 0247468112

Email address: fararaa@yahoo.com

Institution affiliated

School of Public Health, University of Ghana, Legon - Accra.

Introduction

I am a student from the School of Public Health, University of Ghana conducting a research on the Factors influencing the utilization of health care services in Danku community of the Wa Municipal Assembly. Please kindly spend some few minutes to fill the questionnaire. All information collected will be treated strictly as confidential and no one will be able to trace any information back to you.

Section B Consent to Participate in Research

Procedure

The study is targeted at residents for barriers to utilization of health care services in Danku. Selection of participants will be done by random sampling. Participants will be made to complete a questionnaire and returned to the principal investigator.

Risks and benefits

There shall not be any payment for participating. You may feel uncomfortable with some of the questions however, they will be helpful for the purpose of the study and may help change policies on residents' utilization levels of health care services.

Right to refuse

Your consent to participate in this study is voluntary. You are not under any obligation to participate and you are at liberty to withdraw from this study at any point in time. However, I will greatly appreciate if you can complete it.

Anonymity and Confidentiality

Be assured that any information you shall give will purposely be used for the research. Any information given will be treated with utmost confidentiality as your name will not be used in any report but your great ideas and suggestions will help us design programs and policies that will improve residents' access to and utilization of health care services.

Your rights as a participant

This research has been reviewed and approved by the Ethical review committee of the Ghana Health Service. If you have any questions about your rights as a research participant, you can contact the Ethical Review Coordinator on 0507041223 (Ms Hannah Frimpong).S

Section C: Volunteer Agreement

I have read or have had someone read all of the above, asked questions, received answers regarding participation in this study, and I am willing to give my consent to participate in this study. I will not have waived any of my rights by signing this consent form. Upon signing this consent form, I have agreed to be a participant

_____

Name of Volunteer

_____ _____

Signature or mark of volunteer Date

If volunteers cannot read the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

……..

Name of witness

……. …….

Signature of witness Date

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

……

Name of Person who Obtained Consent

……... …….

Signature of Person Who Obtained Consent Date

Appendix C: Ethical Review and Approval