UNIVERSITY OF CAPE COAST

ACCESS TO AND UTILIZATION OF HEALTH CARE FACILITIES IN THE AJUMAKO-ENYAN-ESSIAM AND UPPER-DENKYIRA DISTRICTS OF THE CENTRAL REGION, GHANA

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BY

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DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature……. Date…….

Name: Kwaku Kissah-Korsah

Supervisors' Declaration

We hereby declare that the presentation and preparation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature…… Date…….

Name: Prof. Kofi Awusabo-Asare

Co-Supervisor's Signature……. Date……..

Name: Prof. A. M. Abane

ABSTRACT

The study examined access to and utilization of health care facilities in the Ajumako-Enyan-Essiam and Upper Denkyira districts of the Central Region. Multi-stage sampling procedure was adopted to select the two districts capitals and 15 other settlements in the two districts. In all 17 settlements, seven from Upper Denkyira and 10 from Ajumako-Enyan-Essiam were selected. Four hundred and twenty respondents from UDD and 380 from AEED were included in the study. Questionnaire consisting of both open-ended and closed-ended items were administered to the 800 respondents. Using Statistical Package for Social Sciences (SPSS) and STATA the collected data were analysed and output displayed in frequencies, percentages and binary logistic regression. It emerged that both orthodox and non-orthodox facilities were available and operated along-side each other. Again, among orthodox facilities, drug stores were the most widely used. It also emerged that socio-demographic characteristics such as sex, age, occupation, formal level of education, income, marital and residential status of heads of households influenced the choice of health care facilities in both districts. Diseases such as malaria, diarrhoea, typhoid and skin rashes were some of the diseases reported. However, malaria was the major. Disease reported. Even though the districts differed in their levels of development, use of health care facilities were similar. It is recommended that more health care facilities be provided in order to increase access to health care services. For instance, more CHPS compound could be provided in rural areas to help increase their access to orthodox medicine.

KEYWORDS

Access

Utilization

Health

Facilities

Household

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DEDICATION

To my wife, parents and children

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CHAPTER ONE

INTRODUCTION

Background to the Study

The preamble to the 1946 Constitution of the World Health Organization (WHO) sees health as one of the fundamental rights of every human being which must be enjoyed and no one must be denied this right (WHO, 1946). In its 1948 work on health, the World Health Organization has defined health as a state of complete physical, mental and social wellbeing of individuals but not merely the absence of disease and infirmity (Lüeschen, Cockerham, & Siegrist, 2003). With this preamble and definition as its focus, the WHO encourages and supports member countries to aspire to the level where they can provide facilities and services that can result in the attainment of the defined health status for their citizens (Lüeschen, Cockerham, & Siegrist, 2003).

Depending on the level of development, resource availability, the understanding and interpretation and their worldview of what constitutes health, societies have evolved different health care systems and facilities that try to meet the health care needs of their people (Kaiman, Smith, Anand, Kingsley, Hooper, Woolf, & Oltermann, 2014; Liss, Fishman, Rutter, Grembowski, Ross, Johnson & Reid, 2013).

The level to which any given health care system can become beneficial to the people it serves depends on, apart from it being available, affordable and suitable, must be readily accessible and usable (Hamid, Sitbon, Humbert, Jaïs, Ioos, Provencher, ... & Simonneau, 2005; Thuan, Lofgren, Lindholm, & Chuc, 2008). Available evidence suggests that a given health care may be available, affordable and suitable to the needs of the people but may not accessible and

therefore cannot be utilized (Yang, Lu, Weng, Jia, Ji, Xiao, ... & Zhu, 2015). Accessibility and usability can be influenced by the characteristics of clients such as age, sex, religion, social class as well as the prevailing physical, social, cultural, political and economic milieu within which the health care system exists (Baker & Liu, 2006; Chen, Sullivan, Lu, & Shibusawa, 2003; Hamid et al. 2005; Thuan et al., 2008;). Furthermore, the ability of individuals to recognize disease symptoms because of their worldview of disease, communicate with health professionals and navigate the existing the health care system, when necessary, also contribute to the level of access and utilization (Baltussen & Ye, 2005; Okonko & Ngene, 2004; Ponce, Hays & Cunningham, 2006, Satcher, 2003; Siddique, Islam, Banik & Rawal, 2017). Therefore, available health care facilities can become useful only when it is accessible and user friendly to those who need the services they provide (Cain & Mittman, 2002; Kaiman, Smith, Anand, Watts, Kingsley, Hooper, ... & Oltermann, 2014).

Household and Health Care Utilization

Every individual belongs to a form of family or household arrangement which may have implications for their growth, development and health status (Rabero & Neri, 2015). While family arrangements may be defined based on marriage, adoption or blood link, the household is a social arrangement consisting of a group of people who share eating and sleeping arrangements (Assimeng, 1981). The living arrangement may consist of an individual who lives alone and does not share eating and sleeping arrangement with anyone or group living arrangement which is usually under an older person who may be responsible for the needs of the members of the group. The leader may be a male (male-headed) or female (female-headed). A member of an individual

household is responsible for his/her health care needs while the health care needs of the members of male/female headed households are usually the responsibility of the head of household. Access to and utilization of health care services is therefore either the responsibility of the individual or is influenced by the head who may decide alone or in consultation with other members of the household. The head may decide or influence the decision on what kind of health care services members of the household may use because he/she usually provides the financial resources needed to access such facilities. In looking at health care access and utilization in Ghana, the role of the head of household cannot be ignored (Aryeetey, Jehu-Appiah, Spaan, Agyepong & Baltussen, 2012).

The social, cultural and economic arrangements in Ghana vary between rural and urban dwellers. These differences manifest in differences in financial resource availability with implications for access to and utilization of health care services in the country (GSS, 2012). Unequal access to and use of modern orthodox health care services between urban and rural areas has been reported (Afful-Mensah Sulemana & Dinye, 2014).

Statement of the Problem

Ghana is a developing country whose population has been increasing since 1891 when the first real census was attempted in the country. Because of initial challenges that were encountered with the census process, some doubts have been cast on the reported figure of 764, 613. However, it provides a basis for official census taking in the country. In 1948, another census was taken. This was found to be more reliable since the census process has seen much improvement. The figure reported was 4,501,218. A post-independence census

in 1960 reported a figure of 6,726,815 with other censuses in 1970, 1984 and 2000 reporting figures of 8,889,313, 12,296,081 and 18,912,079 respectively. The 2010 census figure was 24,658,823 and based on that, a figure of 29,463,643 was projected for 2018. Based on the 2000 census figure and using an inter-censal growth rate of three per cent, the population of the country was projected to be 22,123,000 for 2005. The Central Region had a projected population of 1,816,098.

The health care needs of the population have been provided through hospitals, clinics, pharmacy and drug stores and traditional/herbal facilities as well as prayer camps. There has been rapid expansion of orthodox medicine in the country after the initial establishment of the first hospital in the Cape Coast Castle in 1868 by the colonial administrators. After independence in 1957, successive governments have continued to provide more orthodox facilities aimed at increasing access to health care services for the population. It has been suggested that at independence, there were about 30 hospitals in the country; by 2005, the figure had reached 1,832, then reaching 3,011 in 2007, 3,110 in 2008 and 5,065 in 2010. By 2017, the figure had reached 6,568 (GHS, 2014, 2015, 2017; Penchansky & Thomas, 1981).

In spite of the increases in numbers of orthodox health care facilities in the country, some studies have pointed out their uneven distribution to the extent that there exists both inter and intra-regional disparities with over preponderance in the south and urban areas and paucity in the north and rural south (Amporfu, 2009; Bour, 2003, 2004; Sulemana & Dinye, 2014;). These differentials in distribution of facilities have created differences in access to health care facilities for urban and rural dwellers. While most urban households

enjoy the services of orthodox health care facilities because of easy access, their counterparts in most areas in the northern part of the country and rural areas in the south experience restricted access and are therefore forced to contend with herbal medicine for which they have easy access (Amporfu, 2009; Bour, 2003, 2004; Sulemana & Dinye 2014;). Such conclusions have aroused interest in the study of access to health care facilities and services. This has resulted in increased research into access to and utilization of health care facilities in the country. However, instead of dealing with the totality of access, these studies have emphasized physical accessibility equating it to access and concluding that differences in access to orthodox health care facilities exist between urban and rural dwellers leaving a gap in knowledge to the real causes of access to and utilization of existing health care facilities in the country (Agyei-Baffour, Kudolo, Quansah & Boateng, 2017; Amoah, Sandjo, Bazzo, Leite & Biavatti, 2014; Asante, 2010; Kavi, Abanga, Kudolo, & Morna, 2008; Bour, 2005; Frimpong, 2013; Kusi-Bempah, 2011; Overbosch, Nsowah-Nuamah, Van den Boom, & Damnyag , 2004; Twumasi, 1975). There is therefore the need for studies, such as the current one, to bridge the gap in knowledge on access to and utilization of health care facilities by urban and rural dwellers.

Objectives of the Study

The general objective of the study was to assess access to and use of health care facilities in two districts in the Central Region.

The specific objectives were to:

1. Assess the availability of all health facilities in the two study districts
2. Analyse disease reported by clients four weeks before the study;
3. Assess facilities clients in the two districts utilize before the study;

4. Assess factors that influence the choice and utilization of health care facilities within the two districts; and
5. Recommend to policy makers measures that could help make health care facilities beneficial to the populace.

Research Questions

In dealing with the outcome of existing studies and the present one, a number of gaps were identified which raised the following research questions for which the study attempts to find answers:

1. What differences exist between access to and accessibility to health care facilities?
2. How does access to to health care facilities affect their utilization?
3. What health care facilities do urban dwellers and rural dwellers utilize for their health care needs?
4. What factors influence access to and utilization of health care facilities?
5. What are the diseases self-reported within the two districts?
6. Are there any differences in facilities utilized by members of male-headed and female-headed households?

Hypotheses of the Study

The following hypotheses were set out:

1. H_0: There is no significant difference in the utilization of orthodox and other health care facilities in the two districts;

   H_1: There is significant differences in the utilization of orthodox and other health care facilities in the two districts

2. H_0: There is no significant difference in utilization of health care facilities between male-headed and female-headed households;

   H_1: There is significant difference in utilization of health care facilities between male-headed and female-headed households;

3. H_0: There is no significant difference in utilization of health care facilities between urban and rural dwellers;

   H_1: There is significant difference in utilization of health care facilities between urban and rural dwellers;

4. H_0: There is no significant difference in reported diseases between the two districts;

5. H_1: There is significant difference in reported diseases between the two districts;

6. H_0: There is no significant difference in the access to and utilization of health care facilities between endowed and less endowed districts.

   H_1: There is significant difference in the access to and utilization of health care facilities between endowed and less endowed districts.

7. H_0: There is no significant difference in access to and utilization of health care facilities between those with higher levels of formal education and those with low or no formal education.

   H_1: There is no significant difference in access to and utilization of health care facilities between those with higher levels of formal education and those with low or no formal education.

Justification of the Study

Health care facilities will be useful if utilized for the purpose for which they were provided (York, Kaufman, & Grube, 2013). Information has to be collected and periodically reviewed to find out whether access to and utilization is increasing or declining in order to introduce policies to that result in health care facilities becoming functional and useful. The country has in existence different health care systems with different facilities which are accessed differently based on the needs of those they serve. For hospitals and clinics, data is systematically collected and stored about usage. However, for other facilities, no such information is gathered. Any attempt to use existing information for any policy direction that makes traditional health care facilities useful in the present health care delivery arrangement in the country becomes difficult if not impossible.

Secondly, formulation of policies on facility for the health sector will enhance effective administration for both the government and the population of a country. The absence of reliable data has become one major impediment that policy makers and planners routinely encounter. The data generated by this study will serve as resource for those who would want to bring about any such shift in health care policy on access to and utilization in the country. In addition, the method employed can be adopted and replicated in any study of this kind.

The outcome of the study will assist in policy formulation on provision of health care facilities in the country. There is paucity of information regarding the role different health care facilities play in the health care delivery system of the country. The results, conclusions and recommendations of the

study are an attempt to add up to the existing information of the country that can bring about improvement in health care delivery.

Any study that provides basis for further study to either justify or challenge existing conclusions becomes an avenue for further study. Thus, this study provides opportunity for the study to be replicated to challenge conclusions that have already been drawn. This in a way is to contribute to knowledge regarding the role existing health care systems play in the health care delivery effort of the country.

Limitations of the Study

The study has a number of limitations:

1. A study of this nature requires a national coverage for findings to be applicable to the whole country, especially where issues of utilization of health care facilities is involved. This makes this study which covers only two districts out of 110 districts and municipalities restrictive in applying the findings to other parts of the country.
2. Studies that can have policy implications for a whole country because it is concerned with an important issue such as the health of the people of the country must rely on census data but not on survey data as done in this study. That done, enough data is generated for rigorous statistical analyses to be made and important deductions made. This study will be restricted in the statistical tools it has to use. For instance, instead of using multi-nomial logistic regression, binary logistic regression had to be used because of the number of respondents involved in the study. As a result, some facilities had to

be merged with others when binary logistic regression had to be used.

Organisation of the Study

The study is organized under seven chapters. The first chapter, the introductory chapter, deals with the background to the study. Effort is made in this chapter to provide an overview of the general health care situation in Ghana since the introduction of orthodox health care into the country. The statement of problem, objectives and hypotheses that underlie the study have been dealt with in this first chapter. The second chapter deals with major theoretical issues such as meaning of access, availability of facilities and access, knowledge facilities and diseases and access, distance and access, socio-economic conditions and gender issues on access and utilization on health care facility utilization have been analyzed. Theoretical issues on health care utilization models by Dutton, Andersen, and Kroeger are examined. The Three Delays model by Thaddeus and Maine is also dealt with in the chapter. An examination of the relationship between existing health care facilities and the type of settlement is also undertaken.

The third chapter examines methodological issues of the study. This includes delineation of the study area, sources of data and data collection techniques. Methods of analysis and methods of presenting findings are all dealt with in the third chapter. The fourth chapter deals with analysis of socio-demographic characteristics of heads of households and diseases reported by respondents by district and socio-demographic characteristics.

Diseases reported by socio-demographic characteristics with spatial accessibility to health care facilities from the selected study settlements and

their relationships with the utilization of existing health care facilities while the pattern of health care services by members of different households is the object of the fourth chapter discusses the relationship between socio-demographic and diseases reported is examined. The fifth chapter is concerned with identification of available health care facilities and their distribution within the study districts and choice of health care facilities for the treatment of specific diseases. The sixth chapter pays attention to analysing socio-demographic characteristics of respondents as determinants of health care facilities' use while the seventh chapter deals with summary of main findings, conclusions made based on findings and suggestions premised on the conclusions are made.

CHAPTER TWO

REVIEW OF RELATED LITERATURE AND CONCEPTUAL ISSUES

Introduction

The chapter examines both theoretical and conceptual issues of access and utilization of health care services and facilities. In addition, a number of models on health care service utilization are reviewed. A conceptual framework selected to inform the study has also been analysed.

Access to Health Care Facilities

Access is a complex concept that has been used in different areas such as geographical or spatial location of facilities, economic capabilities of clients to resources cultural and functional roles of facilities and psychosocial challenges encountered by different ethnic groups located in urban areas that relate to their relative use of specific resources. Within the geographical or spatial domain, access has been defined in terms of accessibility which deals with the relationship between the geographical or spatial location of a facility or entity and the distance between it and that of client (Breman, Measham & Alleyne, 2006; Couclelis, 2000; Couclelis & Getis, 2000; Emch, Dowling & Carrel, 2017; Meade & Emch, 2010; Wang, Winner & Burgert-Brucker, 2017). This spatial distance has to be overcome to enable physical contact to take place (Duke, Moore & Ames, 2011; Halás, Klapka, & Kladivo, 2014). In this relationship, it is expected that the nearer one is to a facility, the easier it is to utilize service from it and vice versa (Li, 2014; Wild, Barclay, Kelly & Martins, 2012). This has been couched in the distance decay theory which indicates that participation in an activity declines with increasing distance (Batta, Lejuene & Prasad, 2014; Malqvist, Sohel, Do, Eriksson & Persson, 2010).

A counter view is that mere nearness does not induce utilization (Batta, Lejuene & Prasad, 2014; Henry & Mcdonald, 2010; Taverna & Xi, 2007). This is because factors such as transport, time spent in securing transport, road surface conditions, religion, culture or ethnic background can neutralise the effect of distance and have direct effect on utilization (Bottini & Casasanto, 2010; Henry & Mcdonald, 2010; Taverna & Xi, 2007). No definite conclusion has been drawn because enough evidence has been provided to support the opposing views (Baral, Lyons, Skinner, Teijlingen, 2012; Duke, Moore, & Ames, 2011; Halás, Klapka, & Kladivo, 2014; Horan, Lee, Schooley, & West, 2010; Sirven & Zeynep, 2010; Thomson, Osborn, Squires & Jun, 2013).

While the development of faster modes of transport have reduced the effect of distance on use of facilities, the effect of physical distance may take place when transport is rudimentary (Baral, Lyons, Skinner, Teijlingen, 2012; Fiagbe, Asamoa, & Oduro, 2012; Halas, Klapka & Kladivo, 2014; Naiditch & Dourgnon, 2009; Sirven & Zeynep, 2010; Thomson, Osborn, Squires & Jun, 2013).

It can be argued that the effect of distance on access and utilization in the original distance decay theory has, too often, been exaggerated, and that distance may not have any effect on access and utilization. Long distances have often been cited for failure to make the effort to reach a facility, especially in situations where there is difficulty in obtaining an efficient mode of transport (Christian, 2010).

Even though the role of transport on access has become less significant, it cannot be completely ignored especially in developing countries such as Ghana where the full benefit of modern means of transport is yet to be felt. In

such a situation, the frictional effect of distance remains an important factor that influences utilization of health care services (Blanford, Kumar, Luo & MacEachren, 2012; Wagstaff, 2010).

Another issue that has been raised with regards to physical accessibility is the use of time. It has been pointed out that using the same mode of transport, and travelling at different rates vary the distance. This is because distance is the result of speed multiplied by time. If a vehicle takes two hours to cover a distance travelling at 30 kilometres per hour, it has covered 60 kilometres. If another vehicle uses one hour to travel 50 kilometres, it has covered 100 kilometres in the two hours. Thus, spatially, the first vehicle covers a shorter distance; using time and speed, it has used a much longer time and therefore spatially, will need more time to cover that distance of 100 kilometres. Time taken and speed travelled mechanically determine distance and affect the use of facilities. For the present study, the effect of spatial distance on the choice of health care facilities has been highlighted for analysis.

Economic cost is another domain in which access is used and measured. This deals with either the cost of transport, which also relate to physical distance, or the cost of service, which the client must endure in order to have the use of a facility. Economic access creates inequality for the rich and poor. Whereas the rich are able to pay for both transport cost and service charges, the poor are hardly able to bear such costs. Thus, for people residing equidistance from a facility, ability to provide for the costs transport and service charges may create differences in access. Financial affordability then becomes a means of estimating access as it dictates the level of utilization (Fuenzalida-Puelma, O'Dougherty, Evetovits, & Cashin, 2010; Hjortsberg & Mwikisi, 2003;

Kaiman, Smith, Anand, Watts, Kingsley, Hooper, ... & Kaplan, & Kronick, 2006; Liss, Fishman, Rutter, Grembowski, Ross, & Reid, 2013; Kumar, Chen, & Choudhury, 2011; Montagu, Yamey, Visconti, Harding, & Yoong, 2011; Noland & Lem, 2002. Health financing policies that insulate clients from out-of-pocket financing are known to improve access to services (Allotey, 2013; WHO, 2010).

Timely availability of services by service providers is another factor that determines how services become accessible to clients. The extent to which a provider has the requisite resources, such as personnel and technology, to meet the needs of clients at all times is timely availability (WHO, 2017). Timely availability indicates that clients can satisfy their needs because the facility is on hand when required.

Services must not only be timely available; it must also be acceptable to those who are supposed to use it. People differ in their acceptability of service and this captures the extent to which they are comfortable with the services provided. Acceptability is based on existing social-cultural arrangements and norms and reflects the total world view of a people on what is considered appropriate and what is not in terms of disease and treatment; the world view of a people about a disease can affect the acceptability of an intervention. For instance, where the occurrence of an outbreak of an epidemic is considered spiritual, intervention considered spiritual may be preferred to scientific interventions.

Socio-cultural conditions define how a group of people think and act and differentiate them from others (Cacioppo, Bianchi-Demicheli, Frum, Pfaus, & Lewis, 2012). Even where similarities such as location and income levels occur,

differences in perception and actions, based on socio-cultural norms, make people different in how accessible a facility or service may be to them (Karakayali, 2009). Social groups members develop terminologies and conditions that are exclusively known to and used by them (Matthew & Matlock, 2011; Yamakawa, Kanal, Matsumura & Naito, 2009) which create different socio-cultural distances which affect the use of services (Cacioppo, Bianchi-Demicheli, Frum, Pfaus, & Lewis, 2012).

Socio-cultural distance may be conceptualised as affective, normative or interactive. Affective socio-cultural distance deals with the level of sympathy group members have for non-group members. Where the group feeling is strong towards other members, the socio-cultural distance can be bridged and interaction can occur. On the other hand, where the group feeling is weak or absent towards non-members, interaction with them becomes minimal and socio-cultural distance increases (Matthews, & Matlock, 2011; Yamakawa, Kanai, Matsumura, & Naito, 2009).

Normative distance is a subjective and structural social relation that considers who is an 'insider' or an 'outsider'. This creates psychological distance among groups of people. Those considered as 'insiders' could have easy access to the available facilities as opposed to "outsiders' (Matthews, & Matlock, 2011; Yamakawa, Kanai, Matsumura, & Naito, 2009).

In social distance, access to a facility could either be enhanced or inhibited (Bar-Anan, Liberman, Trope, & Algom, 2007; Matthews & Matlock, 2011). In the case of health care facilities, social distance may lead to enhancement or denial of access to people, though they are located next to it.

Others who may be located several kilometres away, but are considered members, may find the same facility accessible (Carter & Lee, 2009).

Socio-economic status reflects the individual's level of education, income, status, marital status and influence behaviour (Conger, Conger & Martin. 2010), One's socioeconomic status could define one's ability to navigate and use existing health care facilities (Chankova, Atim, & Hatt, 2010; Fried, 2014; Gazella, 2012).

People with low socio-economic status are less capable to pay for the cost of services at well-equipped health care facilities, use health insurance, establish a regular source of care, or receive care of similar quality to what their more advantaged peers receive (Friel, Berry, Dinh, O'Brien, & Walls, 2014; Lurie & Dubowitz, 2007). Thus, socio-economic status may help explain why differences in the use of health care facilities exist (Atim, & Hatt, 2010; Gazella, 2012). It has been shown that richer and better-educated people have higher life expectancy and suffer less from the effects of diseases than their poor, less-educated partners due in part due to their ability to pay for the cost of services and also easily navigate existing well-equipped health care services to their advantage which their poor and less-educated peers are unable to afford (Chankova, Atim & Hatt, 2010; Esteves, 2012; Gazella, 2012; Lu, Chin, & Lewandowski, 2012). Differential use of orthodox health care facilities by socio-economic conditions rather than spatial distance has been observed (Ellison-Loschmann & Pearce, 2006; Macias & Morales, 2000).

Conclusions from different studies (Esteves, 2012; Friel, 2014; Gazella, 2012; Lu, Chin, & Lewandowski, 2012) indicate that socio-economic variables such as the level of formal education, occupation and income were important

than spatial factors such as location and distance as factors that influence access to and utilization of health care facilities.

This study has taken lessons from the review by considering the effects of social status, self-acclaimed income status, level of education and distance could have on the choice of health care facilities in a pluralistic setting in the two districts selected. Differences in socio-economic status of people exist in the country, especially between residents of rural and urban communities. This is likely to present differences in access and utilization of health care facilities. Results from the study will provide an insight into how to plan differently for the different health care systems in the country in order to achieve the objective of satisfying the health care needs of different groups of people with different social, cultural and economic backgrounds of the country.

Utilization of Health Care Facilities

Utilization is defined as the process of making effective use of a facility or thing (Oxford Dictionary of English, 2005) with the aim of achieving a particular purpose. In health care services, it involves practical use of a service or facility with the objective of achieving some expected health outcome (Al-Talar et al., 2010). Access and utilization have often been used interchangeably, an indication that access and utilization are equal. This is never the case (Asada & Kephart, 2011). Utilization is the outcome of access. This is explained by the fact that not everyone who gains access to a facility ends up utilizing it. While access captures 'potential use or users', utilization captures 'realized users' (Asada & Kephart, 2011) and represents those real needs that must be satisfied. For reasons of quality of service provided, attitude of care providers or timely delivery, some potential users may or may not become realized users

(Asada & Kephart, 2011). Access deals with the service environment defined as service availability and readiness, while utilization deals with the uptake of the services that are available at the service environment (Wang, Mallick, Florey, Burgert-Brucker & Carter, 2015).

Utilization takes place when there is need, a realization of the need and availability of services that can fulfil the need. The existence of need indicates that within a given population, some health challenges such as maternal and child mortality, deteriorating health of the aged or menace of malaria is found and must be dealt with by the existing health care system. In such circumstances, health-care services may be used to diagnose, cure, or ameliorate disease or injury; to improve and maintain function; or obtain information about their health status and prognosis (National Academies of Sciences, Engineering, and Medicine, 2018). Availability of service can ensure utilization when the realized need must be attended to for a possible positive health outcome.

Determinants of Utilization

Health-care utilization is determined by the need for care; there is knowledge of the need for care, desire to want to obtain care, and the assurance that care can be accessed. The need for care is influenced by the individual genetic constitution and cultural orientation about what constitutes a health challenge. Such conditions vary from person to person and from culture to culture.

Knowledge about health conditions may be available to some people but may be absent with some people. Regular medical examination may reveal health challenges that individual suffer from. For instance, it has been asserted that some HIV-positive people are not aware they are HIV-positive.

Consequently, such people may not see the need to utilize HIV care services available in health care institutions (Adam & Awunor, 2014; National Academy of Sciences, Engineering Medicine, 2018)

How individuals understand and perceive the cause of their ailments is a major determinant of where they seek help. Where the health challenge is perceived to be spiritual, the individual might not consider hospital-based care and may resort to prayer camps and shrines. For instance, HIV victims who perceive their condition as the result of witch-craft may never consider orthodox health care as a possible care option. Thus, whether available services will be utilized or not depends on the nature of ailment and how available services are perceived to be suitable and available (Adam & Awunor, 2014; National Academy of Sciences, Engineering Medicine, 2018)

Gender and Health Care Services Utilization

Every society has roles, responsibilities, expectations and privileges that are ascribed to individuals based on their sex. It is these roles, responsibilities, among others, that refer to the gender of individuals. These gender roles and responsibilities have spatio-temporal dimensions. These ascriptions have been found to be significant in the use of health care services provided by each society (Bertakis, Azari, Helms, Callahan & Robbins, 2000; Glaesmer, Brahler, Martin, Mewes & Rief, 2011; Philips, 2005; WHO, 2010). Males and females differ in their assigned roles which create differences in their needs for health care. For instance, risky responsibilities such as hunting and fishing and involvement in heavy industrial activities which require muscular power possessed by males increase the risk burden of men to accidents and therefore they have need for emergency health care services more than females.

For females, the responsibilities of menstruation, pregnancy and child birth that nature places on them exert enormous health burdens which require frequent use of specialized obstetric health care services for screening and delivery. In addition, societal roles of taking care of children and the sick, make females more vulnerable to disease and infections than males. In societies where catering is regarded as the responsibility of females exposes them to burns, cuts and smoke inhalation. These require that females use existing health care services to deal with such domestic and commercial accidents associated with cooking. In general, females have been found to use existing health care facilities and services more than males (Fikree & Pasher, 2005).

Sometimes the real causes of the differences between males and females in the use of health care services are not recognized because of differences in the control and use of resources. In almost all societies, it is males who control resources; they decide on what health care facilities to develop and also which one household members should use. As a result, existing facilities usually suit the needs of men than that of women (Frieden, 2010; Vian, 2008; Vlassoff, 2007). In general, but particularly in developing countries, cultural value systems give more power to males than females in deciding the use of health care services (Fikree & Pasher, 2004; Gensalud, 2007). In spite of such findings, females have been found to have better utilization of health care facilities and services than men.

This study provides an opportunity to examine how the variations in ascribed roles and responsibilities create differences in the utilization of health care services in an environment where the perception of the role of women, the value system attached to the roles males and females play, the role of economic

resources by males and male chauvinism influence utilization of health care facilities and services.

Perception and Utilization of Health Care Services

Every individual has sensory receptors that are used to gather information from the environment. This stock of information then must be organized for use. The process by which information gathered with the sensory receptors are organized, analysed, and interpreted is our perception and this affects the way we react with the environment in which we live (Odu & Afebende, 2015). People have different perceptions about health care facilities based on available information and their perceptual learning. Perceptual learning refers to individuals' past experiences and training which has been built based on previous experience. In health care services, prior contact with a facility and the level of information and education, to a large extent, affect one's perception about service and its use. Another important factor is the mental set of the person making the perception (Winter, 2003). This refers to the level of preparedness to use information available. Another factor that affects perception is the motive and needs of individuals. Every individual has a motive for doing a particular thing. For instance, if the motive of a victim is to obtain evidence to be present at the work place or to enjoy sick leave, then the person is more likely to use a hospital instead of herbal centre. On the other hand, if the motive is to become well within the shortest possible time, then the choice of service may be different. Self- employed individuals who see the success of his/her enterprise depending on his/her presence may opt for a different health care facility where services are rendered on time but charges higher than another facility where one has to spend a lot of time before receiving the required

services. Cognitive style, which deals with how information is processed, can also affect perception, their past experiences and the training they have (Pillai & Green, 2010). Combining these factors, one could come to the conclusion that people will have different perceptions about existing facilities and services and react to them differently. These factors are considered in the current study to elicit any underlying reasons that are provided for the use of particular health care services.

Health Care Systems in Ghana

Every health care system reflects indigenous knowledge that has gone through processes of practice and adoption of new and existing health care practices. This process may involve initial antagonism if more than one health care system becomes available. This may finally end up in the adoption and blending of some elements and practices from each system until they result in improvements in both systems. For instance, existing health care systems currently found in African societies are a combination of indigenous and orthodox knowledge introduced through colonization. These systems have had issues of drug preparation, dosage efficacy, and mode of operation against each other. They have however succeeded in operating side by side and have dealt with the health care needs of the people of the continent for several years to the extent that they now complement each other, resulting in improvements in their operations (Ekor, 2013).

The choice of a particular system depends on the individual and given context and what the individual hopes to derive in terms of health outcomes. Individuals are however known to use particular health care systems or combine

different systems depending on their preferences and the health outcomes they hope to achieve (Cain & Mittman, 2002; Kaiman et al., 2014).

Until orthodox medicine was introduced into the country, indigenous medicine was the health care system of the population (Busia, 2005; Thumi & Horsfield, 2004; WHO, 2008;). This consisted of herbal preparations and other products that are applied through different means (Akuamoa, 2011; Busia, 2005; Elujoba, Odeleye & Ogunyemi, 2005).

Contact with Europeans led to the introduction of orthodox medicine, initially along the coast, and gradually extending inland (Akuamoa, 2011; Busia, 2005; Frimpong, 2013). Initially, services were limited to the castles and forts. From 1844, western medicine was extended to the local people. In 1867, Dr. Thomas, the medical officer in charge of health issues in the colony, sent a medical report to England about challenging health conditions in the colony. Based on that report, the first hospital was built in 1868 in Cape Coast. Other hospitals were later set up in the forts and castles at Saltpond, Winneba, Accra, Sekondi and Takoradi in 1929. Where ever a hospital was built for use by the Europeans, a different facility was set up for the indigenes who were mostly women impregnated by the Europeans, their children, dependents, assistants to the Europeans and those converted to the Christian faith. Facilities where indigenes were treated were known as African Hospitals. By 1895, there were 10 health care facilities in castles, forts and places outside the castles and forts along the coast. By 1897, a Medical Department to oversee health issues in the colony was established at Victoriaborg in Accra (Akuamoa, 2011 Frimpong, 2013).

Plans to expand and make orthodox health services available to all residents of the colony were outlined in a 1919 10-year development plan (1920-1930) for the Gold Coast during the governorship of Sir Gordon Guggisberg (Frimpong, 2013). Immediately after approval by England, commencement of expansion of health care facilities to both coastal and inland settlements began. Kore-Bu hospital, the biggest hospital facility in the colony, with an initial 200-bed capacity, was built and completed in 1923. Other facilities were also constructed and by 1943, dispensaries had been set up at Manso, Fosu, Mfuom, Kisi, Twifo, Eguafo and Diaso, Ajumako, Swedru, Apam, Senya Beraku, Brenase in the Central Province, Aperade, Akoroso and Ntronang in the Eastern Province (Archival material, retrieved 2017). Dr. Scott-Johnson who was the medical officer and Medical Officer of Health of the colony proposed the building of hospitals at Oda, Mpraeso, Mampong and Nsawam in the Eastern Province; Asankragwa and Tarkwa, in the Western Province, Kumasi, Bekwai and Wenchi in the Ashanti Protectorate; Kintampo, Tamale, Zuarungu and Lawra in the Northern Territories; Kete-Krachi; Jasikan and Kpandu in the Trans Volta Territory (Archival material, retrieved 2017).

The 1919 plan aimed to ensure clean environment led to the establishment of a sanitary inspectorate division of the Medical Department to educate the local populace about environmental cleanliness. The effort to provide health care services to residents of the colony continued to the time the administration of the country was ceded to new local administrators in 1957 (Akosah-Sarpong, 2008; Yeboah, 2000).

Maximum health benefits can be derived from health care systems when clients have easy access to and use existing health care facilities. The WHO

(2012) stipulates that for easy access and for maximum benefit to be derived from existing health care services, there must be a health care facility within every eight kilometres of spatial distance.

After gaining independence in 1957, the new government continued with the efforts started by the colonial administrators in dealing with health issues in the country. As part of its first seven-year and five-year development plans, a new health plan was developed (1963-1970). The plan aimed at ensuring provision of quality medical services in the country. This led to an expansion of the Korle-Bu hospital and later elevated to become the first teaching hospital in the country in 1964 while effort continued to expand the provision of health care facilities to different parts of the country (Maternal Health Channel, 2014).

While the colonial administration was dealing with the expansion and building of new health care facilities throughout the colony, the need for more health care professionals became apparent and had to be dealt with. Health workers were recruited from England and brought to the colony but their numbers were still inadequate. It became necessary to recruit some local people, give them training to assist the European staff. To prepare adequate health personnel to solve the manpower needs of the health sector, students from the Gold Coast were sent to the United Kingdom, between 1929 and the mid-1950s, to be trained as medical doctors. This was still not enough to ensure adequate supply of medical doctors on a permanent basis. As a solution to this problem, the first medical school was set up at Kore-Bu for University of Ghana (Sodzi-Tettey, Aikins, Awoonor-Williams & Agyepong, 2012).

Other medical schools have been built at the University of Science and Technology in Kumasi (1975), University for Development Studies at Tamale (1996) and the University of Cape Coast at Cape Coast (2008) (Dovlo & Nyonator, 2004; MOH, 2012). A school of Allied Health Sciences has been built at Ho in the Volta Region while a private medical school, School of Medical Sciences, was set up in Accra in 2012 (MOH, 2014). Two private medical schools have also been set up in Accra and Tema. As a result of these efforts, more than 500 medical doctors graduate annually from the existing medical schools.

Herbal Health Care Services

While efforts are made to improve upon and expand orthodox medical care in the country, herbal medicine continues to receive attention toward regulating activities of practitioners and improve upon their performance. In 1961, the Psychic and Traditional Healers Association was formed to identify where practitioners operate, scrutinize their activities and to help improve upon their performance, especially with regards to methods of collection, preparation and storage of herbal medicine (MOH, 2007). A body to oversee activities of traditional medicine, the Traditional Medicine Practice Council, was established within the Ministry of Health in 1961. In furtherance to that, a Scientific Research Centre into Plant Medicine was established at Mampong Akwapim in 1975 to research into active ingredients in herbal plant medicine (Kusi-Bempah, 2011). In 2001, the Faculty of Pharmacy, Kwame Nkrumah University of Science and Technology, developed a programme to train personnel in traditional herbal medicine and in 2004, the Ministry of Health developed a traditional health care system's code of ethics to guide the operation of

Traditional Medical Practitioners (Kavi, Abanga, Kudolo, & Morna, 2008). These efforts have led to improvements in the quality of services and shelf life of herbal preparations

Beginning from the establishment of the first hospital within the Cape Coast Castle in 1868 to 2004, 2,740 orthodox facilities had been built (PPME-GHS, 2005) increasing to 3,217 in 2009 and to more than 3,260 in 2013. Among the facilities are eight regional hospitals, three psychiatric and four teaching hospitals. By 2010, there were a total of 389 private maternity homes and 156 privately-owned and 96 totally state-owned hospitals. Aside hospitals, clinics and CHPS compounds, pharmacies and drug stores are additional facilities that serve as avenues for dispensing orthodox medicines in the country.

Theoretical Review

A number of models have been developed within the social sciences to explain the choices individuals make regarding health care utilization. Among them are the social behavioural models and health care utilization models. These have been explored and the extent to which they relate to this study have been examined. In this study, Kroeger's (1983) health care utilization model was used.

Andersen's Health Services Utilization Model

This socio-behavioural model was developed by Anderson (1973) on use of biomedical health services. It identifies three factors (predisposing, enabling and need factors) which influence health services utilization behaviour (see Figure1).

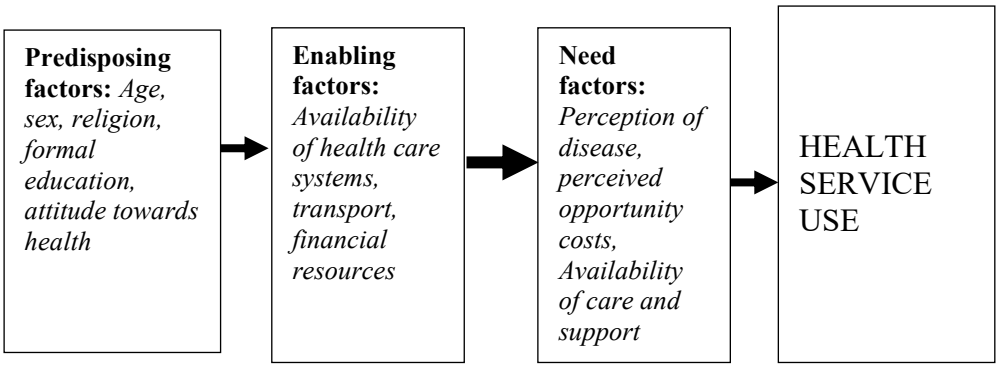

Figure 1: Health Services Utilization Model

Source: Andersen and Newman (1973)

According to Andersen and Newman (1973) the predisposing factors are the characteristics of individuals: age, gender, religion, prior experience with illness, formal education, attitude towards health and knowledge about health. These factors are considered vital for decisions on use of health facilities (Andersen & Newman, 1973).

Enabling factors are external to the individual but are useful in influencing how individuals utilize available health care resources. The factors are: presence of health facility within a certain minimum distance, availability of transport, cost of travelling and existing social support.

The need factors are: perception of severity of a disease condition, opportunities that may be missed, such as number of sick days for a self-employed or one in paid-employment and availability of help for care and support. These factors combine to influence an individual's choice of health service (Andersen, 1973).

The major strength of the model lies in its ability to categorize factors that affect health care use into predisposing, enabling and need factors so that at any point in time one can differentiate among the factors that influence health service use. The model has therefore been used in the health care studies to

identify and categorize factors that influence utilization of services for different diseases. The weakness of the model lies in the fact that variables involved in the predisposing, enabling and need factors are many and makes comparison of results from different studies difficult (Bradley, McGraw, Curry, Buckser, King, Kasl & Andersen, 2002; Ricketts, Goldsmith, Bradley, McGraw, Curry, Buckser, King, Kasl, & Andersen, 2005;).

Dutton's Health Care Use Model

Dutton (1978) developed the health care use model to examine the actions of patients and physicians in the utilization of health care facilities. The model identifies use of health care facilities as an outcome of the interplay between patient and physician (see Figure 2).

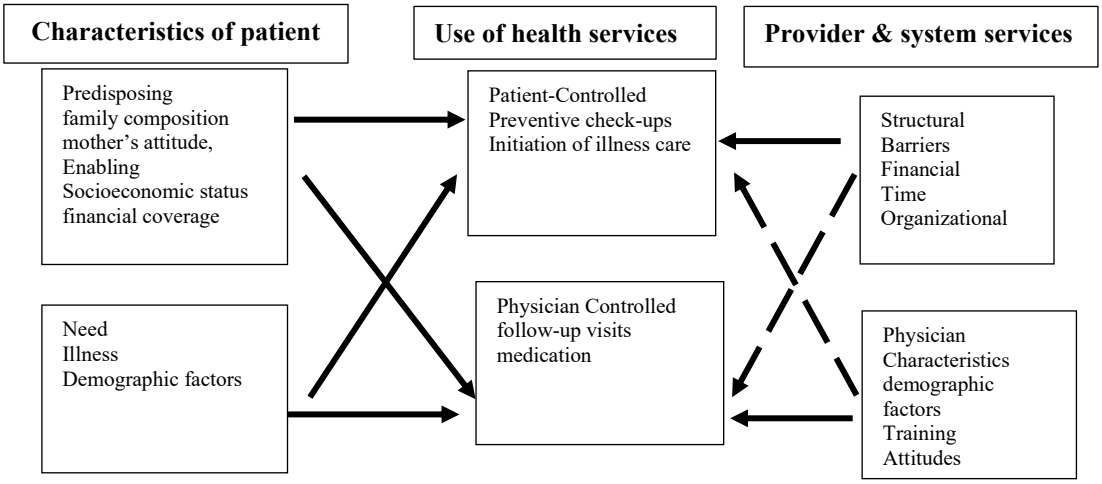

Figure 2: Dutton's Health Care Use Model

Source: Dutton (1986)

Like Andersen's (1973) health services utilization model, Dutton's model also identifies predisposing, enabling and need factors which determine choice by individuals who need to use health care facilities. In making health care choices, the individual is likely to face barriers such as finances, time and organizational practices of the health care facility. Need factors lead the patient

to a physician who controls when follow-up visits are to be made. This decision by the physician is dependent on the nature of training received, experience and attitude towards patients, work and illness (Dutton, 1978). The model has been applied in different health care choice studies (Hollander, 1995; Jahangir, Irazola & Rubinsten, 2012; Williams & Tomison, 2013; Woodley, 2001).

The model categorizes factors influencing heath care use into patient-controlled and physician-controlled, making it possible to analyse separately factors which emanate from patients and those from the physician in a health care delivery system which influence the choice of health care services that patients have to make. It makes it easy to identify barriers to the use of services and apply corrective measures.

The main strength of the model lies in its ability to differentiate between client and care provider and the role they can perform as partners whose actions influence use of health care services. It also categorizes factors that influence the use of health care services into predisposing, enabling and need factors. Use of health care services does not depend only on availability of service but also on the actions of those who provide the service. The main weakness is that nothing is said about health outcomes for the client, which forms an input in determining repeated use of a facility or service (Tomison, 2013). Thus, no feedback loop exists to prompt, especially care providers, about the effect of their actions on the use of existing health care services.

It can be deduced from the model that it takes more than the availability of health personnel or facilities to ensure a successful health care delivery. The patient plays some roles which include the realization of the need to identify the existence of health care services and be prepared to use them. It is important for

a client to have a trust in a health care services and be prepared to follow prescriptions given. When there is congruence between the actions of a care provider and a client, use of existing health care services can increase.

Conceptual Framework for the Study

Health Care Utilization Model

Kroeger (1983) developed a model that determines health care use behaviour of individuals depending on existing predisposing, enabling and need factors and existing health care facilities. The model identified pre-disposing factors which are the observable characteristics of the individual, such as the age, ethnic group, marital status, level of education achieved, number of children. The characteristics of illness are the grade in which people needed the health service, and in some way the expected benefits of this service and constitute the need factors that lead to the use of existing health care services. The characteristics of the health care system are related to the service quality and attainability constitute the enabling factors which influence health choice behaviour of individuals, based on a list of different health care services which represent the structure of health care systems available in any given area and which reflect different socioeconomic systems within which health care deliveries take place (Valencia, 2012) (See, Figure 3).

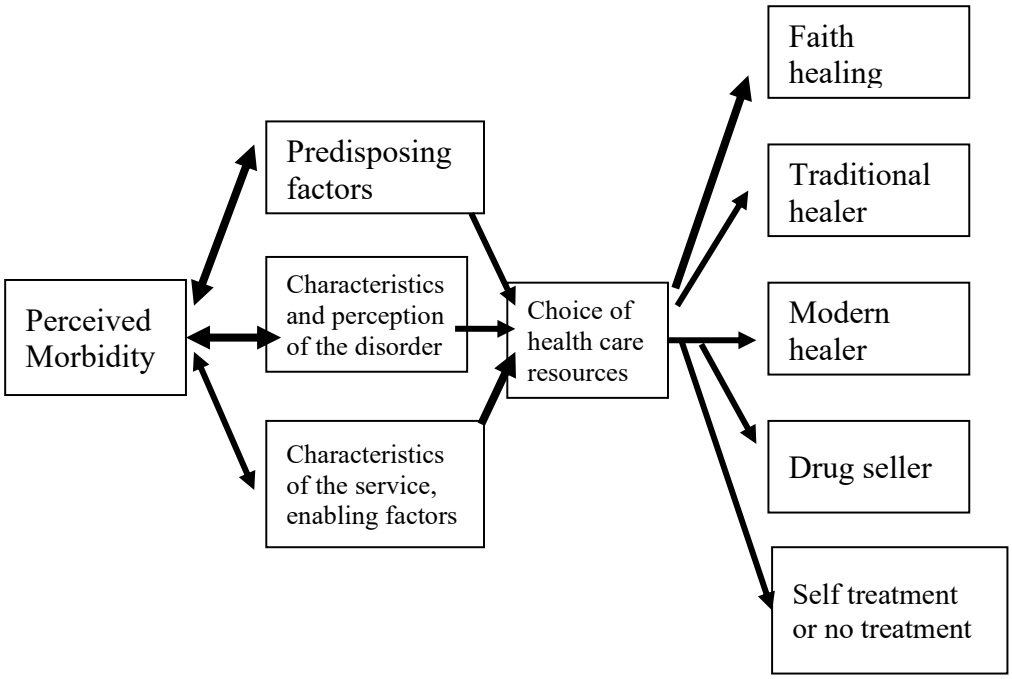

Figure 1: Health care utilization Model

Source: Kroeger (1983)

The choice of a service within a given health system utilization begins with a perceived morbidity about the disease and trust in existing health care facilities. Depending on one's perception about a disease and its severity, the process to seek treatment begins. The choice of a particular service is influenced by prevailing predisposing factors, characteristics and perception of the disorder and the characteristics of available service (See Figure 3). Predisposing factors that influence choice decisions are age, sex, level of education, residential status and socio-demographic status. The characteristics and perception of the disorder also affect individual's perception of morbidity. The characteristics of a disorder may be interpreted in diverse ways and this affects the type of intervention that may be adopted. For instance, where a disease is considered as minor, no institutional service may be sought and the victim may either self-medicate or take no action. On the other hand, where a disease is considered

serious, immediate steps may be taken to seek care from a professional (Mosadeghrad, 2014).

The next set of factors that may influence the perception to seek care and use a particular service is the characteristics of the different types of services available. These are the kind of services rendered, specialization and the attitude of service providers towards those who seek service (Mosadeghrad, 2012; Victoor, Delnoij. Friele, & Rademakers, 2012). In addition, enabling factors such as location of a facility, the distance to be covered to reach the facility, availability of transport, availability of social support systems, such as health insurance and affordability of the service delivery influence the type of treatment options people adopt (Jahangir, Irazola & Rubinstein, 2012; Lo & Fulda, 2008). Social networks and cultural practices can as well influence the type of service one decides on. In some environments, range of health care services that may be available consists of faith healers, traditional healers, modern medical services, the drug sellers and self-medication (See Figure 3). An individual may choose one or a combination of them depending on how fast the perceived relief is seen to occur (Li, Nong, Wei, Feng & Luo, 2016).

The strength of the model is that it identifies predisposing, enabling and need factors and further identifies both the service provider and the client as important partners who can affect the use of health care facilities. The model identifies both orthodox and traditional services as possible services, thus making the model ideal for use in both developed and developing countries where service use could be applied. It places equal importance on the client and service provider as factors in the provision of services. It recognizes that the choice of a health care facility is dependent on predisposing factors, the

perception that is held by the individual about morbidity and the characteristics of the service which constitute the enabling factors. Again, the model provides a list of facilities that may be available and from which the individual is likely to make a choice. Kroeger's model has been used extensively in similar areas. Moreover, the strengths of the model outweigh that of the social behavioural models and health care utilization models. For this reason, Kroeger's model was adopted for the current study.

Implications of the Literature for the Study

A review of some related works has brought into focus the significance of issues such as spatial distance and socio-economic conditions prevailing in an area and how they influence decisions on health. Other factors such as cost of health care services, gender relations and prevailing cultural factors which influence perception of sickness and the interpretation of disease conditions which then determine the decisions made in relation to the utilization of health care facilities were analysed. These factors act differently in different environments and influence the choice of method, study design, choice of variables to consider and presentation of outcome. The review provided opportunity to compare outcomes of the present study to existing ones in order to gain an understanding of spatial differences in health-seeking behaviour of individuals spread over space.

In the review, a number of theoretical issues with different models were considered. This led to the choice of an appropriate conceptual framework that could support the study. Three of the models: Andersen's (1973) model; Dutton's (1986) model and Kroeger's (1983) model which were health care/services utilization models were considered.

Andersen's (1973) model, even though was a utilization model that had emphasized predisposing, enabling and need factors, which are some of the issues raised in the present study, could not be used since the element of choice, which presupposes the presence of different health care facilities at the same time, was absent. Consequently, the model cannot deal with the issue of choice and has to be rejected.

Considering Dutton's (1986) model in relation to the issues at stake in the present model, it was found that like Andersen's (1973) model, the issue of predisposing and need factors are also raised. Aside that, the model identified interaction between a patient and a physician as an important issue which depends on the physician characteristics and structural barriers which the client has to overcome. Like Andersen's (1973) model, the option of a choice which is the main focus of this study was not found and therefore the model was rejected.

Kroeger's (1983) utilization model was examined. Like other utilization models, it starts with perception of morbidity, an important start for a client to decide what to do. It then identifies predisposing factors, examines different health care facilities and by looking at the characteristics of the disorder, makes a choice. This is exactly what the present study is about: Perception about a disease, availability of facilities and the choice the client has to make. This model was therefore adopted as the conceptual framework for the study.

CHAPTER THREE

RESEARCH METHODS

Introduction

The focus of the chapter is to provide a description of the study areas, research instrument employed, the target population and respondents, the sample size and the sampling procedure adopted in selecting the sample to participate in the study. Other issues dealt with were the procedure used in the training of field assistants, the data collection process used, field issues which emerged and how they were dealt with as well as an examination of data quality.

Philosophical Paradigms

In this study, the positivist paradigm was employed. The choice of this paradigm was to assist the study in providing better understanding of the issues under investigation. For instance, the value-free doctrine of positivists tends to singularize reality. This may be necessary when studying large samples of the population. The positivist dictates: what set of beliefs and ideas are held about the nature of reality (ontology); what the knower knows about reality (epistemology); and what approaches are applied to establish reality (methodology) (Lincoln, Lynham & Guba, 2011).

The positivist research paradigm holds the view that reality is fixed and can be observed and described from an objective viewpoint (Levin, 1988). In other words, the positivist paradigm adheres to the opinion that only "factual" knowledge gained through observation (the senses), including measurement, is trustworthy. In positivist studies, the role of the researcher is limited to data collection and interpretation through objective approach and the research findings are usually observable and quantifiable (Dudovskiy, 2016). Research

conducted by positivists tends to assess the causes that influence outcomes by following a rigorous scientific method, using a theory, collecting data, and then supporting or refuting theory (Creswell, 2006). In this regard, the set of data and analytical procedures that were used in this study were dominantly guided by the positivist research paradigm.

Research Design

The present study was a descriptive cross-sectional design as a way of analyzing quantitative approach to better answer the set of research questions posed (Creswell & Clark, 2011). Specifically, the study utilized an explanatory methods approach. This approach was used because it offers flexibility in adequately collecting quantitative data in chronological phases and conduct analyses thereafter. Specifically, the quantitative data was used to run logistic regression analyses using independent and dependent variables.

Profile of the Study Areas

The region chosen for the study was Central Region. The choice of the region was based on the income poverty trend of its population. In terms of income poverty, the proportion of the region's population that lived below the poverty line of less than two dollars a day increased from 44 per cent in 1991/92 to 48 per cent in 1998/99 then decreased to 20 percent of the population in 2005/2006 as compared to other regions (see Table 1). For instance, within the same period the proportion of the Western region population that lived below the poverty line decreased from 61 per cent in 1991/92 to 27 per cent in 1998/99 and then to 18 per cent in 2005/2006. For the proportion that lived below extreme poverty it decreased from 24 per cent in 1991/92 to 10 per cent in

2005/2006, making it higher than Western region which started from 42 per cent in 1991/92 and declined to 8 per cent in 2005/2006

Thus, in terms of poverty trend, the region's performance made it suitable for any study involving poverty. This study was part of a collaborative study among the Norwegian University of Science and Technology, University of Cape Coast and the University of Ghana. The region was thus chosen purposively for the study.

Table 1: Regional Trends of Poverty in Ghana (1991/92-2005/2006)

Region	Proportion below extreme poverty line			Proportion below poverty line		
	1991/92	1998/99	2005/2006	1991/92	1998/99	2005/06
Western	42.0	14.0	7.9	60.6	27.0	18.0
Central	24.0	31.0	9.7	44.0	48.0	20.0
Gt. Accra	13.0	2.4	6.2	26.0	5.2	11.8
Eastern	35.0	30.0	6.6	57.0	38.0	31.4
Volta	42.0	20.4	15.2	57.0	38.0	31.4
Ashanti	25.0	16.4	11.2	41.0	28.0	20.0
B. Ahafo	46.0	18.8	14.9	65.0	36.0	29.0
Northern	54.0	57.4	38.7	63.0	69.2	52.3
Upper West	74.0	68.3	79.0	87.9	83.9	88.0
Upper East	53.0	88.0	60.1	67.0	88.0	70.0
Urban	15.1	11.6	5.7	27.7	19.4	11.0
Rural	47.2	34.4	25.6	63.6	49.5	39.0
National	36.5	26.8	18.2	51.7	39.5	28.5

Source: Ghana Statistical Service (2007)

The Ministry of Local Government classified districts in the country into developed, moderately developed, deprived and most deprived based on the availability or absence of some basic facilities and services (Ministry of Local Government, 1995). According to the Ghana Statistical Service (2006), as of December 2005, there were 110 districts, municipalities and metropolitan

assemblies in the country. Out of this figure 12 districts and one Municipality were in the Central Region. Three of the districts and the only Municipality were classified as developed, three were moderately developed, and six were deprived and one was classified as most deprived (Ministry of Local Government, 2005).

Since the focus of the general study was on poverty, the Ajumako-Enyan-Essiam District, classified as the most deprived district in the region, was purposively selected. Through a simple random sampling, Upper Denkyira, one of the developed districts in the region, was selected. Thus, the most deprived district and one developed district were chosen for the study in order to find out whether access to and use of health care facilities were the same or different for the two (See Figure 1).

The 2000 population and housing census estimated the population of Upper Denkyira to be 108, 444 and constituted 6.8 per cent of the population of the region. This was made up of 53,749 males and 54,695 females. The district had 82,229 of the population as rural dwellers while 26,215 were urban dwellers. In effect, the district had an urban population of 24.2 per cent of the district's total population (Ghana Statistical Service, 2002).

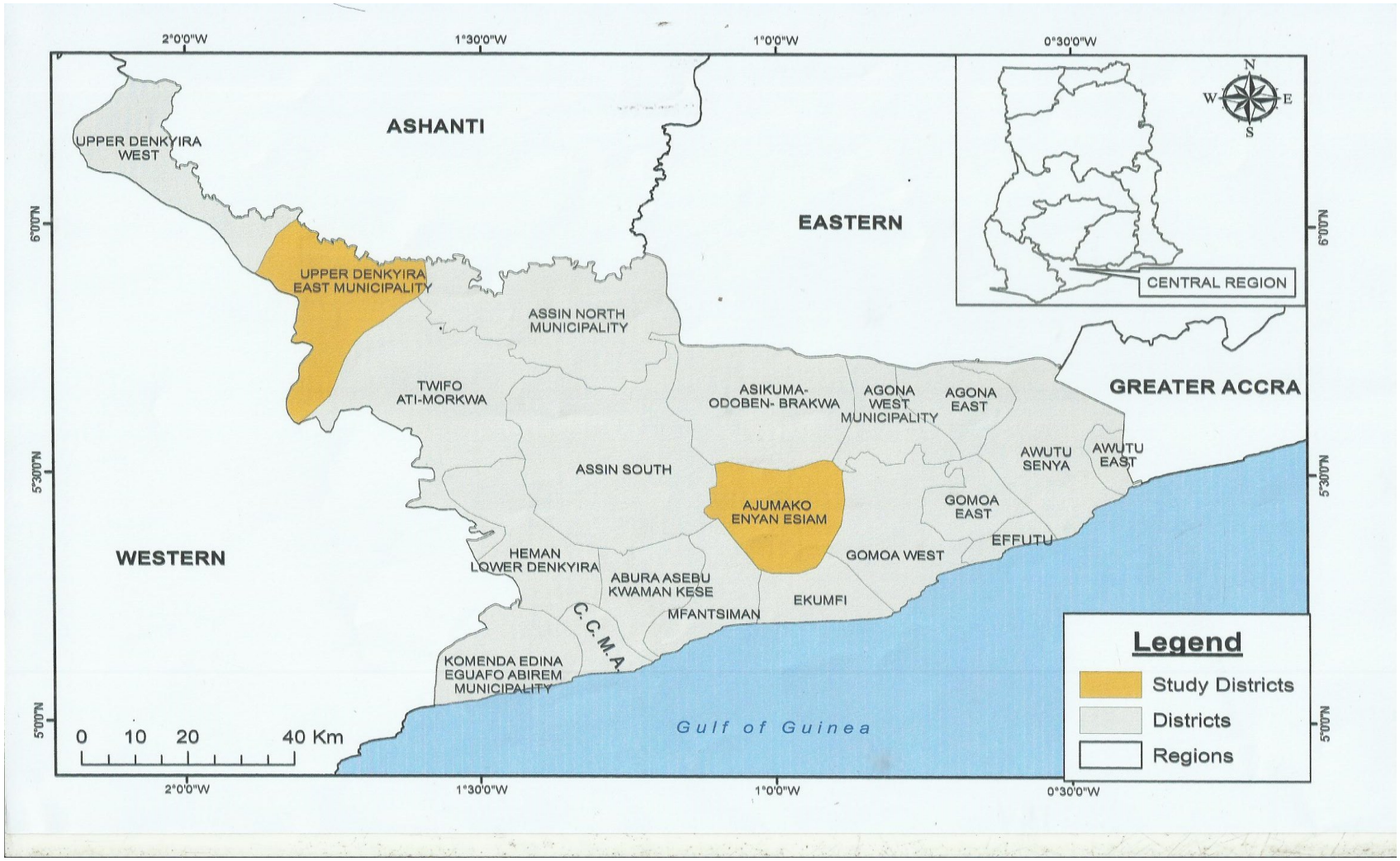

Figure 2: Map of Ghana Showing the Study Districts
Source: Ghana Statistical Service, 2007

Location

The Upper Denkyira district lies within latitudes 5º. 30'N and 6º.02' N and longitudes 1º W and 2ºW. To the North, it shares border with Bibiani-Anhwiaso Bekwai in the Western Region and Amansie West in the Ashanti Region. It also shares borders with Adanse West and Amansie East in the Ashanti Region to the East. In the West, it borders Wassa Amenfi in the Western Region while the Assin and Twifo-Ati Mokwa Districts in the Central Region are the southern neighbours. The district covers a total land area of 1,700sq km, which is 17 per cent of the total land area of the Central Region (Upper Denkyira District Assembly, 2011). Dunkwa-on-Ofin is the district capital (see Figure 2).

On the other hand, Ajumako-Enyan-Essiam District falls within latitudes 5º 53' and 1º 34'N and longitudes 0º 53' and 1º 08'W. In relation to other districts, the Ajumako-Enyan-Essiam District shares common borders with the Asikuma-Odoben-Brakwa district to the north, Assin district to the north-west, Mfantsiman district to the west and south and Gomoa and Agona districts to the east and west respectively. The district covers a total land area of 541.3sq kilometres which is 5 percent of the total land area of the Central Region. The district has about 184 communities and is divided into nine Area Councils and has Ajumako as the district capital (Ghana Statistical Service (GSS), 2012) (see Figure 3).

Socio-economic activities found in the area may be influenced by the geographical characteristics of the area. To understand the organisation of economic activities that also has the potential to influence the choice of health care facilities the study examines the geophysical conditions of the two study

districts under the following subheadings: climate, drainage, vegetation geology and soil.

Climate

The two districts fall within the semi-equatorial zone. Mean annual temperature for Upper Denkyira is between 24 and 29°C while for Ajumako-Enyan-Essiam, mean annual temperature is between 26 and 30°C. Both districts experience two rainfall regimes, but the total annual mean rainfall is between 120cm and 200cm for Upper Denkyira and 110 and 180cm for Ajumako-Enyan-Essiam. The first rainy season is from March to June with the heaviest in June, while the second rainy season is from September to October. The main dry season is from November to February (Upper Denkyira District Assembly, 2011; Ajumako-Enyan-Essiam District Assembly, 2011).

Drainage

The major river in the Upper Denkyira District is the River Offin, with streams that are either tributaries of the Offin or Pra. The major tributaries are Subin, Ninta, Aponapon, Tuatin, Dia and Afiefi (Upper Denkyira District Assembly, 2011). Ajumako-Enyan-Essiam district is characterised by dense drainage with the key rivers, Amissah and Narkwa, named after where they enter the sea although both rivers are locally called Ochi. Flooding is frequent on the land bordering Narkwa towards the borders with Gomoa (Ajumako-Enyan-Essiam District Assembly, 2012).

Vegetation

Both districts fall within the semi-deciduous forest zone with three layers of trees. Trees of the lower layer and some of the topmost layers stay

evergreen throughout the year. This is due to the generally moist condition of the area. Due to increasing farming very little of the original forests remains, and most of what is left are tree that grew to replace the original ones. The forest contains various valuable timber species such as Mahogany and Wawa (Upper Denkyira District Assembly, 2011).

Geology and Soil

The two districts are underlain by rocks that are predominantly of Birimian and Tarkwaian formation. The Birnmian formation consists of metamorphosed sediments as phyllites, schist and lava. This accounts for the Upper Denkyira's rich mineral deposits, particularly alluvial gold deposit, along the valleys of river Offin and its tributaries. Gold Mining is thus an activity that has been going on in the district. Unlike UD where mining is undertaken, no mining activity takes place within AEED. Rather, it has a dissected plateau with heights ranging between 50 and 150 metres above sea level.

The principal soil found in two areas is forest ochrosols. The colour of this soil ranges between brown and orange. The soil is not highly leached as oxysol. Due to the reduction in the amount of rainfall, the soils contain greater quantities of soil nutrients and are generally alkaline (Upper Denkyira District Assembly, 2011, Ajumako-Enyan-Essiam, 2011). Tree crops such as cocoa and oil palm thrive in the two areas and are supported by the forest ochrosols.

Economic Activities

Given the physical conditions of the area, farming is the major economic activity undertaken by the people in the two districts. Cocoa is the major economic crop and constitutes the major cash crop produced by farmers. Food

crops such as cassava, plantain and maize also do well. Aside farming, some mining, fishing along the Offin river are also undertaken within UD while citrus is cultivated in AEED. Small-scale agro processing of palm fruits for palm oil is undertaken in both districts. Trading and artisanal work and some clerical works also take place within the districts. These activities, some of which relate directly to the environment, influenced the type of diseases and facilities that were selected for treatment.

Health Care Facilities

The health care delivery systems of the two districts were the same, made up of orthodox and traditional systems. The traditional systems involved the use of leaves, backs and roots of trees and other plants by herbalists, fetish priests and spiritualists. In addition, there were faith healers who prayed and applied 'holy' oils and water for healing purposes. Health delivery under the orthodox system in the two districts existed up to Level C under the country's primary health care system with a district hospital offering referral services.

Orthodox health facilities in the Upper Denkyira district included two hospitals: one government and one company hospital at Dunkwa-on-Offin, there were three health posts at Kyekyewere, Oponso and Diaso. The district had five clinics at Mbraim, Nkotumso, Ntom, Subin Hill and Dominase, operated by government, a private clinic at Dunkwa-on-Offin and two other clinics operated by religious bodies at Dominase and Ayanfuri (see Figure 7). There were also two private maternity homes at Dunkwa-on-Offin (Upper Denkyira District Assembly, 2011). The district had three qualified medical doctors, 46 nurses, 20 community health nurses, two public health nurses and

nine paramedics. There were no dentists and gynecologists in the district (Upper Denkyira District Assembly, 2011).

For the Ajumako-Enyan-Essiam district, there was no hospital within the district at the time of the study. The orthodox health care system within the district consisted of nine clinics and health posts which were managed by medical assistants, nurses and midwives (see Figure 8). There were no qualified medical doctors, dentists, pharmacists and gynecologists in the district. Community health nurses managed and examined health cases that were reported at the health posts. Those that were not serious were treated at those facilities while others were sent to the clinics. The clinics were managed by health assistants. They dealt with cases that were within their competencies and more serious cases were either referred or taken to the hospitals in nearby districts accompanied by a nurse (Ajumako-Enyan-Essiam District Assembly, 2011).

As a check on the 2018 status of health care infrastructure in the districts, the two districts were visited in January 2019. It was reported that the government clinic at Ajumako has been upgraded into a district hospital and had three medical doctors. In all, as at December 2018, the district had one hospital, six health centres, four community clinics, 15 CHPS compounds, one maternity home and one private clinic. A further check on use of facilities revealed that drug stores were still the most patronised facilities since reasons given in 2005 for the use of drug stores had not changed.

Upper Denkyira East and Upper Denkyira West formed Upper Denkyira district in 2005. The January 2019 visit to Upper Denkyira East district revealed that there had been increases in the number of health care facilities in the new

district. A total of 28 health care facilities which consisted of three hospitals, three health care centres and 22 CHPS compounds were available and functional (Denkyira East District Health Information Office, 2018). A check was made on Upper Denkyira West since it was part of the Upper Denkyira district that was studied in 2005. It was reported that there was no hospital at Diaso, the district capital nor any place in the district. Clients who need hospital services have to rely on the three existing ones at Dunkwa-on-Offin (Upper-Denkyira West District Health Information Office, 2018). There were however two clinics, three health centres and 16 CHPS compounds. Together these had brought orthodox health care services closer to clients.

Some investigations into the use of the facilities revealed that people were still patronising the services of drug stores. The major reason assigned for this was that bearers of National Health Insurance cards were given simple drugs, such as paracetamol after long delays at the hospitals. While for other drugs clients were give prescriptions to buy from drug stores. They would therefore rather buy straight from the drug stores. They would rather go to the hospitals with cases which they considered serious (District Health Information Office, 2018). These were the same reasons given in 2005.

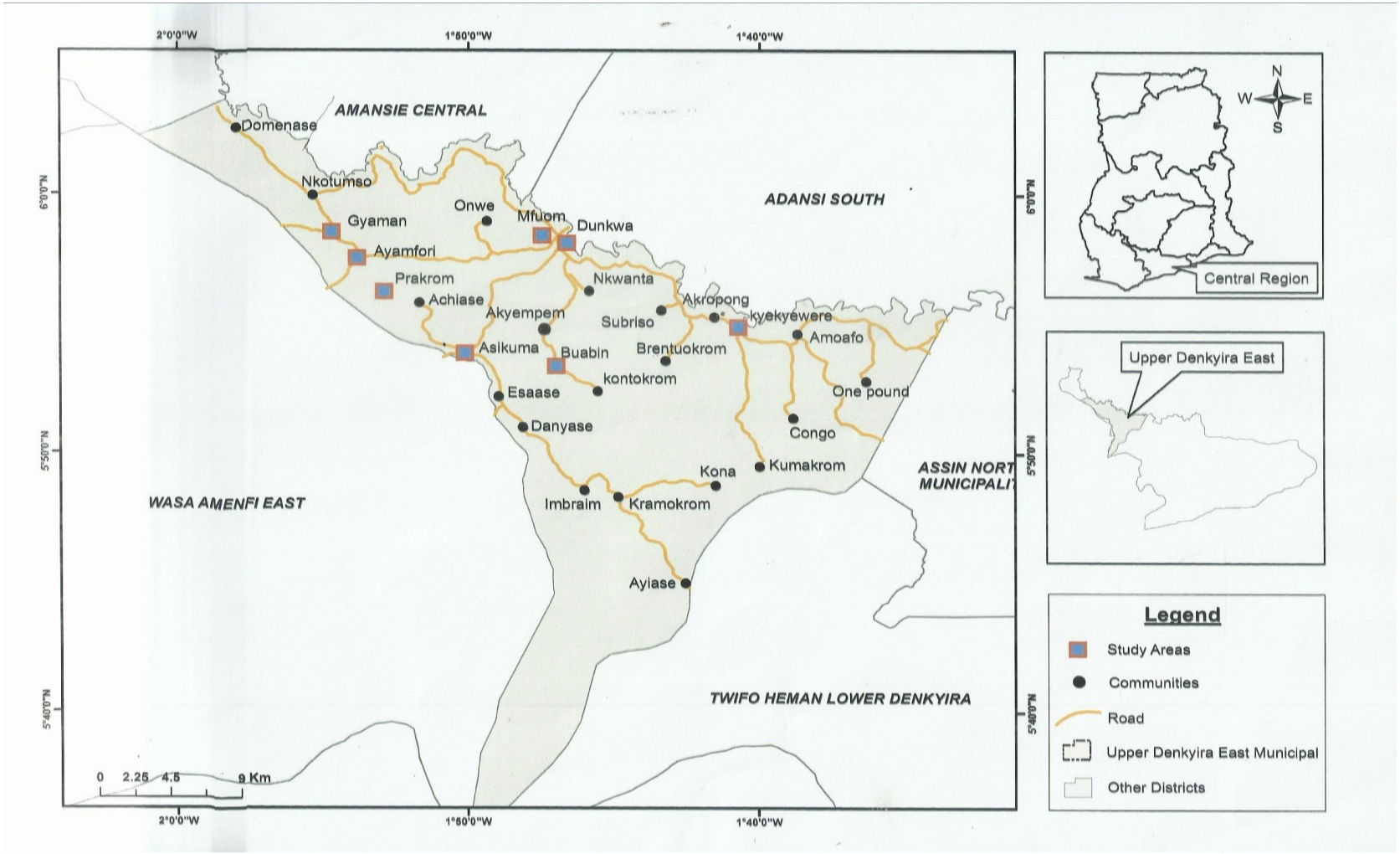

Figure 3: Map of Upper Denkyira Showing Selected Settlements
Source: Ghana Statistical Service, 2007

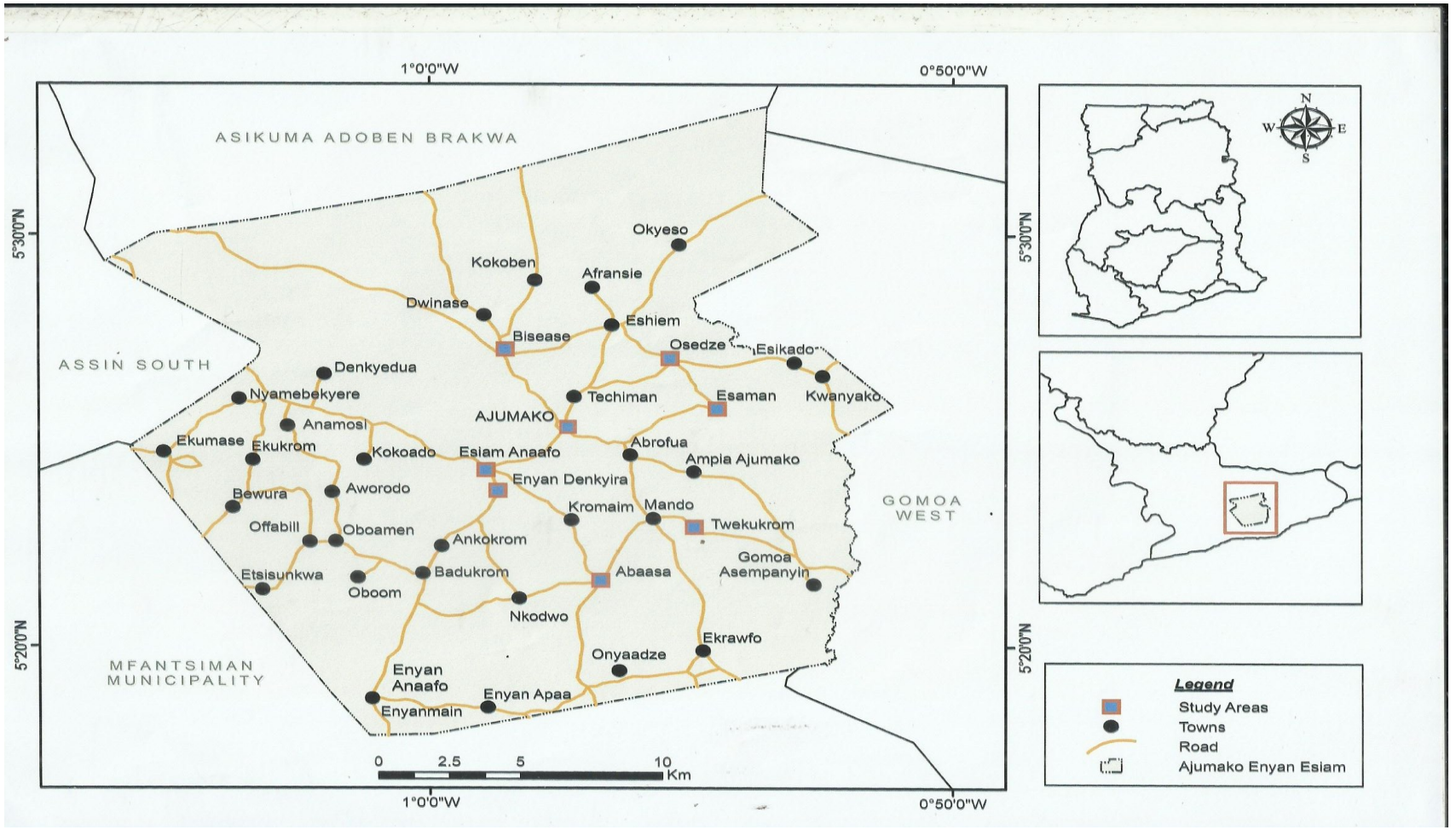

Figure 4: Selected Settlements within Ajumako-Enyan-Essiam District

Source: Ghana Statistical Service, 2007

Sources of Data

Data for the study were collected from heads of households on use of health care facilities in the district, existing health care facilities and staff situation as well as when the current health insurance scheme was launched in the district. Heads of households have the responsibility of ensuring that basic needs of members such as food, clothing, shelter, education and health care needs are met. Even where they do not provide the resources, their influence in decision making, such as choice of health care facility, cannot be underestimated. It is this recognition of the role of heads of household that motivated the consideration to use them for health care information for the study.

Sampling Procedures

Settlements

First step was to identify clusters of settlements that were less than a kilometre and up to 20 kilometres from the district health care facility. Distance from the district hospital was used as basis for the selection of settlement because the district hospital was the referral facility and was therefore the ultimate facility in the district to which all serious cases would be sent for treatment. It was therefore considered convenient to use that instead of any other facility as basis for selecting settlements. Within this distance range, all settlements with less than 100 households were excluded. Such settlements were not likely to yield enough households with dependants from which sampling could be done. Distances that were farther than 20km were excluded

since such a distance was more likely to be disincentive to move to a hospital when other facilities were within reach.

Thus, for Upper Denkyira, for considerations such as difficulty in accessing means of transport, difficulty of making call back visits and reduction in the number of facilities from which clients could make choices, a total of 27 settlements were deemed qualified to be included in the study. The district capital was purposively selected since it had all the health care facilities from which clients could make choice. Out of the 26 settlements left, a decision was made to use 25 per cent of such settlements. That meant six settlements could be selected aside the district capital. Using a simple random method, six out of the 26 settlements were selected

Using the same principle used in for UD, eight settlements were selected aside the district capital, Ajumako. That meant nine settlements were selected in Ajumako-Enyan-Essiam district.

Sample Size Determination

Selection of houses

Initial chalking was not done due to logistic constraints. Thus, for the settlements selected, it was decided that in the case of Dunkwa-on-Offin, selection of houses was to start from the district hospital and in the case of other settlements, selection was to start from a clinic or lorry station. The closest houses to the facilities listed were selected using simple random method to select a first house from which every 1 + nth house was selected until the whole settlement had been covered.

Selection of households

In UD, it was found that there was a total of 17,360 households. The number of households in the selected seven settlements were 8,175. Sarantakos (2005) had indicated that where the target population is not above 10,000, sampling between three and five percent of the population would lead to meaningful generalisation. With that, it was decided that six per cent of the target population should be selected. This led to a sampling of 420 of household heads to respond to the research questionnaire.

In the Ajumako-Enyan-Essiam district, a total of 5,194 households from nine selected settlements were present. Six percent of heads of these households, 320, were to be contacted. But for the same reasons of costs and accessibility considerations and also to avoid under and over representation for some settlements, 380 respondents were selected. In all, a total of 800 respondents were chosen (Table 2).

Twenty-seven settlements with a total of 17,360 households were selected for data collection. Of the 27 settlements, the district capital was purposively selected while the rest, 26, were selected through a simple random method. The total number of households was 8,175. Five per cent of the 8,175 heads of households was 408. To avoid the danger of non-response, and to make generalisation applicable to the total population, it was rounded up to 420. For AEED, nine settlements and 5,194 households were identified. Three hundred and eighty (380) households were selected, making the total number of 800 respondents from the two districts.

Selection of individuals

On entering a house, the number of households were identified. If a house had one household, that household was selected and the household head participated. If there were more than one household in a house, they were listed and through simple random method, one household was selected and the head participated in the study.

Table 2: Sample Size of Respondents for Settlements from the two Districts

Settlement	Dist. to Hospital (Km)	Urban	Rural	Total
AEED				
Ajumako	1	86		86
Asaaman	6		28	28
Besease	4	54		54
D. Asikuma	6		25	25
E. Abaasa	15		62	62
E. Denkyira	6		16	16
Essian	6		31	31
Ntananta	5		22	22
Osedzi	6		35	35
Twiekukrom	12		21	21
N		140	240	380
UDD				
A.Gyaman	12		41	41
Asikuma	10		54	54
Buabin	16		45	45
D. Offin	1	164		164
K.Prakrom	4		38	38
Kyekyewere	15		53	53
Mfuom	2		25	25
N		164	256	420

Source: Field data (2005)

Data Collection Instruments

Questionnaire was administered to selected heads of household, who also had dependents. For those who could not read or write, the field assistants

did the reading and interpretation of the questions and then recorded responses given.

Questionnaire administered to heads of households was in two parts: the first part dealt generally with issues on health care seeking behaviour while the second part dealt with socio-economic backgrounds of respondents. Two types of questions were used: open ended which sought specific information on incidence and severity of diseases suffered by various members of the household four weeks prior to the study, actions taken to seek relief, health care facility used and mode of transport used to reach facilities; and knowledge of the existence of health care facilities within their areas of settlement as well as reasons for the choice of specific health care facilities.

Background information covered age, sex, religion, level of education and the occupation of the heads of household. Household information covered type of dwelling, the materials used in constructing the dwelling, solid and liquid waste disposal, economic status of heads of households and selected members of their communities, sources of income and household expenditure on some basic items four weeks prior to the study.

Interviews with drug store operators covered the types of drugs dispended, common drugs clients requested and whether clients demanded full courses for drugs, levels of qualification of those who dispended drug and the types of in-service training received within the last one year prior to the study. With herbalists, the focus was on their preparations, quantity of their preparations given at a time and any known side effects and the nature of relationship with existing orthodox health care avenues.

Training and Fieldwork

Six (6) field assistants were recruited and trained for two (2) days in interview techniques and translation of field materials into the local language, Fante. There were demonstrations on the appropriate community entry, selection of households from compound houses and interaction with respondents. The questionnaire was pre-tested in four (4) villages around the University of Cape Coast. After the pre-test, results were discussed on aspects such as the reaction of respondents, understandings from the use of words and use of concepts such as income to mean all monetary inflows. At the meeting, difficulties such as the reaction of respondents and misunderstandings from the use of words such as income to mean all money that become available to an individual, as well as what was one's occupation if one was involved in more than one economic activity were brought out and agreement reached on their use.

The questionnaire was then re-organized taking into consideration recommendations from the field. After completing that the document was considered complete and ready for the field work.

Community Entry

The two District Assemblies were contacted and permission sought through presentation of introductory letters from the Department to them. Assembly members from the selected communities were duly informed. In every community visited the chief or his representative was informed about the study and permission sought. The community was then informed through a 'gong beater' who informed the people of the presence of the researchers and

requested for their co-operation. This ensured maximum co-operation from the selected communities.

Fieldwork/Data Collection

Questionnaires were administered with the assistance of the six trained field assistants. Data collection was carried out between 15th July and 10th August 2005. It took each person an hour to go through the questionnaire if it was self- answered. However, if field assistants did translation and recording of responses, then it took one and a half hours.

Fieldwork Challenges

A number of issues emerged in the field worth documenting for future purposes. Even though permission was sought in all the settlements from an Assembly member and/or chief, some people were reluctant to participate in the study. The reason to some of them was that some people had been there in the past, promising them assistance, but the promised assistance were yet to be fulfilled. They were therefore not ready to allow themselves to be deceived again. Others felt the team was from the ruling government and since according to them, the government was finding it difficult to implement the Health Insurance Scheme, they were not ready to deal with anybody on issues of health. This perception was however changed after the rationale of the study was explained to them. This was aided by showing letters of introduction from the Department to them.

Some of the respondents also demanded monetary reward before participating in the study. The concern of some respondents was that all of us administering the questionnaire were rich and had possibly been contracted by

the government with some amount of money to undertake the study. Their reason was that a similar study to identify people considered poor had been undertaken within the districts. Some of them indicated that unless they were given their share of whatever monies we were given or included in the list of those to receive financial support from the government, they would not answer any questions. But it was explained to them that the study was only for academic exercise for which no monies were involved and that the outcome of the study would be disseminated to them to inform them about issues concerning their health and use of existing health care facilities in their areas.

After explain to them the objectives of the study, some people were angry with us for not selecting them and that if there were any benefits, some of the people selected were not poor to benefit from any benefit that may come from the government. It was explained to them that the study was not going to form the basis for the selection for any financial assistance, but rather it was to provide some information in understanding the use of existing health care facilities in their districts.

Even though research fatigue, as experienced in some urban areas, was not really an issue, items dealt with within the questionnaire were many and required about one-hour contact time with a respondent. In some instances, respondents attempted abandoning their participation mid-way. They had to be prevailed upon to continue.

Some of the settlements were remote and traffic flow on routes to such settlements were not regular. There were long waiting times at vehicle stations to such settlements. Consequently, it affected arranged times with respondents. In some instances, vehicles had to be hired, thus increasing the overhead cost of

the research. Some respondents were also reluctant to respond to some issues. Some of them, for instance, did not spontaneously provide information about health care institutions and had to be prompted. Another difficulty was the recall of the exact period when the head or a member of the household fell sick. Such situations were likely to affect the recall of the exact health care facility that might have been used.

Although respondents agreed that there were people they considered rich or poor, when asked to indicate their own status, respondents found it difficult to do so. Some people were usually reluctant to accept being rich or poor. To accept outright that one was rich was probably taken to mean boasting of one's riches. So even when indicators such as the housing type, the living environment and personal appearances pointed to one likely being rich, many of such people insisted they were not rich. To easily accept that one was poor also meant that individual was demeaning one's self. However, after assuring them of anonymity of information provided, they obliged to indicate appropriately, their social status; being rich or poor.

Another issue was in stating expenditure made and income received within the last four weeks prior to the study. Even though some figures were stated, expenditure figures were, in most instances, far greater than income levels. This probably was due to the fact that some people felt reluctant to disclose their real income, especially where research assistants were not known to them. One person commented 'You tell someone you do not know your income and the next moment you are attacked by armed robbers'. These were some challenges that had to be handled with care.

Data Analyses Procedures

Returned instruments were edited for issues of non-completion and non-legible responses. Questionnaires which were found to be incomplete were followed up. Care was employed by the research assistants and as a result, minimum problems were discovered and were rectified with follow up visits. Again, questionnaire was vetted every day after research assistants had returned from the field. This made it easy for errors to be identified for correction. The consistency and the utmost care used in dealing with the questionnaire ensured that quality of data obtained was of good standard for analysis.

A coding manual was prepared and used to code the questionnaire. Quantitative analysis was done in three parts. In part one, socio demographic backgrounds of respondents involved in the study was analysed. The second part was concerned with an analysis of the utilization of all existing health care facilities identified in the two districts for different categories of household members. For these two analyses, the Statistical Product for Service Solutions (SPSS), version 12.0 was used. The third and final part involved a determination of the influence of selected socio-demographic variables such as sex, level of education, among others, on the use of existing health care facilities in the two districts. This was done using STATA. Chi-square tests was run to determine significant association between any of the dependent variables and the use of the identified health care facilities within the two districts.

Reasoned Assessment of Situation

Conducting a research requires a rigorous, careful planning and proper execution of activities. This is to ensure that data obtained can lead to good outcomes that can benefit humanity. These challenges were taken into

consideration from the planning stage of the study. In the first place, the choice of region was influenced by a concern to come out with findings, conclusions and recommendations that will help improve utilization of health care facilities and improve upon health care delivery system of the country.

The selection of the two districts were not arbitrary, but carefully considered and using scientific approach that would not raise questions of biasness. It was also to provide an opportunity to find out whether health care choice behaviour was different from what others have reported or were the same. Economic activities may not totally be based on the environmental deterministic view. However, the role of environment cannot be completely ignored. Consequently, a careful description of the physical characteristics was made. This was done with a view of finding out the extent to which the economic activities of the two study districts related to the environment. In particular, it was to help ascertain the extent to which existing economic activities related to reported diseases and the extent to which these influenced the choice of health care facilities.

To avoid biases in the selection of respondents which could have the possibility of twisting the outcome of results, a careful scientific probabilistic approach was adopted. Even though some respondents were initially not willing to participate, after a fruitful dialogue, respondents selected participated in the study. Their preparedness was an indication that ethical considerations had not been compromised. Respondents were informed about the objective of the study and the free will of individuals were sought.

The use of research instrument has the potential of generating either useful data or not. In order not to compromise on data quality, a careful planning

of the research instrument was made. This involved observing both face and content validity. Face validity was done by ensuring that questions were meaningful and organized into modules. Content validity was done by assessing whether the questions captured information that they were to do. These satisfied, the research instrument was deemed appropriate for the study.

One issue that could affect data quality and therefore the outcome of the study was how data was collected. This was avoided by the calibre of field assistants chosen and the training they went through. A careful planning was done to ensure that assistants who were willing to help in such a study were selected. A carefully thought training was therefore given to them. This was to ensure no compromise in quality of data occurred.

To reduce field challenges to the barest minimum, proper permission was sought in all instances from the district assemblies, assemblymen and women and chiefs and communities dully informed. The outcome was that no hostilities were encountered. Co-operation was enjoyed at all settlements and with all respondents.

A careful review of methodological issues followed in the data collection process which can lead to one conclusion that the required data of the required quality has been obtained and that any analysis and conclusions that has been made are sound and relevant.

Ethical Issues

All researches involving human beings have some ethical issues to observe. Divulging of information by respondents that can affect the respondents is among several ethical issues relating to the data that was collected. This was addressed by first explaining the essence of the study to the

respondents. Thus, the consent of the respondents was sought. Moreover, they were assured of confidentiality that information collected from the them will be handled properly.

CHAPTER FOUR

SOCIO-DEMOGRAPHIC CHARATERISTICS AND REPORTED DISEASES

Introduction

This chapter is organized in two parts. The first part examines the socio-demographic characteristics of the respondents while the second part deals with their reported disease.

Socio-Demographic Characteristics of Respondents

Decisions to use an existing health care facility in an area may be dictated by an individual's socio-demographic characteristics (Adeleke & Danfillo, 2005; Bourne, 2009). The chapter examines various socio-demographic characteristics of heads of households who participated in the study from the two districts. Socio-demographic characteristics that have been examined are sex, age, marital status, level of formal education, religion and household size. Others are ethnicity and occupation. The socio-demographic characteristics of respondents within the two study districts are presented in Table 3.

Every individual possesses a number of socio-demographic characteristics that together make them different from other individuals. They are variables that allow individuals to behave in a manner different from how others behave. For health care facility usage, differences in socio-demographic of individuals result in different utilization of health care facilities. The present study examined a number of variables such as age, marital status, level of formal education completed, size of household and religion. Others were ethnicity, occupation, and settlement status of heads of households.

Table 3: Socio-Demographic Characteristics of Respondents

	AEED			UDD		
	Male (%)	**Female (%)**	**Total (%)**	**Male (%)**	**Female (%)**	**Total (%)**
Age of head of household						
20-29	5.4	5.8	5.5	9.5	20.	12.6
30-39	31.5	20.8	28.2	33.9	24.0	31.0
40-49	26.9	31.7	28.4	31.5	17.6	27.4
50-59	16.5	25.8	19.5	14.6	27.2	18.3
60-69	8.1	11.7	9.2	6.4	8.8	7.1
70-79	8.5	4.2	7.1	2.4	0.8	1.9
80-89	1.9	0	1.3	1.7	1.6	1.7
90-99	1.2	0	0.8	0	0	0
N	260	120	380	295	125	420
Marital status of head of household						
Married	91.2		62.4	92.9	0	65.2
Divorced/wid.	8.9	100	37.6	7.1	100	34.8
N	260	120	380	295	120	420
Completed level of formal education						
None	18.0	49.6	28.1	14.3	49.6	24.7
Primary	6.7	9.2	7.5	5.8	8.1	6.4
Middle/JHS	56.5	37.8	50.5	65.7	39.8	58.0
	18.8	3.4	13.9	14.3	2.4	10.7
N	255	119	374	294	123	417
Household Size						
2-3	36.5	56.7	42.9	44.1	49.2	45.6
4-5	63.1	43.3	56.8	55.9	50.8	54.4
6+	0.4	0	0.3	0	0	0
N	260	120	380	295	124	419

Table 3 Continued

Religion of head of household						
Catholic	18.7	20.0	19.1	20.2	29.0	22.8
Protestant	35.5	38.3	38.6	20.9	21.0	20.9
Other X'ian	30.4	37.5	32.6	46.9	43.6	45.9
Islam	8.8	2.5	4.8	5.8	4.8	5.5
Other	6.6	1.7	5.0	6.2	1.6	4.8
N	257	120	377	292	124	416
Ethnicity of head of household						
Fanti	88.8	91.7	89.7	10.8	19.2	13.3
Akan	6.2	6.7	6.3	70.5	65.6	69.0
Other	5.0	1.7	3.9	18.6	15.2	17.6
N	260	120	130	295	125	420
Occupation of head of household						
Farming	38.6	40.6	39.3	37.8	34.4	36.8
Trading	8.7	41.5	19.1	11.6	44.0	21.2
Artisan	14.2	6.8	11.8	15.0	8.8	13.1
Professional	33.1	9.3	25.5	25.2	7.2	19.8
Other	5.5	1.7	4.3	10.5	5.6	9.1
N	260	120	380	295	124	419
Residential status						
Urban	39.2	31.7	36.8	38.6	40.0	39.1
Rural	60.8	66.3	63.2	61.4	60.0	61.0
N	260	120	380	295	120	420

Source: Field Survey (2005)

Age of Heads of Households

Age constitutes an important characteristic that differentiates individuals into child, youth adult and aged. Chronological age is an important demographic characteristic that is often used in placing individuals in a social continuum in determining when an individual can be dependent and

independent and when the individual can enter the job market, vote or be voted for and also take decisions independently.

In the study, completed age of respondents were obtained and used. This was to ensure uniformity and also to avoid approximations. The study revealed that within AEED, 32 per cent of male household heads were in the 30-39 years age group while 27 per cent were aged 40-49 years. Some male heads (1.2%) were aged 90-99 years. For the female heads, 32 per cent were aged 41-49 years, 26 per cent were 50-59 years while no one was more than 80 years. Within UD, 34 per cent of male heads were aged 30-39 years, 32 per cent were aged 40-49 years while no one was above 90 years. For the female heads, 27 per cent were within the 50-59 years age group, with two per cent aged 80 to 89 years.

Marital Status of Heads of Household

Even though not all marriages are helpful, marriage in general is believed to bestow dignity, responsibility and recognition on individuals and make such individuals become recognized as adult members of society. Marriages also lead to improvement in individuals' subjective well-being (Dush & Amato, 2005; Wu & Hart, 2002). Even though different forms of marriage such as traditional marriage, ordinance and co-habitation might have been in existence, the study did not delve into the type of marriage people were involved. Rather, a simple question as to whether a person was married, divorced or widowed was used to select those who were qualified for the study.

Results indicated that in both districts studied, no married woman was head of household. This was considered normal for in heterosexual marriages, males assume automatic heads of households. However, in same sex marriages that are evolving, any one of the males or females can assume headship in such

relationships. Legally, Ghana does not recognize such same sex marriages. Consequently, no woman involved in marriage and staying with the husband at the same place can assume headship of household. Female heads of household were either divorced, widowed or their husbands had to stay at another place for whatever reason. All married respondents who reported as heads of households in both districts were thus males. In the AEED, out of 260 male heads of household surveyed, 91 per cent were married while nine per cent were divorced. Similarly, in the Upper Denkyira District, 93 percent of the 295 male heads of household surveyed were married while seven per cent were either divorced or widowed. In the Ajumako-Enyan-Essiam District, 62 per cent of 380 heads of household surveyed were married. Similarly, in the Upper Denkyira District, 65 per cent of the respondents were married.

Level of Formal Education

Level of formal education was defined in this study as the level a respondent had completed schooling. For instance, a person who reached primary five was not considered as having completed any level of formal education. It was revealed that in the AEED, whereas 56 per cent of males reported completing Middle/JHS, 38 per cent of the females indicated completing the same level of formal education. While 18 per cent of males in this district had not completed any level of formal education, half (50%) of females in the district had not completed primary education. Whereas 19 per cent of males had attained a level of education higher than Middle/JHS level of education, only 3 per cent of females reported doing the same.

Results from the Upper Denkyira District were similar to those from AEED. More males than females reported attaining higher levels of education.

For instance, whereas 14 per cent of males reported that they had completed higher formal education, only three per cent of females reported doing so. Further 14 per cent of males and 50 per cent of females had not completed any formal level of education. Overall, completed level of education among respondents in the two districts was low. Fourteen and 11 per cent of males and females respectively reported attaining higher than Middle/JHS formal education. These were comparable to similar studies by Shabaya and Agyeman-Konadu, (2004) who analysed data from Ghana, Zimbabwe and Kenya and came to the conclusion that females in these countries had had lower levels of formal education compared to men. They pointed out gender inequality to access to education in these three countries.

Household Size

Household size was another socio-demographic considered. The study adopted the definition of household used in the Ghana Demographic and Health Survey (2008). A household is defined as a group of people who share eating and sleeping arrangements and are under the control of a head. In the study, household size referred to the number of people forming a group who shared eating and or sleeping arrangements.

The data indicated that while 57 per cent of households in AEED consisted of between four and five people, 43 per cent were between two and three people. Specifically, 57 per cent of female-headed households had between two and three members while 63 per cent of male-headed households had between four and five household members. On the other hand, in the Upper Denkyira District, 54 per cent of households had between four and five

members. Fifty-four per cent of female-headed households had four to five members compared to 56 per cent of male-headed households. (see Table 3)

Religion of Heads of Household

As observed by Mbiti (1975), the African expresses religion in all his/her activities, to the extent that religion can have a significant influence on the individual's way of living, including health-seeking behaviour. As a way of finding out the extent to which religion could be a contributory factor in the choice of health care facilities, religion of heads of households were examined.

The data revealed that majority of respondents from the two districts were Christians. For instance, in AEED, 39 per cent of males and 38 per cent of females were protestants while six per cent of the males and five per cent of females were Moslems. In UDD, 47 per cent of males and 44 per cent of females belonged to other Christian denominations while six per cent of the males and five per cent were Moslems (see Table 3). These findings were in conformity with those reported on by GDHS (2008) where Christians were reported as forming the largest proportion of the Ghanaian population and Moslems were in the minority.

Ethnicity of Heads of Households

Ethnicity defines a population of human beings whose members identify with each other, either on the basis of a presumed common genealogy or ancestry. Such a group see themselves as one and act to protect their interests. Such a bond has often been found to influence group dynamics including how they perceive wellness and how they seek health care. As a result, the study became interested in ethnic composition of respondents.

Results of the study indicated that within AEED, Fantis constituted the dominant group forming 90 per cent of all respondents. In terms of sex, 89 per cent of males and 92 per cent of females were Fantis. Again, five per cent of all other heads of households belonged to other ethnic groups such as Ewes and people of northern extraction. In UD, it came out that Akans constituted the dominant ethnic group in the district. In terms of sex, 71 per cent of the males and 69 per cent of female heads who took part in the study were Akans. On the contrary, whereas other ethnic groups formed 4 per cent in AEED, in UD, they constituted 18 per cent (see Table 3).

Occupation of Heads of Households

Occupation is defined as the dominant economic activity that individuals engage in for survival. The occupation people get involved can affect their income levels and how these in turn affect a number of things, such as accommodation, utilization of resources and social status (Thuan et al, 2008). The study examined occupations engaged in by the heads of household since these were likely to affect their use of health care facilities within their districts.

Farming was found as a major economic activity engaged in by heads of households in the two districts. It recorded 39 and 41 per cent among male and female heads of household in AEED. While 42 per cent of female heads of households were involved in trading, 33 percent of males were doing professional jobs in the Ajumako-Enyan-Essiam District.

In the Upper Denkyira District, 38 per cent of male heads and 34 per cent of female heads were engaged in farming. As was the case in AEED, trading was the most important occupation among female heads (44%) while

for the male heads, the next most important occupation was professional work which engaged 25 percent of male heads of household (see Table 3).

Settlement Status

Settlement may be described as cluster of dwellings of any size or type in which people live. Settlements are usually classified based on population, facilities or function or for a particular purpose for which the classification is needed (Bibby & Shepherd, 2004). The study adopted the definition of Ghana Demographic and Health Survey (2008), which classified settlements according to the size of the population using 5,000 and above as urban settlement and a population of less than 5,000 as a rural settlement. Based on the definition outlined, the settlement status of respondents were analysed.

In the Ajumako-Enyan-Essiam District, 63 per cent of household heads compared to 61 per cent in Upper Denkyira District lived in rural settlements. Males and females also reported similar settlement characteristics in both districts. In Ajumako-Enyan-Essiam District for instance, 61 per cent of male heads and 68 per cent of female heads lived in rural settlements. In the Upper Denkyira District, 61 and 60 per cent of male and female heads also lived in rural settlements.

Reported Diseases

This section deals with the reported diseases of respondents in relation to their socio-demographic characteristics. Socio demographic characteristics that vary from person to person influence the way individuals experience health conditions which result in difference in diseases that affect how individuals report diseases they suffer from.

Demographic characteristics are likely to differently influence diseases contracted and reported by people (Ahmed, 2005; Uzochukwu & Onwujekwe, 2004). A number of diseases reported in the study were analysed according to the demographic background of individuals involved in the study. Result of reported diseases by heads of households is presented in Table 4.

The data indicated that the main diseases that were reported were malaria, typhoid, diarrhoea, and others. The others consisted of diseases such as skin rash, headache, stomach ache, bodily pains and pains in the joints. These were lumped together because the number of cases were few in each case and analyzing them on their own would not produce statistically significant results.

Reported Diseases by Sex of Heads of Household

The results indicated that in all cases diseases reported varied among males and females. For instance, out of 120 heads who reported malaria, 65 per cent were males.

Table 4: Reported Disease by Sex and District

Sex	Malaria (%)	Typhoid (%)	Diarrhoea(%)	Other (%)	Total (%)
AEED					
Male	65.0	80.0	66.9	66.0	66.2
Female	35.0	20.0	33.1	34.0	33.8
Total	100	100	100	100	100
N	120	15	37	47	219
UD					
Male	68.8	93.8	70.0	52.3	68.0
Female	31.2	6.2	30.0	47.7	32.0
Total	100	100	100	100	100
N	144	32	50	65	291

Source: Field Survey, (2005)

Similarly, 69 per cent of the 144 people who reported malaria in UD were males. Again, out of 15 reported typhoid cases in AEED, 80 per cent were males while 94 per cent of the 32 reported typhoid cases in UD were men (see Table 4).

Diseases Reported by Age of Household Head

Diseases that affect individuals are likely to vary according to age. The age of an individual may influence his or her resistance or susceptibility to diseases. The age of heads of households were therefore surveyed by the study. An analysis of diseases reported by age of head of household in the two study districts is presented in Table 5.

Table 5: Diseases Reported by Age and District

Age of head of household	Malaria	Typhoid	Diarrhoea	Others	Total
AEED					
	46	3	21	14	84
20-40	38.33	20.00	56.76	29.79	36.36
	54	6	11	22	93
41-60	45.00	40.00	29.73	46.81	42.47
	20	6	5	11	42
61-90	16.67	40.00	13.51	23.40	19.18
	120	15	37	47	219
Total	100	100	100	100	100
UD					
	64	13	31	40	148
20-40	44.44	40.62	62.00	61.54	50.86
	61	15	17	23	116
41-60	42.36	46.88	34.00	35.38	39.86
	19	4	2	2	27
61-90	13.19	12.50	4.00	3.08	9.28
	144	32	50	65	291
Total	100	100	100	100	100

Source: Field data (2005)

From Table 5, it emerged that in both the Ajumako-Enyan-Essiam and Upper Denkyira districts, the main diseases reported by age of heads of household were malaria, typhoid and diarrhoea. Other minor diseases such as bodily pains and rashes were also reported. Out of 219 respondents in AEED who reported their diseases, 42 per cent were within the 41-60 age group while 19 per cent were within the 61-90 years age group. In UD, however, more heads of household from the 20-40-year group reported having suffered from diseases (51%) while those within 61-90 years age group were the least to have reported diseases.

On specific diseases reported, results from analysis made indicated that for malaria, of the 120 respondents who reported in AEED, 45 per cent were within the 41-60 years age group while of the 144 respondents who reported of malaria in UDD, 44 per cent were within the 20-40 years age group. On diarrhoea, 37 people reported having had an attack in AEED. Out of that number, 57 per cent were from the 20-40 years age group. Similarly, of the 50 respondents who reported having suffered from diarrhoea, majority of them were from the 20-40 years age group. Typhoid was not reported on by many respondents in both districts. In AEED, out of 15 people who reported having had typhoid, 40 per cent were reported by the 41-60 and 61-90 years age groups while within UDD, out of 50 respondents who suffered an attack, 47 per cent were from the 41-60 years age group.

Reported Diseases by Occupation of Head of Household

Different occupations expose individuals to different environments and different conditions that have the potential to predispose individuals to different

diseases. The study therefore sought to find out the link between occupation and reported diseases within the two study districts

It emerged from the data that more heads who were farmers reported having suffered from diseases than heads from any of the listed diseases in the two districts. For instance, in AEED, while 35 per cent of those who reported malaria were farmers, 15 per cent were artisans. Again, when typhoid was considered, it also emerged that while 47 per cent of those who reported were farmers, 13 per cent were artisans. Similarly, within UD, it also emerged that while 41 per cent of those who reported for malaria were farmers, 15 per cent were artisans. With regards to typhoid, while 52 per cent of those who reported were farmers, less than 10 per cent were artisans (see Table 6)

Table 6: Diseases Reported by Occupation and District

Occupation	Malaria	Typhoid	Diarrhoea	Others	Total
AEED					
Farmer	35.3	46.7	36.1	48.9	397
Trader	19.3	0.0	27.8	20.0	19.5
Artisan	15.1	13.3	13.9	4.4	12.6
Profess	22.7	33.3	22.2	22.2	23.3
Others	7.6	6.7	0.0	4.4	5.58
Total	100	100	100	100	100
N	120	15	37	47	219
UDD					
Farmer	41.0	52.1	42.0	26.6	39.3
Trader	21.5	6.3	24.0	25.0	21.0
Artisan	15.3	9.4	18.0	17.2	15.5
Profess	15.3	21.9	8.0	17.2	14.8
Others	6.9	9.4	8.0	14.1	9.3
Total	100	100	100	100	100
N	**144**	**32**	**50**	**64**	**290**

Source: Field Survey (2005)

Reported Diseases by Level of Formal Education of Head of Household

As individuals obtain higher levels of education, they develop, not only cognitive, affective and psychomotor potentials, but also the ability to understand causes and effects of diseases, identify disease signs and symptoms and as well develop the potential to exploit existing health care facilities to obtain better health outcomes. In addition, they set high priorities for health and are also willing to bear the cost of health care services. Education therefore makes a person a more informed consumer of health care services (Kickbusch, 2001). Based on these pieces of information, the study became interested in examining the link between levels of formal education and diseases reported in the two districts (see Table 7)

The results showed that in almost all instances of use of existing health care facilities, more heads of household who had completed middle school/JHS reported having suffered from more diseases than heads with other levels of qualification. For instance, in AEED, 53 per cent of those who reported having suffered malaria attack were those with Middle School/JHS qualification while those with higher education constituted 13 per cent. Similarly, in UD, for malaria, 56 per cent who reported having suffered an attack had completed Middle/JHS while those without any qualification formed 28 per cent.

With regards to diarrhoea, 34 per cent of those who reported having had an attack in AEED had no qualification while 13 per cent had middle/JHS. In UD on the other hand, 64 per cent of those who had diarrhoea had middle/JHS qualification.

Table 7: Disease Reported by Level of Education and District

Level of Education	Malaria	Typhoid	Diarrhoea	Others	Total
AEED					
None	25.2	33.3	34.3	46.8	31. 9
Primary	9.24	6.7	14.3	4.3	8.8
Middle/JHS	52.9	33.3	31.4	40.4	45.4
Higher	12.6	26.7	20.0	8.5	13.9
Total	100	100	100	100	100
N	120	15	37	47	219
UD					
None	27.97	27.97	27.97	27.97	27.97
Primary	8.4	8.4	8.4	8.4	8.4
Middle/JHS	55.9	55.9	55.9	55.9	55.9
Higher	7.7	7.7	7.7	7.7	7.7
Total	100	100	100	100	100
N	143	143	143	143	143

Source: Field Survey (2005)

Diseases Reporting by Marital Status of Head of Household

Marriage results in the creation of strong bonds of relationship between couples and results in a concern about the welfare and health of individuals. Marriage and health have been found to be closely related, often resulting in married people experiencing lower temporal and permanent effects and mortality of diseases such as cancer, heart attacks and surgery (Kiecolt-Glaser & Newton, 2001; Liu & Reczek, 2012). Marriage has been found to be good for both men and women (Harvard Health Publication, 2010).

Married men have in particular been found to suffer less than their unmarried counterparts from diseases such and diabetes and cancers (Halt-Lunstad, Smith & Layton, 2010). The study was therefore interested in finding out the extent to which marriage affected disease reporting.

Results of the study revealed that more married heads of households, who were obviously all men, reported having experienced some diseases than divorced/widowed heads of households (see Table 8). For instance, 80 per cent of all who reported typhoid in AEED were married while in UD it was 94 per cent.

Table 8: Reported Diseases by Marital Status

Marital status AEED	Malaria	Typhoid	Diarrhoea	Others	Total
Married	60.8	80.0	62.2	61.7	62.6
D/wido	39.2	20.0	37.8	38.3	37.4
Total	100	100	100	100	100
N	120	15	37	47	219
UD					
Married	63.2	93.8	66.0	50.8	64.3
D/wido	36.8	6.3	34.0	49.2	35.7
Total	100	100	100	100	291100
N	144	32	50	65	291

Source: Field Survey (2005)

Reported Diseases by Residential Status of Head of Household

Differences in residence can create different environmental conditions that are likely to produce different health conditions. It has been indicated that urban and rural dwellers experience different diseases due largely to the different environmental conditions they encounter (PHAST, 2011). The study

examined the reported diseases by residential conditions of respondents (see Table 9).

The results showed that on the whole, more people from the rural settlements reported having suffered attacks from all diseases than urban dwellers. In terms of malaria, for instance, 72 per cent of those who reported in AEED were from rural areas; UD had 67 per cent from rural areas. In the case of diarrhea, however, in AEED, 57 per cent of those who reported were from urban settlements while in UD 66.0 per cent of those who reported were from rural area.

Table 9: Reported Diseases by Settlement Status and Districts

Settlement	Malaria	Typhoid	Diarrhea	Others	Total
AEED					
Urban	28.3	46.7	56.8	38.3	36.5
Rural	71.7	53.3	43.2	61.7	63.5
Total	100	100	100	100	100
N	120	15	37	47	219
UD					
Urban	32.6	34.4	34.0	53.9	37.8
Rural	67.4	65.6	66.0	46.2	62.2
Total	100	100	100	100	100
N	144	32	50	65	291

Source: Field Survey (2005)

Level of Satisfaction and Facilities Used

Satisfaction is the inner gratification a person derives from participating in an activity or utilizing a facility. It could be a driving force to lure a person to utilize a facility or product. Different levels of satisfaction from using existing

health care facilities were reported by respondents. Results of analysis of the level of satisfaction are presented in Table 22.

From Table 22, the results indicate that for those who used hospital facilities in the Ajumak-Enyan-Essiam district, about 21 per cent were very satisfied and about 5 per cent were not satisfied. For those who used the services offered by drug stores, 31 per cent were very satisfied and 65 per cent were also satisfied. Within the Upper Denkyira District, it was reported that for those who used the services of the district hospital, 20 per cent were very satisfied while 76 per cent were satisfied with the services they received

Table 10: Level of Satisfaction and Health Facility Chosen

Level of satisfaction	**Facility**				
	Hospital	**Clinic**	**Drug store**	**Others**	**Total**
AEED					
V. satisfied	20.8	25.0	31.3	52.4	28.8
Satisfied	74.0	65.4	64.6	38.1	65.7
N. satisfied	5.2	9.6	4.1	9.5	5.5
N	96	52	196	36	380
UDD					
V. satisfied	19.8	13.3	24.0	30.8	22.9
Satisfied	76.4	86.7	74.4	57.7	74.3
N. satisfied	3.8	0	1.6	11.5	2.7
N	106	15	254	45	420

Source: Field Survey (2005)

Generally, many more persons were not satisfied with other health care services; 10 per cent for Ajumak-Enyan-Essiam district and 12 per cent for Upper Denkyira. This might be due to difficulties such as identifying the active ingredient in herbal preparations, non-standardized measures used in

determining the dosage of preparations to be taken at a time. One facility classified alongside other minor facilities was prayer camps. Probably people did not experience the anticipated outcomes leading to dissatisfaction. In general, high levels of satisfaction were expressed by respondents in the use of health care facilities within the two districts.

Discussion

In the traditional Ghanaian society, men, upon marriage, assume household headship. Irrespective of the status of a woman, she relinquishes household headship to the husband once she gets married. Females who were heads of households were either divorced, widowed or their husbands had travelled leaving the woman and their children behind. Women whose husbands had travelled could be seen performing headship role; in reality, they were not the heads as they continue to seek the consent of the man in taking some decisions concerning the household. This could have implication for the use of health care facilities. Similarly, resource control has been a man's role in the Ghanaian traditional society.

Men may therefore have more resources at their disposal for their own use and other members of society who depend on them. When women become heads of households, they are likely to face the challenge of possessing less resources to cater for the needs of such households. They are therefore likely to utilize health care facilities with less cost implication for themselves and for other members of the household.

In terms of age of heads of household, it became evidently clear that in both districts, heads of household started for both males and females from age 20 to 29. One would have expected that at that age, women who had entered

into marriage would have had their husbands as heads. Since none of them assigned reason of travelling of their husbands for their becoming heads of households, then it is possible such women might have had children without getting married and might have been forced into becoming heads of household when they had to cater for themselves and their children (Kotwal, 2009). Another feature that was observed was that even after age 80 when most people would be free from taking care of dependents, some males and females were still heads of households. This would most likely affect decisions on the use of some health care facilities. It probably could be that such people were not those who really decided on facility use even though they might have remained the figure heads but might not have been responsible for providing the resources. In such cases, people who were not heads and who provided the needed resources might have taken decisions on the use of health care facilities. This is catered for by the Kroeger's model which is used for the study.

The data indicated that in both districts, the proportion of women who did not have formal education was higher than that for males. This probably is explained by the proportion of respondents who were from rural settlements. In such areas, socio-cultural factors might have contributed to more males having been given the chance to go to school at the expense of girls (Boeren, 2011). Such disparities in the level of formal education was more likely to affect employment opportunities of males and females and also affect their income levels which might have had some effect on their use of health care facilities. This was in conformity with the national findings which indicate that males control economic resources and usually decide where women and children must seek health care.

On household size, the data revealed that household's sizes of between 4 and 5 was more common in both districts. Large family sizes were likely to create dependency problems for heads of households, especially, female-headed households who might have had more difficulties in terms of resource control. This eventually might have had some implications for the choice of health care facilities.

In terms of religion, it emerged that majority (90%) of family heads were Christians. This could probably be due to the fact that the two districts were all in the southern part of the country where Christian religion is the major form of religion. However, in terms of other Christian religion, it was found that the proportion of both males and females who belonged to such religious groups were more in UD (46%) than AEED (33%). This might be due to the fact that such churches survive in urban settings more than in rural settings. Since the size of Dunkwa-on-Offin, the capital of Upper Denkyira was bigger than Ajumako, the capital of Ajumako-Enyan-Essiam district, such churches might have had more people in UD than AEED

For occupation, farming and professional work such as teaching and clerical work were the main occupations engaged in by males in AEED while farming and trading were the main activities engaged in by females in AEED. For UD, farming and professional work were the major occupations engaged in by for males while trading and farming were for females. This could possibly be due to the fact that the natural vegetation, the soils and weather conditions which support farming offered farming as a major economic activity for the male populations of the two districts. Again, for the females, farming might have been a major economic activity because the natural environment and the

high proportion of females without formal education forced them into farming. On the other hand, trading was popular with females probably because they found it easy to engage in than men.

Analyses of the link between reported diseases and socio-demographic characteristics within the two districts revealed a number of issues. First, it emerged that generally more males than females reported all diseases. Malaria was found to be the most dominant disease that was reported by both males and females. This might be due to the fact that because males controlled resources and took decisions on issues of health, they might have reported having suffered from diseases more than the females (Regitz-Zagrosek, 2012) because they had resources to seek health care while the females might not have reported because they did not have the resources to seek health care. Once health care was not sought, the disease might not have been reported. The other probable reason that might have accounted for differences in diseases reported by males and females such as the case of typhoid might be that the male heads might have eaten off the street more than females and might therefore have suffered from diseases associated with food handling.

In terms of age, it emerged that in both districts, heads between 20 and 60 years reported having suffered from more diseases than other age groups. This could be attributed to the fact that such heads were actively engaged in economic activities that might have exposed then to conditions that could lead to attacks from diseases. It might also be due to the fact that they were the bread winners and controlled resources which they could use to seek health care and thus reported any symptoms which they attributed to any diseases (Yatas, 2009).

Another revelation was that more farmers than any other occupational group reported more diseases (Wierzbicka, Józefiak, Szydłowski, Marszałek, Stankiewicz, Hassman-Poznańska ... & Puacz, 2013). The general occurrence of diseases across all occupations might have been an indication that diseases like malaria might have been influenced by environmental factors (Prüss-Ustün et al., 2017) and aggravated by other factors such as behaviour and exposure (Lagomarsino, Garabrant, Adyas, Muga & Otoo, 2012). For instance, the higher rate of malaria among farmers might have been due to their occupation, bringing them into contact with mosquitoes more than heads involved in other occupations. Behaviour such as food handling might have accounted for a disease such as typhoid. It is most probably that by their occupation farmers did not have time to handle their food hygienically and might have contracted such diseases.

When level of formal education was examined, it came out that those with middle school/JHS outnumbered all others in diseases reported. The differences in disease reporting could be explained in a number of ways. In the first place, middle school/JHS level of education might have equipped heads to have a fairly good knowledge of diseases (Zimmerman, 2016) to report but not the capacity to avoid contracting such diseases (Mills, Ataguba & Akazili, 2012). It could also be that they were contracting the same level of diseases but might have reported higher levels because of the education they had.

Marriage provides companionship and a person who could prompt and help take action on one's health (Savedoff, Ferranti, Smith & Fan, 2012). Men outnumbered the divorced and widowed, who were women. Heads who were males and married might have been influenced by their wives to seek early

treatment while the same could probably not be said about female heads who might not have had others to support them seek early treatment because they were either divorced or widowed.

Finally, on settlement status, it emerged that rural dwellers outnumbered urban dwellers in reporting diseases contracted. This trend in disease reporting might probably have been due to environmental and behavioural factors (Basu, Andrews, Kishore, Panjabi & Stuckler, 2012). Environmentally, it could probably be due to exposure to more mosquitoes and other disease-causing organisms which the rural dwellers might have been exposed to more than those in the urban areas. It might also have been due to differences in taking measures such as the use of mosquito nets, better eating habits of urban dwellers and adoption of preventive measures such as proper hand washing before meals that were likely to be absent when dealing with the rural dwellers.

The higher cases of diseases reported from rural areas were probably due to insanitary conditions that prevailed in the rural areas compared to urban areas (Meessen, Gilson & Tibouti, 2011). Again, it could possibly be due to poverty which made it difficult for some of the rural dwellers to purchase mosquito nets or the generally poor surroundings some of them might have lived in. Thus, in all instances, it could be said that the differences in disease reporting might have been the result of issues such as sex, age, level of education, occupation, and residential status which led to differences in exposure to disease-causing conditions, differences in resources for health-seeking and differences in health seeking behaviour.

CHAPTER FIVE

EXISTING FACILITIES FOR TREATMENT OF DISEASES

Introduction

Individuals may vary in the choice of facility when dealing with diseases even where they may have the same socio-demographic characteristics. Issues such as income, age, occupation, perception and level of education are among the factors that may combine in different ways to influence the health care facility choices to seek health care delivery. The study examined how socio-demographic characteristics, such as age, sex, level of education, among others, of heads of households, influenced the choice of health care facilities within the two study districts. The chapter therefore presents results obtained from analyses made.

Facility Choice by Sex of Head of Household

The sex of a person plays an important role in the control and use of available resources. Where males control available resources, they decide on what facility they use and what other members of the family should also use (Dixon, Robertson, Appleby, Burge, Devlin & Magee 2010; WHO, 2007). The study was therefore interested in finding out how the sex of heads of household affected facilities they chose for themselves (see Table 11).

The data showed that as far as the choice of facilities for the heads were concerned, in all instances, males dominated. For instance, in AEED, it was shown that 67 and 70 per cent each of heads who went to hospital, herbalists and prayer camps were males. Similarly, in UD, 71 and 65 per cent of heads who used hospital and herbalist or prayer camps respectively were males.

Table 11: Facility Choice by Sex of Head of Household

Sex	Hospital	Clinic	Dstore	H/PCamp	Total
AEED					
Head					
Male	67.0	71.2	68.2	70.4	68.5
Female	33	28.8	31.8	29.6	31.5
N	97	52	195	27	371
Child					
Male	67.9	77.0	67.3	60.0	69.1
Female	32.1	23.0	32.7	40.0	30.1
N	78	74	171	20	343
Adult					
Male	4	77.8	74.2	62.5	74.5
Female	20.8	22.2	25.8	37.5	24.6
N	72	54	155	16	297
Head		UD			
Male	71.4	80.0	70.2	65.2	0.6
Female	28.6	20.0	29.8	34.8	29.4
N	105	15	255	23	371
Child					
Male	74.8	86.7	66.2	50.0	70.7
Female	25.2	13.3	33.8	50.0	29.3
N	131	45	195	18	389
Adult					
Male	84.4	88.9	74.9	86.2	79.7
Female	15.6	11.1	25.1	13.8	20.3
Total	100	100	100	100	100
N	90	27	179	29	325

Source: Field Survey (2005)

Children from male-headed households dominated in the use of existing health care facilities. For instance, out of 78 children who were sent to hospital, 70 per cent were from male-headed households and out of 171 children who were treated with drugs from drug stores, 67 per cent were from male-headed households.

The choice of facilities for adult members of household followed a similar trend. For instance, of 279 adults who received some treatment from existing health care facilities in AEED, 155 bought drugs from "drug stores". Of that number, 63 per cent were from male-headed households while for those who went to hospital, 79 per cent were from male-headed household.

In UD, the choice of facilities by heads of households was similar to that in AEED. For instance, 105 heads used hospital-based services and of that number, 75 per cent were males. Two hundred and fifty-five heads bought drugs from drug stores with 70 per cent were males.

For children in the district, a total of 389 were treated at the various facilities. However, 195 out of 389 children were treated with drugs bought at the drugstore. Of that number, 70 per cent were from male-headed households. Herbal treatment and use of prayer camps were the least chosen facility for health care delivery of children.

Facility Utilization by Age of Head of Household

Age may come with experience, especially when it comes to the use of resources. It is therefore one of the important socio-demographic characteristics considered in studies (Lwelamira & Safari, 2012; Nketiah-Amponsah & Hiemenz, 2010). Age is also one of the predisposing factors which the modified Kroeger's behavioural model has espoused. Age has the potential therefore to

influence the choice of health care facilities, as indicated in the model. The study examined the extent to which the age of respondents influenced the choice of health care facilities to access health care services.

In AEED, out of 97 heads of household who utilized hospital based services, 33 per cent were aged 41 to 50 years, 27 per cent were between 31 and 40 years while 2 per cent were between 71 to 80 and 81 to 90 years respectively (see Table 11). For clinics, 23 per cent each were within 31 and 40, 41 and 50 and 51 and 60 years respectively. In the case of drug store, out of 195 heads who used the facility, 30 per cent were aged between 31 and 40 years, 29 per cent were between 41 and 50 years while only one per cent were from 81-90 years age group. It was further observed that 41 per cent of heads who used herbal medicine were aged 41 to 50 years while only one per cent was in 81 to 90year group. It was further observed that 41 per cent of heads who used herbal medicine were aged 41 to 50 years.

In seeking health care for children, it was found that in AEED, a total of 389 children were sent to the various health care facilities. Thirty-one per cent of such children who were taken to hospital were from households whose heads were aged between 31 and 40 years while one per cent were from households with heads aged 81 and 90 years. One hundred and seventy-one children were treated with drugs from drug stores. Out of that number, 32 per cent were from households with heads aged 41 to 50 years. Even though only 20 children out of the 342 were taken to herbal centres and prayer camps, 35 per cent were from households with heads aged between 41 and 50 years.

Some adult members aside the heads were also treated at the existing health care facilities. In AEED, a total of 297 adults were treated at all existing

facilities. The facility most used was drug store where 155 adults received treatment. Of that number, 36 per cent were from households with heads aged 41 to 50 years while the next facility to have been used was hospital where 72 adults were treated. Of the 72, 44 per cent were again from households with heads aged between 41 and 50 years while the least used facilities were herbal centres and prayer camps where 16 out of 279 adults went for treatment. There again majority of them, 44 per cent, were from households with heads aged 41 to 50 years.

Within UDD, out of a total of 398 heads who used all existing facilities, 105 used hospital. For that number, 40 per cent were from 41-50 years age group while only two per cent were aged between 81 and 90 years. For the use of clinic, only 15 heads out of 398 heads who had reported for the use of all existing facilities used services of clinics. Of that figure, 47 per cent were aged 41-50 years while seven per cent were from the 21 to 30 and 81 and 90 years age groups. Drug stores registered the highest number of users, 225 out of 398 heads. For that number, 33 per cent were aged 31 to 40 years while less than one per cent were aged 81 to 90 years. Twenty-three heads patronised herbal dispensers and prayer camps. Out of that, 26 per cent each were from age 21 to 30 and 31 to 40 years age groups while no one from 71 to 80 years age group utilized the facility.

In all, children from 389 households who participated in the study received treatment from all existing facilities. Drug stores were the most used facility, registering 195 of the 389 children. Thirty-two per cent of those who sought treatment from that facility were from households with heads aged between 31 and 40 years while 31 per cent of the 131 children treated at

hospitals were from households with heads aged between 41 and 50 years. As in AEED, herbal facilities and prayer camps were the least patronised (29 out of 325 adults).

Table 12: Facility Utilization by Age and District

Age	Hospital(%)	Clinic(%)	D. Store(%)	H/P camp(%)	Total (%)
AEED					
Head					
21-30	7.2	3.8	11.3	7.4	8.9
31-40	26.8	23.1	29.7	29.6	28.0
41-50	33.0	23.1	29.2	40.7	30.2
51-60	17.5	23.1	13.3	14.8	15.9
61-70	11.3	15.4	9.2	3.7	10.2
71-80	2.1	9.6	6.2	0.0	5.1
81-90	2.1	1.9	1.0	3.7	1.6
N	97	52	195	27	371
Child					
21-30	9.0	12.2	7.6	15.0	9.3
31-40	32.8	31.1	30.4	15.0	29.7
41-50	28.2	24.3	31.6	35.0	29.4
51-60	16.7	14.9	15.8	15.0	15.7
61-70	10.3	9.5	8.2	10.0	9.0
71-80	3.8	6.8	5.3	5.0	5.2
81-90	1.3	1.4	1.2	5.0	1.5
N	78	74	171	20	343
Adult					
21-30	6.9	3.7	6.5	0.0	5.7
31-40	15.3	25.9	36.1	31.6	29.0
41-50	44.4	29.6	22.6	43.8	30.3
51-60	13.9	14.8	19.4	6.3	16.5
61-70	12.5	14.8	8.4	6.3	10.4
71-80	1.9	9.3	4.5	12.5	5.7
81-90	2.8	1.9	2.6	0.0	2.4
N	72	54	155	16	297

Table 12 Continued

UDD					
Head					
21-30	10.5	6.7	21.2	26.1	18.
31-40	22.9	33.3	33.3	26.1	30.2
41-50	40.0	46.7	24.7	21.7	29.4
51-60	18.1	6.7	13.7	13.0	14.6
61-70	6.7	0.0	3.9	8.7	4.8
71-80	0.0	0.0	2.4	0.0	1.5
81-90	1.9	6.7	0.8	4.3	1.5
N	105	15	255	23	398
Child					
21-30	16.8	17.8	18.5	22.2	18.0
31-40	29.0	32.8	32.3	33.3	31.9
41-50	31.3	26.7	27.7	38.9	29.3
51-60	17.6	11.1	13.8	5.6	14.4
61-70	3.1	4.4	5.1	0.0	4.1
71-80	0.8	0.0	1.5	0.0	1.0
81-90	1.5	2.2	1.0	0.0	1.3
N	131	45	195	18	389
Adult					
21-30	15.6	7.4	14.0	34.5	15.7
31-40	33.3	37.0	32.4	20.7	32.0
41-50	31.1	25.9	31.3	17.2	29.5
51-60	15.6	14.8	14.5	13.8	14.8
61-70	3.3	0.0	5.6	10.3	4.9
71-80	0.0	3.7	1.1	3.4	1.2
81-90	1.1	11.1	1.1	0.0	1.8
N	90	27	179	29	325

Source: Field Survey (2005)

Facility Utilization by Marital Status

Family dynamics significantly influence health. Marriage has been found to provide companionship, emotional support and economic security and help reduce morbidity and mortality risk to about half of those not married. Marriage creates that close-knit that can influence relationship and decision-making concerning access to and use of health care services. For instance, a married person has a higher potential to seek health care than an unmarried

person (Manzoor, Hashmi & Mukhtar, 2009; Thompson, Miller, & Witter, 2003). The study was therefore interested in finding out how use of health care facilities was affected by marital status of heads of households.

The data suggested that in general, more married heads of households utilized existing facilities than the divorced or widowed. For instance, in AEED, of the 97 heads who chose to use hospital-based services, 64 per cent were married. Similarly, of the 195 people who utilized drug store services, 61 per cent were married. Within UD it also came out that out of 105 heads who utilized hospitals, 67 per cent were married while 64 per cent out of 225 respondents who used services at drug stores were married.

When the choice of facility for children was examined, it emerged that in AEED, an average of 64 per cent of all facilities chosen for children were by married heads of households. For instance, 67 per cent each of those who chose hospital and clinic for their children were married. The same picture emerged in UD where 81 and 71 per cent of those who respectively chose clinic and hospital for their children were married heads.

For adult members of households, an average of 70 per cent of those who chose existing facilities were from homes where the heads were married. For example, 76 per cent of those who used hospitals were from households with married heads. A better picture was presented in UD where an average of 77 per cent of adult household members who used existing facilities were from households with married heads. In the case of clinic, for instance, 89 per cent of the 27 adults who visited clinics were from households with married heads.

Table 13: Facility Utilization by Marital Status of Head of Household and District

Marital Status	Hospital %	Clinic %	D.Store %	H/PCamp %	Total %
AEED					
Head					
Married	64.95	59.62	61.03	70.37	62.53
D/ Widowed	35.05	40.38	38.97	29.63	37.47
N	97	52	195	27	371
Child					
Married	66.7	66.7	60.8	60.0	63.6
D/Widowed	33.3	33.3	39.2	40.0	36.4
N	78	74	171	8	254
Adult					
Married	76.4	74.1	66.6	56.3	69.7
D/Widowed	23.6	25.9	33.5	43.7	30.3
N	72	54	155	16	297
UDD					
Head					
Married	66.47	80.00	64.31	65.22	65.58
D/ Widowed	33.33	20.00	35.69	34.78	34.42
N	105	15	155	23	398
Child					
Married	71.0	82.2	59.5	44.4	65.3
D/Widowed	29.0	17.8	40.5	55.6	34.7
N	131	45	195	18	389
Adult					
Married	80.0	88.9	72.1	82.8	76.6
D/Widowed	20.0	11.1	27.9	17.2	23.4
N	90	27	179	29	325

Source: Field Survey, (2005)

Facility Utilization by Level of Education of Head of Household

Formal education increases awareness and concern for health which then generally helps to increase the life span of those who receive it. Ultimately,

the desire to overcome the burden imposed by diseases result in better utilization of existing health care facilities (Baker, Leon, Greenaway, Collins, & Movit 2011; Cutler & Lleras-Muney, 2007). While some heads of household had no formal education, others had higher levels of formal education. The study was consequently interested in analyzing the effect of formal education on choice of facilities (see Table 14).

The results indicated that in AEED, of heads who used hospital-based services, 52 per cent had completed Middle school/JHS while 4 per cent had primary school education. A similar trend was observed in UD where 51 per cent of heads who used hospital services had Middle school/JHS education. In the case of the use of clinic, the study suggested that in AEED, out of 52 people who went to the clinics for treatment, 67 per cent had Middle/JHS level of formal education and 15 per cent had higher education. In UD, 93 per cent of those who used clinics had middle school/JHS while 59 per cent who used drug stores had completed middle school/JHS.

On the other hand, no one from those who did not have any formal education and those who had completed primary education utilized clinic in UD. For heads who used the services of herbalists and prayer camps, the results indicated that in AEED, 52 per cent had no formal education while one person (3.7%) had higher education. In UDD, on the other hand, 61 per cent of heads who used herbal medicine or went to prayer camps had completed middle school/JHS.

Table 14: Choice of Facility by Level of Education and District

Formal Education level	Hospital %	Clinic %	D.Store %	H/PCamp %	Total %
AEED					
Head					
None	27.08	15.38	28.95	51.85	28.22
Primary	4.37	1.19	10.00	11.11	7.40
Middle/JSS	52.08	67.31	47.89	33.33	50.68
Higher	16.67	15.38	13.16	3.70	13.70
N	96	52	190	27	365
Child					
None	16.7	20.3	35.1	35.0	27.7
Primary	5.1	6.8	8.2	15.0	7.6
Middle/JSS	57.7	48.6	47.4	45.0	49.9
Higher	20.5	24.3	9.4	5.0	14.9
N	78	74	171	20	343
Adult					
None	20.8	18.5	29.0	37.5	25.6
Primary	2.8	11.1	7.7	12.5	7.4
Middle/JSS	61.1	55.6	45.8	43.8	51.2
Higher	15.3	14.8	17.4	6.3	15.8
N	72	54	155	16	297
UDD					
Head					
None	22.86	0.00	25.98	21.74	23.93
Primary	4.76	0.00	7.48	8.70	6.55
Middle/JSS	51.43	93.33	59.45	60.87	58.69
Higher	20.95	6.67	7.09	8.70	10.83
N	105	15	254	23	397
Child					
None	21.4	11.1	28.7	27.8	24.2
Primary	4.6	2.2	8.7	11.1	6.7
Middle/JSS	58.8	73.3	55.4	44.4	58.1
Higher	15.3	13.3	7.2	16.7	11.1
N	131	45	195	18	389
Adult					
None	12.2	22.2	25.1	24.1	21.2
Primary	5.6	11.1	6.7	10.3	7.1
Middle/JSS	66.7	59.3	53.6	58.6	58.2
Higher	15.6	7.4	14.5	6.9	13.5
Total	100	100	100	100	100
N	90	27	179	29	325

Source: Field Survey (2005)

In selecting health care facilities for children, it emerged from the study that in AEED, 58 per cent of children sent to hospital were from households where the heads had middle school/JHS education while 17 per cent were from households where the heads did not receive any formal education. For children who were treated with drugs from drug stores and herbal medicine/prayer camps, the figures were 47 and 45 per cent respectively from households where the heads had middle school/JHS levels of education.

In UDD, it was observed that children from households with heads who had had middle school/JHS dominated in the use of every health care facility. For instance, they constituted 73 per cent of all those who sent their children to clinic and 59 per cent of all those who were sent to hospital.

For adult household members, it was found that in both, majority of adults who used health care facilities from the two districts were from households with heads having completed middle school/JHS. For instance, in AEED, they constituted 61 per cent of adults who went to hospital and 56 per cent of all adults who were treated at clinics. In UDD, they constituted 67 per cent of all those treated at hospitals and 59 per cent of those treated at clinics.

Choice of Facility and Religion of Heads of Household

Religion can have effect on belief and how an individual perceives and interprets issues such as occurrence of disease and the facility that is chosen to deal with both the short- and long-term effects (Ajiboye, & Adebayo 2012; Asch, Kerr, Keesey, Adams Setodji, 2006; Burket, 2006). The study attempted to find out how a choice of a facility could be affected by the religion of heads of households (see Table 15).

The results were suggestive that in AEED, among the heads who chose hospital for health care delivery, 40 per cent were Protestants with a further 32 per cent being other Christians. In UDD, 49 per cent of those who chose hospital belonged to other Christian faith while four per cent belonged to the Islamic faith. For those who used services at clinics, it was found that in AEED, 37 per cent were Protestants, 29 per cent belonged to other Christian faith while 27 per cent were Catholics. In UDD, 57 per cent belonged to other Christian faith and 36 per cent were Protestants.

When the use of drug stores was considered, it emerged that in AEED, 59 per cent of those who used it belonged to other Christian faith while 41 per cent were Protestants and five per cent were Moslems. In UDD, it also emerged that 45 per cent of those who patronised drug stores belonged to other Christian faith while Moslems constituted six per cent.

For those who used herbal medicine or visited prayer camps, the study showed that in AEED, 44 per cent belonged to other Christian faith while 19 per cent were Catholics and seven per cent were Moslems. In UD on the other hand, 35 per cent were Protestants while 26 per cent belonged to other Christian faith.

Another look was taken at the religious background of heads of households and where children were sent for treatment. In AEED, it emerged as was the case of the heads of households that Protestants constituted majority (40%) of those taken to hospital, clinic (42%), drug store (38%) and herbal treatment/prayer camp (25%). It was however observed that while for those who belonged to the Islamic religion, an average of 4 per cent utilized all orthodox facilities, when it came to herbal medicine, they constituted 15 per cent. For

those who belonged to other Christian denominations, they constituted 50 per cent of those who used herbal facilities and prayer camps.

In UDD, however, heads of households of children who utilized majority of existing facilities mostly belonged to other Christian denominations: hospital, (43%), clinic (53%), drug store (47%) and herbal/prayer camps (39%). It was observed that no child from a household where the head professed other religious beliefs utilized herbal/prayer camps.

For adult members of household studied in AEED, 44 and 41 per cent of those who utilized hospital and clinics were from households with heads who were Protestants while 44 per cent were from households where heads belonged to other Christian denominations. In UDD, however, 37 per cent of those who used hospitals, 56 per cent of all who used clinics, 48 of all who used drug stores and 52 per cent of all who used herbal /prayer respectively were from households where heads belonged to other Christian denominations (See Table 15).

Table 15: Religion of Head and Facility Use

Religion	Hospital(%)	Clinic(%)	D.Store(%)	H/PCamp(%)	Total (%)
AEED					
Head					
Catholic	18.56	26.92	17.71	18.52	19.29
Protestant	40.21	36.54	40.62	18.52	38.32
Oth Xtian	35.05	28.85	30.73	44.44	32.61
Islam	6.18	1.92	4.69	7.41	4.89
No/Other	0.00	5.77	6.25	11.11	4.89
N	97	52	192	27	368
Child					
Catholic	23.1	24.3	15.8	10.0	19.0
Protestant	39.7	41.9	38.0	25.0	38.5
Oth Xtian	28.2	28.4	33.9	50.0	32.4
Islam	3.8	4.1	4.1	15.0	4.7
No/Other	5.1	1.4	8.2	0.0	5.5
N	78	74	171	20	343
Adult					
Catholic	23.6	22.2	16.1	0.0	18.2
Protestant	34.7	44.4	41.3	37.5	40.1
Oth Xtian	30.6	29.6	31.0	43.8	31.3
Islam	5.6	1.9	4.5	6.3	4.4
No/Other	5.6	1.9	7.1	12.5	6.1
N	72	54	155	16	297
UDD					
Head					
Catholic	24.76	7.14	23.72	24.76	7.14
Protestant	21.90	35.71	17.39	21.90	35.71
Oth Xtian	48.57	57.14	45.85	48.57	57.14
Islam	3.81	0.00	5.93	3.81	0.00
No/Other	0.95	0.00	7.11	0.95	0.00
N	105	14	253	105	14

Table 15 Continued

Child					
Catholic	26.7	8.9	23.6	26.7	8.9
Protestant	19.8	31.1	17.9	19.8	31.1
Oth Xtian	42.7	53.3	46.7	42.7	53.3
Islam	4.6	4.4	5.6	4.6	4.4
No/Other	6.1	2.2	6.2	6.1	2.2
N	131	45	195	131	45
Adult					
Catholic	31.1	7.4	21.8	31.1	7.4
Protestant	23.3	25.9	20.7	23.3	25.9
Oth Xtian	36.7	55.6	48.0	36.7	55.6
Islam	6.7	7.4	2.8	6.7	7.4
No/Other	2.2	3.7	6.7	2.2	3.7
N	90	27	179	90	27

Source: Field Survey, (2005)

Facility Choice by Ethnicity of Head of Household

Ethnicity has the potential to create major and minor groups that can bring about differences in how health care facilities can be accessed. Where discrimination occurs, it has been observed that ethnic minorities usually suffer and encounter challenges in accessing health care services (Chen, Fryer, Phillips, Wilson & Pathman, 2005; Traylor, Schmittdiel, Uratsu, Mangione & Subramanian, 2010). In Ghana, different ethnic groups exist in dominant and minor groups at different places across the country. The study tried to find out how ethnicity affected the use of health care facilities within the two study districts.

The results were indicative of the fact that in AEED, out of 95 heads who used hospital 87 per cent were Fantis while two per cent were from ethnic groups such as Ewes and Guans (see Table 16). Again, for the use of clinics, 94 per cent of the heads who used that facility were again Fantis. With the use

of drug stores, it emerged that 93 per cent of the heads were Fantis while no one was from the northern part of the country.

Within UDD, Akans constituted 60 per cent each for the use of hospital and drug store while Fantis formed 17 and 13 per cent respectfully for the two facilities. Again, for drug store use, 73 per cent of the heads who used that facility were Akans while 11 and 5 percent were Fantis and northerners respectively.

In AEED, facility choice was matched against the ethnic background of children from households and was found that in every facility chosen for a child, Fantis constituted the dominant heads of household. For instance, Fantis formed 94 and 93 respectively of all heads of households who had used clinics and drug stores respectfully. However, in UDD, the Akans constituted the dominant heads of households in every facility examined. For instance, they constituted 60 per cent each in the use of hospital and clinic while forming 73 per cent in the use of drug store.

For adult members of households, a similar trend like that of heads and children was observed in AEED and UD. Majority of those who used every existing facility had Fanti heads of households in AEED and in UD the majority were Akans; 67 percent for those who used hospitals and 82 per cent for those who used herbal/prayer camps.

Table 16: Ethnicity and Choice of Health Care Facility by District

Ethnicity	Hospital(%)	Clinic(%)	Drug st(%)	H/PCamp(%)	Total(%)
AEED					
Head					
Akan	9.5	1.9	6.3	15.4	6.6
Fanti	87.4	94.2	93.1	76.9	91.5
Ga/Adangbe	0.0	1.9	0.0	7.7	0.6
Northern	1.1	0.0	0.0	0.00	0.3
Other	2.1	1.9	0.5	0.0	01.1
N	95	52	189	13	363
Child					
Akan	9.0	2.7	7.6	5.0	6.7
Fanti	89.7	94.6	91.8	85.0	91.5
Ga/Adangbe	0.0	1.0	0.6	0.0	0.6
Northern	0.0	0.0	0.0	5.0	0.3
Other	1.3	1.4	0.0	5.0	0.9
N	78	74	171	20	343
Adult					
Akan	9.7	1.9	7.1	6.3	6.7
Fanti	87.5	94.4	92.3	87.5	91.2
Ga/Adangbe	0.0	1.9	0.6	0.0	0.7
Northern	0.0	0.0	0.0	0.0	0.0
Other	2.8	1.9	0.0	6.3	1.3
N	72	54	155	16	297
UDD					
Head					
Akan	60.0	60.0	72.5	52.9	68.1
Fanti	17.1	13.3	11.4	17.6	13.3
Ga/Adangbe	1.0	0.0	0.8	17.6	1.5
Northern	2.9	26.7	5.1	11.8	4.5
Other	19.0	0.0	0.0	0.0	12.6
N	105	15	255	17	398
Child					
Akan	64.1	80.0	67.7	77.8	68.4
Fanti	16.8	6.7	13.8	16.7	14.1
Ga/Adangbe	0.0	0.0	2.1	0.0	1.0
Northern	6.1	0.0	3.6	5.6	4.1
Other	13.0	13.3	12.8	0.0	12.3
N	131	45	195	18	389
Adult					
Akan	66.7	63.0	64.8	82.8	66.8
Fanti	14.4	11.1	14.5	6.9	13.5
Ga/Adangbe	1.1	0.0	2.8	0.0	1.8
Northern	3.3	7.4	2.8	3.4	3.4
Other	14.4	18.5	15.1	6.9	14.5
N	90	27	179	29	325

Source: Field Survey, (2005)

It emerged out of the study that for those who chose hospital in AEED, 32 per cent were professionals, three per cent were farmers with artisans

forming nine per cent. In UDD, professionals formed 31 per cent while traders formed 25 per cent. When the use of clinic was examined, it also emerged that in AEED, 38 per cent of all those who used clinic were professionals while farmers formed the next lager group (29%). In UDD, on the other hand, farmers and professionals constituted 47 and 27 per cent respectively of those who used clinic.

Drug stores were one set of health care facilities that was used. In AEED, farmers formed the largest group (44%) of all people in occupation who used the facility followed by professionals (20%). In UDD, farmers again formed the largest group (41%) of all people with some occupation who used drug stores. They were followed by professionals and traders. The active use of drug stores by farmers might stem from the fact that drug stores were found in all the settlements chosen. This made it probably more convenient for them to use the facility, especially in the evening without sacrificing the time they needed to engage in their activities to attend to hospital or clinic.

Another set of facilities examined were herbal facilities and prayer camps. In AEED, it was observed that the bulk of working heads who patronised them were farmers (63%) compared to seven per cent artisans. Similarly, in UDD, while farmers constituted almost 48 per cent, artisans formed 17 per cent of all people who used that facility in the district (see Table 16).

Table 17: Facility Utilization by Occupation of Head of Household

Occupation	Hospital(%)	Clinic(%)	D. St (%)	H/PCamp(%)	Total (%)
AEED					
Farmer	31.25	28.85	43.62	62.96	39.67
Trader	23.96	17.31	18.09	7.41	18.73
Artisan	9.38	9.62	13.83	7.41	11.57
Professional	32.9	38.	20.21	18.52	25.90
Others	3.12	5.77	4.26	3.70	4.13
N	96	52	188	27	363
UDD					
Farmer	20.95	46.67	41.34	47.83	20.95
Trader	24.76	13.33	20.47	13.04	24.76
Artisan	13.33	13.33	12.60	17.39	13.33
Professional	31.43	26.67	15.75	17.39	31.43
Others	9.52	0.00	9.84	4.35	9.52
N	105	15	252	23	105

Source: Field survey (2005)

Choice of Health Care Facility by Disease Severity

Diseases vary in their severity from person to person depending on the genetic constitution of the individual, life style and environmental conditions and the approach adopted in dealing with the diseases when individuals become infected with the disease-causing organisms. Depending on the mode of finance of health care costs, perception about disease and the perceived level of severity of the disease, different facilities may be chosen to deal with the disease (Queensland Health, 2012). Diseases reported in the study included malaria, typhoid, diarrhea, skin infection, stomach upset and headache. The study tried to find out how choice of facility was affected by respondents self-reported severity of their diseases

As indicated in Table 18, in AEED, 48 per cent of those who went to hospital did so because they considered their condition very severe while 2 per cent went to hospital because they considered their disease very severe. On the other hand, in UDD, 53 per cent and 20 per cent respectively of the 105 people who went to hospital did so because their conditions were severe and very severe respectively. It also emerged that in AEED, of the 52 people who used services at clinics, 50 per cent considered their condition as severe while 8 per cent said theirs were very severe. In UDD, only 15 people reportedly went to clinics. Of that, none considered his/her condition as very severe but 60 per cent said theirs were severe.

For those who visited drug stores, 194 respondents did so in AEED while 254 did so in UD. In AEED, nobody went to drug store with very severe condition but in UDD, two per cent indicated their conditions were severe. However, 86 per cent of the respondents in AEED said their conditions were

not severe, that is why they chose to be at the drug store and thus avoid wasting time. Similarly, about 81 per cent in UDD who had gone to drug stores did so because their conditions were not severe. On the contrary, in both districts, some heads had either used herbal medicine, gone for prayers at prayer camps because their conditions were considered very severe. In AEED, 22 per cent and in UDD, nine per cent respectively had gone to prayer camps or herbal centers even when they considered their conditions very severe while 37 percent and 52 percent respectively had gone to prayer camps and the herbal centers respectively because their conditions were considered severe (see Table 17)

Table 18: Choice of Facility by Disease Severity and District

Severity	**Hospital (%)**	**Clinic (%)**	**D Store(%)**	**H/P Camp(%)**	**Total(%)**
AEED					
V.Severe	21.88	7.69	0.00	22.22	8.40
Severe	47.92	50.00	14.43	37.04	29.81
N.Severe	30.21	42.31	85.57	40.74	61.79
N	96	52	194	27	369
UDD					
V.Severe	20.00	0.00	1.57	8.70	6.80
Severe	53.33	40.00	17.72	52.17	29.97
N.Severe	26.67	60.00	80.71	39.13	63.22
N	105	15	254	23	397

Source: Field Survey (2005)

Choice of Health Care Facility by Household Size

The size of an individual's household can affect issues such as disposable income, level of expenditure, eating, and sleeping arrangements. (Scheiermann, Kunisaki, Jang & Frenette, 2010). The larger the size of one's household, the smaller the size of disposable income spent on health care is more likely to be. This may, as well, affect the choice of health care services for members of the household. The study was interested in finding out the link between choice of health care facilities and household size. Results of analysis are presented in Table 19.

Table 19: Facility Choice by Household Size and District

House hold Size	**Hospital (%)**	**Clinic (%)**	**D.Store(%)**	**H/PCamp (%)**	**Total (%)**
AEED					
Head					
2	8.2	11.5	9.2	0.0	8.6
3	15.5	5.8	13.8	11.1	12.9
4	16.5	19.2	24.1	22.2	21.3
5	21.6	26.9	24.8	25.9	24.3
6	38.1	36.5	28.2	40.7	32.9
N	97	52	195	27	371
Child					
2	9.0	2.7	4.1	25.0	6.1
3	12.8	10.8	12.3	5.0	11.7
4	21.8	21.6	20.5	30.0	21.6
5	14.1	29.7	30.4	10.0	25.4
6	42.3	35.1	32.2	30.0	35.0
7	0.0	0.0	0.3	0.0	.03
N	78	74	171	20	343
Adult					
2	4.2	1.9	6.5	6.3	5.1
3	11.1	7.4	11.0	6.3	10.1
4	20.8	16.7	23.9	18.8	21.5
5	19.4	35.2	27.1	37.5	27.3
6	44.4	38.9	31.0	31.3	35.7
7	0.0	0.0	0.3	0.0	0.3
N	72	54	155	16	297

Table 19 continued

UDD					
Head					
2	5.7	0.0	7.9	4.3	8.8
3	14.3	20.0	19.3	17.4	17.9
4	17.1	13.3	21.3	26.1	20.2
5	19.0	26.7	20.1	8.7	19.4
6	43.8	40.0	31.5	43.5	36.8
N	105	15	254	23	397
Child					
2	3.8	6.7	6.2	11.1	5.7
3	20.8	17.8	15.9	22.2	18.0
4	16.9	28.9	20.0	22.2	20.1
5	20.8	22.2	19.0	11.1	19.6
6	37.7	24.4	39.0	33.3	36.6
7	0.0	0.0	0.0	0.0	0.0
N	130	45	195	18	388
Adult					
2	4.4	0.0	0.6	10.3	2.5
3	16.7	22.2	16.2	6.9	16.0
4	16.7	22.2	24.6	31.0	22.8
5	23.3	22.2	17.3	20.7	19.7
6	38.9	33.3	41.3	31.0	39.1
7	0.0	0.0	0.0	0.0	0.0
N	90	9	74	29	325

Source: Field Survey, (2005)

Result of analysis indicated that in AEED, 38 percent of heads who used hospital-based services were from households with six members while only eight per cent were from households with two members (see Table 20). For those who used clinics, 37 per cent of their heads of households were from households with six members. Heads of households with six members constituted 28 per cent of heads who used drug stores and 41 per cent of those who went to prayer camps and or used herbal medicine.

In UDD, a similar picture emerged with 44, 40 and 44 per cent of heads of households with 6 members using hospital, clinic and prayer camps or herbal medicine respectively. Again, heads with households with 2 members

constituted 6, 8 and 4 percent of all those who used hospitals, drug stores and herbal/prayer camps.

Concerning the choice of facilities for children, in AEED, 42 and 35 per cent of such children who were sent to hospital and clinic were from households with 6 members. In UDD, those from households with six members formed 39 per cent of all those who were sent to hospital and 39 per cent of all those who used drug stores.

For adults in AEED, those from households with 6 members formed 44 percent of all those were treated at hospitals and 39 per cent of all those who received treatment at clinics. In UDD, adults from households with 6 members formed 39 and 41 per cent of all those who went to hospitals and those who bought drugs from drug stores (see Table 19).

Educational Attainment and Choice of Health Care Facility

Formal education does not only equip an individual with cognitive, affective and psychomotor development; it is also the means by which an individual develops the capacity to make informed decisions about health (Sedgwick, 2000). Respondents in the study had attained different levels of formal education. The level of education attained was defined in terms of the level an individual had completed. Results of the analysis of the link of the level of education and the choice of health care facilities are presented in Table 20.

Results of analysis in Table 20 indicated that within the Ajumak-Enyan-Essiam district, out of the 96 people who went to hospital, 52 per cent had completed Middle school while 26 per cent had no formal education. Similarly, in the Upper Denkyira district, out of 106 respondents who had chosen the district hospital, 52 per cent had completed Middle school while 24 per cent had

no formal education. As regards the use of drug store, out of the 196 respondents who had used the facility in the Ajumak-Enyan-Essiam district, 47 per cent had completed Middle school while 28 per cent had no formal education (see Table 20). Similarly, within the Upper Denkyira district, out of 254 respondents who had ever used the drug store, 60 per cent had had formal education while 24 per cent had no formal education.

Table 20: Highest Level of Education of Head of Household and Health Facility Chosen

Level of education	**Facility**				
	Hospital(%)	Clinic(%)	Drugstore(%)	Others(%)	Total
AEED					
None	26.0	13.5	27.6	44.4	26.8
Primary	4.2	3.8	12.2	11.1	8.9
Middle	52.1	67.3	46.9	36.1	50.0
Higher	17.7	15.4	13.3	8.3	14.2
N	96	52	196	36	380
UDD					
None	23.6	6.7	26.4	28.9	25.2
Primary	4.7	0	7.1	8.9	6.4
Middle	51.9	86.7	59.8	53.3	58.1
Higher	19.8	6.7	6.7	8.9	10.2
N	106	15	254	45	420

Source: Field Survey (2005)

The result was an indication of the significance of drug stores in the health care delivery in the country. Those with formal education and those without formal education utilized the services of such facilities. This might be due to the ease with which services were obtained at the facility. Again, some operators

offered credit facilities to costumers and that might have been and added incentive to customers to utilize the facility.

Household Member and Facility Chosen

The use of health care facilities for members of a family may differ according to available resources, person involved, who takes the decisions on facility use and the nature of disease. Different members were involved in the use of health care facilities within the two study districts. Results of the analysis of the relationship between family members and facilities chosen for them are presented in Table 21.

Table 21: Member of Household and Health Facility Chosen

	Facility				
	Hospital(%)	Clinic(%)	Drugstore (%)	Others (%)	Total(%)
AEED					
Self	30.4	54.5	47.3	33.3	43.3
Spouse	10.0	4.5	15.5	13.3	13.0
Father/mother	0	4.5	0	0	0.4
Brother/sister	0	0	2.3	0	1.3
In-laws	2.0	0	0.8	0	0.9
Other relative	6.0	4.5	2.3	3.3	3.5
House help	0	0	0	3.3	0.4
Grandchildren	4.0	0	2.3	16.7	4.3
N	50	22	129	30	231
UDD					
Self	24.6	40.0	37.0	34.2	34.3
Spouse	28.1	20.0	21.2	15.8	21.8
Father/mother	1.8	0	2.2	0	1.7
Brother/sister	0	0	0.5	2.6	0.7
In-laws	1.8	0	0.5	0	0.7

Other relative	1.8	20.0	0.5	2.6	1.7
Grandchildren	1.8	0	2.7	5.3	2.8
N	57	10	184	38	289

Source: Field Survey, (2005)

Discussion

Findings of this study with regards to sex of head of household and facilities chosen confirm findings of Victoor**,** Delnoij**,** Friele and Rademakers (2012), Ellison-Loschmann and Pearce (2006) who all claim that females tend to have some challenges when it comes to the use of orthodox health care facilities due to their limited income status compared to males. Females do not have access to economic resources like men in the country, which might have affected their ability to use health care facilities when men are not the sponsors and they have to sponsor on their own. In terms of age, respondents between 30 and 50 years formed about 50 per cent of the people who use hospital based services. This might be that such heads were the most active in terms of participation in economic activities, implying they might have larger incomes; thus, their ability to pay for hospital-based services. However, heads between 71 and 90 years hardly use hospital based services probably because the income levels had gone low and they had also gotten experiences in the use of herbal medicine instead of going to the hospitals. The study further finds out thatdrug stores were used generally by respondents of all age groups. This might be an indication that because hospital was located closed to respondents, they might have had it more convenient in terms of physical accessibility, cost and time spent on the facility (Mohammed & Shamima, 2011)

Baker and Liu (2006) and Twain et al (2006) have all come to the conclusion that, short distances to facilities are inducement for the utilization of such facilities. However, severity of disease is more likely to lead to the use of hospital facilities where they are better managed. The use of hospital facilities by respondents might have been influenced by the severity of the diseases they reported and for which they might lead to quick relief. In such instances, distances would not be a factor to be considered in the use of professional services at hospitals.

On age, an importance issue emerged on the use of orthodox health care facilities. Those within the working age group, thus 30-60, tended to use orthodox health care facilities than those between 20-25 and above 65 years. This might be that those between 20-25 and 60 above might have been economically weak and could therefore not afford the cost of health care at the orthodox facilities whereas those between 30 and 60 might be gainfully employed and could therefore pay for the cost of health care services (Macassa, 2014).

Marital status was found today to be an important factor in the use of hospital and drug stores. The concern for the well-being of an individual becomes the concern of the partner he or she is married. The findings of the study which showed that members married heads of households used existing health care facilities more than female heads of households who were divorced or widowed because they might not have had people around them who could be so much concerned about their health care needs (Robards, Evandrou, Falkingham & Vlachantoni, 2012)

Education equips individuals to be concerned about the causes of disease and measures to deal with them. Even though in the present study, majority of the respondents did not have high level of education, the few who had higher than middle school/JHS patronized hospital, clinics and drug stores where orthodox medicines are dispensed. They might have considered such avenues better to deal with their problems and members of their household than herbal facilities and prayer camps (Fadare, 2011).

Religion did not seem to have particular influence on the use of health care facilities on members from all religious groups. Even though religion was not a barrier, it did not play any catalytic role in the choice of health care facilities. This might be as result of religions not being antagonistic to any health care system. This confirms similar findings by Al-Mujtaba, et al (2016), who have concluded that religion does not promote or serve as a barrier on its own and that when physicians communicate to religious adherents without hurting their faith, they are able to attract them irrespective of their religious background.

Occupation was found to be important in the choice of health care facilities. For instance, in both districts, farmers form the majority of those who patronised herbal medicines and prayer camps while professionals patronised hospital and clinics. This might be due to the fact that the income levels of farmers are generally low and the literacy levels are also low as compared to professionals. As a result, they might have chosen herbal and prayer camps where emphasis might be placed on spirituality compared to professionals whose income are higher and consistent and whose higher level of education

might have given them a better understanding of the causes of their diseases. This confirms similar findings made by Oni and Agboje (2010).

The size of household affects its expenditure and leads to decrease in surplus income which can be saved and invested. Eventually, the household incomes and access to basic goods and services including health care declines (Meyer, 2016).

The outcome of the study did not show any significant effect on the size of the household and choice of health care facilities. This is contrary to the findings by Meyer (2016), who has pointed out that large family sizes affect proportion of family income that can be spent on health and for which the family cannot afford the health facilities that charge high prices for their services.

The way individuals indicate their wealth status influences the choice of health care services. It emerged from the study that those who consider themselves rich tendered the use of the orthodox health services while their poor counterpart could not use those facilities. This might be explained by the fact that, at the time of the study, health care in Ghana was paid from the user's pocket under the "Cash and Carry System". Those who had the resources might have received health care services from orthodox facilities while the poor resorted to the use alternative health care services.

Another important observation was on the use of health care facilities by other members of household apart from the head. When two or more people are involved in decision making, better results are likely to be achieved than decision by an individual. In general members of married heads of household used hospitals and clinics more than female heads of households who were

either divorced or widowed in which case they had to take decisions that concerns them and other members of their households.

Another observation was on the consistency in the choice of facilities for members of household. This might have been that heads considered the health of other members of the household as equally important as their own health. So, when issues of health emerge, heads chose facilities that they themselves had chosen. This might be due to the level of satisfaction they might have had when a member was first sent there.

These have amply been captured in the conceptual framework as predisposing factors, which are relevant in explaining the choice of health care facilities. The findings implied that drug stores were the most patronized in both districts while both males and females in both districts patronized drugstores more than any other facility. This trend might be due to a number of factors which include convenience or ability to buy drugs on credit or minimum time spent there.

As a confirmation of this possible reasons one female client in Ajumako said:

I buy drugs from the drug store because the owner allows you to explain your problem before giving you good drugs that can solve your problem. This is in contrast to hospitals where one had to spend a long time in queue only for the doctor to ask only one question and before one end answering, the doctor has written something for you for which you may end up buying drugs from a drugstore. Another man, who was asked why he used a drug store when there was a hospital in town which he could use, responded: The drug stores are more convenient because you can come even in the night and you will obtain what

drugs you need. Again, you do not waste time like you will do at the hospital or clinic. You may also end up at the drug store with your prescription. Why then not come here direct, especially when the disease is not so serious.

The statement was an indication that the hospital which was seen as the better equipped health care facilities was not very suitable as too much time is spent before receiving the expected service. The availability of different facilities from which clients could choose had been part of available facilities under the modified Kroeger model which provides the conceptual basis for the study.

Findings of this study regarding age of head of household and choice of facility support findings by Muriithi (2013), Lwelamira and Safari (2012) and Nketiah-Amponsah and Hiemenz (2009) who found "age" as an important predisposing factor that influenced the choice of health care facilities.

An examination of the conceptual framework used for the study, the Kroegers utilization model, identifies age as a predisposing factor and the different health care facilities as end facilities, thus making the model relevant to the present study. The study found that health care facilities were patronised by heads from all the age groups. This is an indication that heads of all ages were concerned about their health and therefore exploited all existing health care facilities. However, it was also realised that those whose ages were between 31 and 60 years used all existing health care facilities more than all the other age groups. This happened because their number outstripped all other age groups in the study. It is however very probable that majority of people within these age groups were actively working and therefore had the means to pay for the cost of health delivery. After all, health insurance had just been launched in

the district and patronage might not have been high since the beginning of the policy had some initial problems such as the unwillingness of people to register onto the policy.

An important observation that was made was heads from two age groups, namely 31to 40 and 41 to 50, were the dominant groups who made extensive use of health care facilities for themselves and for their dependents. This probably is suggested by the fact that majority of heads within these two age groups might have had dependents who were many and had not started forming their own households. Again, they might have been actively working and therefore could afford the cost of health care delivery from their own sources of income or from conditions provided by employers. Even though people aged between 81 and 90 years were still involved in the provision of health care for members of their households and for themselves, they were not many - an indication that many of their dependents might have been on their own. Again, the trend in both districts concerning health seeking was similar. For almost all the age groups, drug store was the most utilized facility followed by hospital. For drug store, it might be because they were found in all settlements sampled. That might have provided ready-to-reach facility.

The findings of this study in relation to marital status and facility used confirm similar studies that had come to the conclusion that marriage is significant in the health of men especially (Chen**,** Chen & Yang, 2008; Harvard University, 2010; Lwelamira, & Safari, 2012; Kaplan & Kronick, 2006; Thompson, Miller, & Witter, 2003).

According to Kroeger's health care utilization behavioural model, marriage forms part of the predisposing factors that can influence the choice of

health care facilities. The different health care facilities that respondents chose from were also amply highlighted by the model. The model therefore provides relevant basis for analysing the present study.

An important issue that might explain the significance of marriage in facility use in Ghana is that men automatically assume family headships when they marry. Women can assume headship of household when they are single, divorced or widowed. It is possible that wives exerted some influence on the married men and might have even received financial support from wives in seeking health care services for themselves and for other members of the household. On the contrary, female heads might not have had sufficient resources nor received any support probably because some of them might not have been gainfully employed.

The outcome of the analysis of level of education and facility use in the present study confirms similar findings by Kaul, You and Boyle (2012), Dixon, Robertson, Appleby, Burge, Devlin, and Magee (2010), and Cutler and Lleras-Muney (2007) who had concluded that majority of those who had used traditional medicine are those whose level of formal education are low. What was observed in the present study was that even though majority of heads who utilized existing health care facilities for themselves and for other members of their households had had middle school/JHS, those who had had higher levels of education and those without any formal level of education all utilized all existing health care facilities. This might have been that even if the head did not have formal education, they might have had some members of their households who informed them about existing facilities. Furthermore, health education

might have provided them with the information they needed to be aware of facilities and services available.

Even though in terms of percentages, some religious denominations dominated in the use of particular facilities, in almost all instances, there were people from all religious groups who used all existing facilities. It probably might be that people looked beyond religion when it comes to accessing health care services even though some people belonging to particular religious grouping might tilt towards some types of health care facilities. For instance, in the use of services of herbalists and prayer camps, it was found that in both districts, people who belonged to other Christian denominations dominated. This, for instance, might be due to such people having stronger believe in spiritual healing. The findings were in tandem with observations made by Asch, Kerr, Keesey, Adams and Setodji, (2006) that religious differences were not very significant among religious groups when health seeking behaviour of religious sub-groups is considered.

In terms of ethnicity, some studies have found that ethnicity affects income, attitude, and access to health care facilities. In particular, ethnic minorities have often faced challenges regarding access to and use of health care facilities. The dominance of Fantis in AEED and Akans in UDD was an indication of the type in indigenes who lived in those areas. It is probably a direct result of the type of economic activities that prevailed in those two areas. In AEED, farming was the major economic activities and that probably was not attractive enough from people from other areas, thus leaving the indigenes who engaged in farming. In UDD, however, there was some variation in economic

activities that might have helped to attract people with different ethnic backgrounds to the area.

Findings of this study confirm similar one by Manzoor, Hashmi and Mukhtar, (2009) and Ogwurike (2005) who have concluded that some workers in some occupations, especially those who engage in private occupations, find it difficult to leave their jobs to seek medical care, especially where the disease is not considered serious. In the present study, farmers, for instance, used drug stores because they might have found it difficult to go to the hospital where they might end up spending a greater part of the day there. Rather, their preference might stem from the fact that drug stores operate late into the night and might have made it possible for them to go there after the day's work.

With regards to disease severity and choice of health care facility, it became clear that even though some people considered their conditions severe and went to hospital, others chose other facilities other than orthodox facilities. This might have stemmed from the fact that some heads might have considered their health condition as linked with spiritual causes, a belief which is part of some people.

The findings of the present study on household size and choice of health care facility might be due to the fact that those with medium household sizes did not find it constraining to choose a preferred health care facility when the need arose. Since none of the households studied did not fall within large household sizes, the real effect of household sizes on choice of health care facilities could not be reported.

Another issue that emerged was the economic claim made by heads of household. While some claimed they were rich, some said they were poor while

others said they were neither rich nor poor. Those who claimed that they were neither rich nor poor dominated in the use existing facilities. However, some respondents who claimed to be poor also used herbal medicine/prayer camps. The cost of treatment at such facilities might have been low; thus, it might have motivated people who claimed to be poor to have patronized such facilities.

The study also tried to find out reasons behind the use of existing facilities. Whereas nearness to facilities was important, the major reason had to do with nearness, cost and other reasons such as the influence of others, time one had to spend at a facility and recommendation from others or previous experience when another member was treated at a facility.

CHAPTER SIX

DETERMINANTS OF UTILIZATION OF HEALTH CARE FACLITTIES

Introduction

The chapter deals with analyses of determinants of factors that determine utilization of health care facilities by different members of households with different characteristics. Health care needs vary from person to person and from location to location. Even within the same location, health care needs may vary for different individuals. Consequently, different health care facilities that may cater for different people and their health care needs may co-exist and may be used side by side (Young, Klosko, Weishaar, & Kierdorf, 2005). Their use may, however, vary depending on need, prevailing and enabling individual or household conditions (Thuan et al; 2008; Hamid et al; 2005; Dole et al; 2000; Waibel, 2001; Huq & Tasnim, 2005 Ikeako et al; 2006).

Every health seeking decision by individuals or households may be influenced by different need, prevailing and enabling factors. Researchers have been concerned about the strength of these determinant variables in order to help develop health care systems that can serve the needs of clients better. They have often depended on statistical tools such as univariate and multivariate partial least squares, binary and multinomial logistic regression (Tabachnick & Fidel, 2001). The nature of data obtained and the form in which it was collected and stored can determine what tool to use.

This study collected data that covered utilization of different health care system which operate pluralistically in two different study sites. By the nature of data collected, multinomial logit had initially been considered. This is because multinomial logit allows analyses of different facilities to be considered

because they constitute subset of a universal set (Tabachnic & Fidel, 2001). However, the volume of data needed to obtain significant result from multinomial logit analyses must be reasonably large (Tabachnic & Fidel, 2001). Even though this study could use multinomial logit analyses, based on the fact that data had been collected on different facilities that constituted a subset of a universal health care delivery system, the volume of data obtained would render some cells empty and thus not make analyses meaningful as observed by Tabachnick and Fidel (2001), and Bowerman and O'Connell (1979).

Hospital, clinic and drug stores were re-categorized as orthodox health care facilities while herbal medicine and prayer camps were re-categorized as non-orthodox health care facilities. With these two categories, binomial logit was used. The operation involved twelve factors, grouped under individual characteristics (age, sex, level of formal education, religion, and wealth), spatial factors (settlement status, district and distance) and other extraneous factors (transport, type of diseases and person who paid for cost of health care).

To identify the effects of any set of determinant variables on the operation, three models were employed for analyses. The first model considered sex, age, level of formal education, ethnicity, religion and self-stated wealth status of heads of household. Their effect on the strength of the model to explain the choice of health care facilities was then examined. The effects of the individual determinant factors were also examined.

In the second model, settlement type, the district of study and the nearest distance to an orthodox facility were added to the personal factors. The extent to which these strengthened the model was also examined. Their effects on the choice of facilities for different members of household were then

considered. In the third model, mode of transport used, type of disease and the person who paid for the cost of services were added to the factors in the first two models to constitute a third model and to find out whether those factors could help to explain the choice of facilities. Analysis was performed using STATA statistical programme. Eight hundred cases representing responses from respondents from the two study sites were imputed and the three different models were run.

Determinants of Use of Health Care Facilities

The study has been interested in analyzing factors that determined the use of health care facilities within the study areas. Health care facility use has been found to be influenced by factors such as sex, age, occupation, income status, availability of health insurance and residential status (Asenso-Okyere et al, 1998; Bour, 2005; Canagarajah & Ye, 2001; Deaton, 2003; Fikree & Pasha, 2004; Overbosch, Nsowah-Nuamah; Slack, Cumming, Mare & Timmins, 2002; Van den Boom, & Damnyag, 2004). One important issue that has often engaged the attention of researchers is the extent to which such factors individually or collectively affect the choice of health care facilities. The current study tried to find out the extent to which identified factors (dependent variable) affected the choice of health care facility use for different members of household in the study.

Determinants of Orthodox Health Care Facilities for Use by Heads of Households

For the use of orthodox health care facilities for heads of household, it emerged that the first model was significant at 95% confidence interval (0.000). In the second model, one or the predictor factors were not significant (0.095) but in the third model, one or all of the predictor models were significant (0.050) (see Table 32). Analyses of results could therefore be performed. It emerged from the results that the odds ratio of using an orthodox health care facility when the head was a female was an average of 1.2 in all models (see Table 32), an indication that females tended to use orthodox health care facilities more than males.

Age was another predictor variable that was considered. As the results indicated (see Table 32), at p-value of <0.05, the odds ratio of using an orthodox health care facility for those aged 65 years and above the odds ratio of using an orthodox health care facility was 2.3 as against 1.7 for those aged 35 to 44 years. This is an indication that within the study districts, older heads of households tended to utilize orthodox health care facilities more than younger heads of households.

When level of formal education of the head of household was considered, it came out that the odds of using orthodox health care for those with secondary education was 1.7 at p-value of <0.05 when model 1 was used but 1.8 in model 2 and 1.7 in model three compared to 0.37 in model three. This was an indication that higher levels of education tended to influence the choice of orthodox health care facilities in the two districts.

The influence of religion of the head of household in the choice of orthodox health care facilities was also considered. Results of the data (see Table 22) indicated that the odds of using orthodox health care facility when the head belonged to other Christians or was a Protestant was 1.1 but when the head was a Moslems was 0.6 with model one was used and 0.8 with model three.

Individual wealth status is able to influence what facilities the individual can use. The study was interested in finding out how the individual's own perceived wealth status affected their choice of health care facilities. It emerged from the study that the odds ratio of choosing an orthodox health care facilities was 2.2 when the individual considered him/herself rich when the first model was used. In the second model, the odds ratio of using an orthodox facility was 1.3 and 1.9 when the head said he or she was rich (see Table 22). In other words, the use of orthodox health care facility was higher for individuals who considered themselves rich.

The use of the first model which had considered six predictor variables (sex, age, highest level of formal education, ethnicity, religion and self-stated wealth status) had indicated that the model was significant (0.000 at 95percent confidence interval). Age higher levels of education, ethnicity, religion and wealth exerted influence on the choice of orthodox health care facilities.

The next level involved the use of model two where settlement status, district and distance to the nearest facility were added. The addition of settlement status, district and distance were not significant (0.095) and therefore did not add to influence the choice of orthodox health care facilities. For instance, without those three factors, the odds ratio of choosing an orthodox

health care facility for heads aged 65 years and above was 2.3 at p-value of <0.05.

Table 22: Binary Logistic Regression Results on Utilization of Health Facilities for Heads of Household

	Model 1		(2)		(3)	
	OR	95% CI	OR	95% CI	OR	95% CI
Sex						
Male	1	(.)	1	(.)	1	(.)
Female	1.150	(0.468)	1.267	(0.272)	1.199	(0.594)
Age						
25-34	1	(.)	1	(.)	1	(.)
35-44	1.704*	(0.025)	1.804*	(0.029)	2.255	(0.052)
45-54	2.090**	(0.002)	2.162**	(0.004)	2.740*	(0.011)
55-64	2.996***	(0.000)	2.901**	(0.002)	4.009**	(0.008)
65 & above	2.267*	(0.013)	2.102*	(0.044)	1.700	(0.353)
Education						
None	1	(.)	1	(.)	1	(.)
Primary	0.667	(0.306)	0.850	(0.708)	0.373	(0.158)
Secondary	1.667*	(0.016)	1.804*	(0.013)	1.474	(0.278)
Higher	2.909***	(0.000)	3.136**	(0.001)	2.598	(0.059)
Ethnicity						
Akan	1	(.)	1	(.)	1	(.)
Others	1.424	(0.169)	1.938*	(0.024)	1.566	(0.344)
Religion						
Catholic	1	(.)	1	(.)	1	(.)
Protestant	1.083	(0.718)	1.206	(0.468)	1.304	(0.520)
Other Christian	1.094	(0.675)	1.361	(0.201)	1.519	(0.261)
Moslem	0.634	(0.280)	0.519	(0.179)	0.854	(0.817)
Others	0.293*	(0.032)	0.356	(0.124)		
Self-stated Wealth status						
Poor	1	(.)	1	(.)	1	(.)
Neither rich nor poor	1.368	(0.463)	0.839	(0.706)	1.028	(0.967)
Rich	2.202	(0.099)	1.269	(0.652)	1.853	(0.428)
Settlement						
Urban			1	(.)	1	(.)
Rural			0.876	(0.548)	0.858	(0.640)
District						
UD			1	(.)	1	(.)
AEE			0.672*	(0.043)	0.642	(0.153)

Table 22 Continued

Distance						
Less than 1 km			1	(.)	1	(.)
1-5 km			0.543*	(0.017)	0.548	(0.099)
5-8 km			0.768	(0.431)	0.474	(0.169)
More than10 km			0.512*	(0.022)	0.410	(0.053)
Mode of transport						
Walking					1	(.)
Vehicle					2.339**	(0.004)
Self-reported disease						
Malaria					1	(.)
Typhoid					1.466	(0.420)
Diarrhea					1.322	(0.458)
Others					1.040	(0.912)
Who paid for service						
Self					1	(.)
Other family members					2.718	(0.102)
Constant	0.132***	(0.000)	0.353	(0.095)	0.164	(0.050)
Log likelihood	-461.7		-380.7		-171.5	
Chi-squared	54.25		64.16		45.10	
N	754		635		321	

Source: Field Survey (2005)

Exponentiated coefficients; *p*-values in parentheses

*$p< 0.05$, **$p< 0.01$, ***$p< 0.001$

However, when the three determinant variables were added in the second model, the odds ratio, for heads within the same age group choosing an orthodox health care facility was 2.1 (see Table 22). Again, for wealth status, the odds ratio for choosing orthodox health care facilities for those who considered themselves rich was 2.2 in model one but in model two, when settlement status, district and distance to the nearest orthodox facility were

added, the odds ratio for the same category of heads was 1.3, an indication that the three variables did not contribute in explaining the choice of facilities.

In the third model, where transport, type of disease and person who paid for the cost of services were added, the odds ratios changed. For instance, for those who considered themselves rich, the odds ratio of choosing an orthodox health care facility in model two was 1.3 but in model three, it increased to 1.9, an indication that the addition of transport, distance and person who paid for the cost of services were added, they helped to influence the choice of orthodox health care facilities by heads of households.

Determinants of Orthodox Health Care Facilities for Adult Members of Household

The study has considered not only the choice of health care facilities for only household heads but adult members of household who were dependent on him. Using the same determinant variables that were used for heads of households, analysis was performed to determine factors that increased the use of health care facilities by adult members of households. An analysis using STATA was performed. Results are presented in Table 23.

It emerged from the analysis that where the head of household was a female, the odds ratio of choosing an orthodox health care facility for an adult member of household decreased (0.24) in model one. It implied that if the head was a female adult, then non-orthodox facility could be used more than if the head of household was a male.

In considering age of head of household, the study indicated that the odd ratio for selecting an orthodox health care facility for an adult member of household was highest (1.30) when the head was within 45-54 years age group

and was least (0.797) when the head was 65 years and above. It implied that as the age of head of household increased, chances that an adult member of household who needed health care would be taken to a non-orthodox health care facility was higher.

Again, in terms of education, the study revealed that the odds ratio of selecting an orthodox health care facility for an adult member was 1.75 when the highest level of formal education of head of household was secondary education when model one was used.

When the effect of self-stated wealth status on choice of orthodox health care facilities for adult members of household was considered, it emerged that the odds ratio for those who considered themselves rich was 2.81 even though that was not considered statistically significant (0.08) to help in the explanation of the model for the selection of facilities (see Table 23).

Settlement status, district and distance to the nearest facility were added, as was done in the case of heads of households. Those predictor factors were not able to significantly strengthen the model to explain the choice of facilities. For instance, in model one, the odds ratio for the choice of orthodox health care facility for an adult member from a household with a head who said he/she was rich in model one was 2.81 but in model two, it was 2.42. However, the inclusion of transport to the nearest facility, disease type and person who paid for the cost of services led to an odds ratio of 7.22 for the same household (Table 23)

Table 23: Binary Logistic Regression Results on Utilization of Health Facilities – Adult Member

	Model 1		Model 2		Model 3	
	OR	95% CI	OR	95% CI	OR	95% CI
Sex						
Male	1	(.)	1	(.)	1	(.)
Female	0.762	(0.303)	0.716	(0.266)	0.290*	(0.038)
Age						
25-34	1	(.)	1	(.)	1	(.)
35-44	1.140	(0.635)	1.190	(0.586)	1.474	(0.444)
45-54	1.304	(0.348)	1.628	(0.134)	1.799	(0.233)
55-64	1.104	(0.794)	1.383	(0.439)	1.221	(0.782)
65 & above	0.797	(0.567)	1.024	(0.958)	1.126	(0.858)
Education						
None	1	(.)	1	(.)	1	(.)
Primary	0.713	(0.482)	0.593	(0.353)	0.165	(0.073)
Secondary	1.747*	(0.038)	1.706	(0.078)	1.202	(0.719)
Higher	1.322	(0.430)	1.065	(0.876)	0.814	(0.759)
Ethnicity						
Akan	1	(.)	1	(.)	1	(.)
Others	1.050	(0.871)	1.032	(0.928)	0.867	(0.816)
Religion						
Catholic	1	(.)	1	(.)	1	(.)
Protestant	0.570*	(0.029)	0.694	(0.228)	0.484	(0.169)
Other Christian	0.546*	(0.016)	0.702	(0.216)	0.667	(0.383)
Moslem	1.153	(0.759)	1.467	(0.457)	2.614	(0.190)
Others	0.468	(0.133)	0.710	(0.551)	0.725	(0.690)
Self-stated Wealth						
Poor	1	(.)	1	(.)	1	(.)
Neither R/P	1.423	(0.502)	0.986	(0.981)	2.061	(0.426)
Rich	2.809	(0.077)	2.421	(0.173)	7.218	(0.067)
Settlement						
Urban			1	(.)	1	(.)
Rural			0.613	(0.063)	0.667	(0.340)
District						
UD			1	(.)	1	(.)
AEE			1.182	(0.486)	1.146	(0.736)
Distance to nearest facility						
< 1 km			1	(.)	1	(.)
1-5 km			0.469**	(0.007)	0.517	(0.141)

Table 23 Continued

5-8 km			0.601	(0.205)	1.011	(0.986)
>10 km			0.548	(0.072)	0.428	(0.153)
Mode of Transport						
Walking					1	(.)
Vehicle					1.833	(0.105)
Self-reported disease						
Malaria					1	(.)
Typhoid					0.728	(0.594)
Diarrhea					1.178	(0.726)
Others					0.409	(0.077)
Person paying						
Self					1	(.)
Others					4.468	(0.064)
Constant	0.242*	(0.031)	0.543	(0.431)	0.282	(0.321)
Log likelihood	-339.4		-276.8		-114.0	
Chi-squared	29.89		43.56		42.48	
N	614		516		245	

Source: Field Survey (2005)

Exponentiated coefficients; *p*-values in parentheses
*$p< 0.05$, **$p< 0.01$, ***$p< 0.001$

Determinants of Choice of Orthodox Health Care Facilities for Children

A child is defined in this study as any member of a household below age 18 and who entirely depended on the head of household or other members of household for his/her life support including health care needs. To help in the analyses, the same determinants that were considered in the analyses of heads of household and adult households were used. STATA analyses were then conducted with twelve non-dependent determinant variables (sex, age, highest level of formal education, ethnicity, religious affiliation, wealth, settlement status, district, distance to nearest facility, transport disease type and person who paid for cost of services). Three models were used in the analyses. The p-values of .005 for model one and .005 for model two indicated that the non-dependent

variable chosen strengthened the model to explain the choice of facility while settlement status, district and distance to the nearest facility in model two further helped to strengthen the model in explaining the choice of orthodox facility for a child. However, a p-value of 0.92 was an indication that mode of transport, type of disease and person who paid did not strengthen the model in explaining the choice of orthodox facility for a child member of household.

In model one which considered personal characteristics, it emerged that the odds ratio in the first model, i.e. the odds ratio for choosing an orthodox facility when the head was a female was 1.01. That implied that orthodox facility was chosen for a child whether the head was a male or female. However, in models two (2) and three (3), the odds ratio reduced to 0.97 and 0.81 when the head was a female (see Table 34). In other words, orthodox facility choice for a child was more likely in the case of a male head of household than in the case of a female head of household.

The study considered the influence of age of head of household in the choice of orthodox health facility for a child in the household. It emerged that the odds ratio of choosing an orthodox health care was 1.4 for heads between the ages of 55 and 64 years in model one, and 1.62 in model two. It implied that the inclusion of settlement status, district and distance to nearest facility helped to strengthen the model in explaining the choice of orthodox facility. Other factors that found to positively affect the choice of orthodox facilities were ethnicity (being a non-Akan with odds ratio of 1.6 in model one, and 1.85 in model two) (see Table 33); religion (other with odds ratio of 1.29) and self-stated wealth (rich with odds ratio of 2.83) district (AEED with odds ratio of 1.89); disease type (diarrhoea with odds ratio of 2.81) and person who paid

(other with odds ratio of 2.89) (See Table 23).

The findings confirm results of similar studies which have also found individual characteristics such as age sex, education, and income status to be important factors that influence the choice of health care facilities (Babaloal & Fatusi, 2009; Thuan, Lofgren, & Chuc, 2008; Uchendu, Ilesanmi & Oluminde, 2013).

Table 24: Binary Logistic Regression Results on Utilization of Health Facilities for Child Members

	Model 1		Model 2		Model 3	
	OR	95% CI	OR	95% CI	OR	95% CI
Sex						
Male	1	(.)	1	(.)	1	(.)
Female	1.006	(0.976)	0.967	(0.885)	0.812	(0.715)
Age						
25-34	1	(.)	1	(.)	1	(.)
35-44	0.918	(0.716)	0.789	(0.374)	0.248*	(0.024)
45-54	1.069	(0.781)	1.206	(0.485)	0.448	(0.160)
55-64	1.382	(0.305)	1.618	(0.167)	1.315	(0.746)
65 & above	0.649	(0.256)	0.917	(0.834)	1.435	(0.624)
Education						
None	1	(.)	1	(.)	1	(.)
Primary	0.877	(0.746)	0.984	(0.970)	0.364	(0.267)
Secondary	1.639*	(0.032)	1.415	(0.175)	0.646	(0.445)
Higher	2.248**	(0.009)	2.324*	(0.016)	3.659	(0.115)
Ethnicity						
Akan	1	(.)	1	(.)	1	(.)
Others	1.565	(0.101)	1.096	(0.763)	1.847	(0.405)
Religion						
Catholic	1	(.)	1	(.)	1	(.)
Protestant	0.747	(0.215)	0.842	(0.532)	0.245*	(0.031)
Other Christian	0.744	(0.187)	0.804	(0.386)	0.723	(0.536)
Moslem	0.668	(0.357)	0.753	(0.570)	0.214	(0.136)
Others	1.289	(0.553)	1.419	(0.494)	1.700	(0.591)
Self-stated wealth						
Poor	1	(.)	1	(.)	1	(.)
Neither rich nor poor	1.559	(0.354)	1.201	(0.721)	1.020	(0.984)
Rich	2.833*	(0.049)	2.914	(0.064)	1.073	(0.953)
Settlement status						
Urban			1	(.)	1	(.)
Rural			0.686	(0.105)	0.151***	(0.001)

Table 24 Continued

District						
UD			1	(.)	1	(.)
AEE			1.895**	(0.003)	0.866	(0.764)
Distance to nearest facility						
<1 km			1	(.)	1	(.)
1-5 km			0.890	(0.655)	0.351	(0.064)
5-8 km			0.541	(0.113)	0.457	(0.320)
>10 km			0.642	(0.152)	0.262	(0.068)
Mode of transport						
Walking					1	(.)
Vehicle					281.9***	(0.000)
Self-reported disease						
Malaria					1	(.)
Typhoid					0.174*	(0.050)
Diarrhea					2.806	(0.074)
Others					1.204	(0.733)
Who paid for service						
Self					1	(.)
Others					2.885	(0.212)
Constant	0.198**	(0.005)	0.281	(0.058)	0.873	(0.922)
Log likelihood.	-417.7		-340.5		-89.06	
Chi-squared	26.45		49.65		233.4	
N	717		604		337	

Exponentiated coefficients; *p*-values in parentheses $^{*}p< 0.05$, $^{**}p< 0.01$, $^{***}p< 0.001$

Source: Field survey (2005)

Discussions of Results

The study had found out that females' heads of households used orthodox health care facilities for older members of house hold above 65 years. This might probably be that, the older female member of the household may herself have children who might be interested in her welfare and as such if she did not have money her working children may give her money to go hospital.

This was agreed by Dixson et al (2010), Dirnstein et al (2003) who had indicated in their studies that older female household members usually receive support from their children when it comes to the issues of health. Education did not have any significant influence most probably because educational level in the two districts were generally low and as such, we might not have seen any older educated person who might have been using her own resources for health care, for education to be significant. When districts and distance were analysed, in the choice of health care facilities for older members of household, no significant effect emerged. This is an indication that older female members of the households did not have any advantage as far as orthodox heath care facilities were concerned.

In considering the effects of determinates in choosing health care facilities for children, variables such as sex, age, education, ethnicity, religion, were examined. The p-value of 0.005 compared to calculated value indicated that a number of the variables were significant in all instances; when a child was involved in health care seeking, orthodox facilities was given priority. Ghanaian families have priority or pay attention to the health of their family. So, when adults might not choose orthodox health care facilities for the adults in the case of children, they will probably do so since any mistake on their part might result in the death of that child. This probably is the reason why the determinate variables showed significant values.

CHAPTER SEVEN

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The chapter deals with summary of the work including summary of major findings, conclusions which have been drawn based on the findings of the study and recommendations made based on the conclusions drawn and suggestions for further study.

Summary of the Study

The purpose of the study was to analyze factors that influenced access to and use of district hospitals and other health care facilities within the Ajumako-Enyan-Essiam and Upper Denkyira districts of the Central Region. The main problem investigated was unequal distribution of health facilities in the country which affects the two districts creating unequal access to orthodox health care services. The descriptive cross-sectional design was used with a multistage sampling technique. Generally, the study used a sample size of 800 respondents from the two districts (Ajumako-Enyan-Essiam and Upper Denkyira Districts). Data was analysed using the Statistical Package for the Social Sciences (SPSS), version 12.0 and STATA version 13.0 for windows.

Main Findings of the Study

Major findings of the study are summarised as follows:

1. The major disease reported in the two districts was malaria. Two hundred and sixty-four (264) respondents out of the total of those who reported any kind of disease by the age of heads of households (510) reported malaria and 71.7 per cent of those who reported malaria were

in Rural areas in AEED and 67.4 per cent of those who suffered malaria in UDD were in rural areas. This probably was due to the absence of anti-malaria drugs, lack of use of mosquito nets as against those in urban areas who may have access to anti-malaria drugs, use of mosquito repellents and mosquito nets. This was in conformity with findings by Asante and Asante Okyere who reported in 2003 that malaria is the number one cause of morbidity in Ghana, accounting for between 40 percent and 60 percent of all out-patient cases in Ghanaian hospitals. Again, this was also in conformity with findings by the Institute for Health Metrics and Evaluation that malaria is the leading cause of death as at 2010 with 16.2 per cent.

2. The level of formal education did not exert significant influence on the type of diseases reported as those with and without formal education reported malaria as a major health challenge. Out of the 119 people who reported malaria, 52 per cent had completed middle school/JHS in AEED while 25.2 per cent has no formal education in AEED. In UDD, 55.9 percent of the 143 people who reported malaria had middle school/JHS level of education compared to about 28 per cent who did not have any level of education. Again, for typhoid, out of the 15 people who got infected one month to the start of the study, about 27 per cent had higher education whilst about 6.7 per cent had primary education in AEED. In UDD, out of the 32 people who reported typhoid, 56.25 per cent had middle school/JHS and about 16 per cent had higher education and those without formal education reported about 28 per cent.

3. Access to hospital by residents depended on whether the facility was available within the district or not.
4. Access to hospital by residents depended on whether the facility was available within the district or not. In AEED, out of 343 children who received treatment from all the existing health care facilities, only 78 (22.7%) were taken to hospitals in other districts whilst in UDD, where there were hospitals, 131 (33.7%) children out of 389 children were taken to hospital because there was a district hospital in Dunkwa- on-Offin
5. Distance constituted a major determinant factor in the use of health care facilities within the two districts. The closer a health facility was, the more likely it was for it to be selected as the first point of call in accessing health care. In AEED, out of the 189 people who went to the drug stores, 55 percent cited nearness as the reason for using the facility whilst 41 percent of those who use drug stores cited cheapness for the use of drug stores and only 1.1 per cent said services were friendly. In UDD, of the 385 heads who used clinics, 35.7 cited nearness, 7.1 percent said it was cheap while none cited services friendliness.
6. Drug stores were found in almost all settlements studied and they provided services to all manner of people who called at different times of the day. Drug stores were the most patronized health care facilities for members of the household. For instance, in AEED, out of the 371 heads of households who used the existing health facilities, 195 (52.6%) used drug stores while only 97 (26.1%) went to hospitals. In UDD, out

of the 398 heads who used existing health care facilities, 255 (56.5%) used drugs stores whilst only 15 (3.8%) visited clinics for treatment.

7. Factors that determined access and use of health differed from facility to facility within the two study districts.
8. Access and use of health care facilities within the two districts studied were similar and were influenced by similar factors. In this light, it was found that drug stores received the highest patronage in all two districts while herbal facilities and faith healing did not have many clients. Nearness to facility was cited by 28.2 per cent of adult respondents for using the facility in AEED and 19.7 per cent cited that as reason for adult using any facility in UDD. Spiritual reasons scored the least, 0.6 percent in AEED and 0.8 percent in UDD as reasons for using facilities for any other reasons by heads of households. In treating children, the desire for fast cure was the third reason that was cited by respondent in AEED and it was the fourth indication that the two districts had similar reasons for the use of existing facilities.
9. Those with higher levels of formal education and those with primary level of formal education had similar patterns of health care facility use within both districts. Perhaps higher education was significant at 95 percent confidence level. Whereas higher education at 95 percent confidence level was significant in determining facilities for heads of household (0.000) at the same confidence interval, higher education was not significant in choosing heath care facilities for choosing adults. Whereas age 45-64 were significant at 95% confidence level in choosing

health care facilities by heads of family, same could not be said when it comes to choosing health care facilities for adult members.

10. Even though different facilities were found in the two study districts, no significant difference was found among members of household regarding the use of existing facilities. For instance, it was realized that both in urban and rural areas, among people with no education and those with education and among those in formal sector employment and those in private work, drug store was the single most widely used health care facility.
11. The study also found that male-headed households tended to use hospitals slightly higher than members of female-headed households. Female-headed households used drug stores more than male-headed households.

Conclusions

A number of conclusions have been drawn based on the analysis, discussion and findings made:

1. Malaria constitutes a major health challenge in rural and urban settlements in both AEED and UDD and urban and rural settlements in the two districts.
2. Different health care facilities were utilised in the treatment of malaria
3. Formal education is not a major factor in determining access to the use of health care facilities in the two districts.
4. Distance was an important factor that influenced access to and use of facilities. Nearness was cited by over 50% of respondents in both

districts for using drug stores, a facility which was found in every settlement and therefore closer than hospitals and clinics.

5. Utilization of health care facilities in the two districts were determined by similar factors. Some of the factors were service arrangements, clients' perception of the severity of disease, level of education, age of head of household and location of facility.

Contribution to Knowledge

1. There is the likely temptation to expect extra ordinary findings that may change existing paradigms on issues when reflecting on contributions that doctoral thesis such as the current one is expected to make (Philips & Pugh, 1994). It has rather been recommended that the strength of any doctoral thesis must be sought for in areas of developing methodology, the development of useful approaches that help in research, contributions made that enhance existing study and a willingness to change direction when all other studies point another way. It is in these areas that the contributions made by the present study must be viewed**.** Studies have been carried out in different parts of the world and some parts of Ghana such as those by Rosenberg and Halon (1996), Gulzar, (1999), Arhin-Tenkorang (2000) and Bour (2002). The present study has contributed to existing stock of studies on access to and use of health care facilities and have at the same time expanded knowledge on access to health care in Ghana.
2. Another contribution to knowledge has been the demonstration of application of concepts such as Daton's model, Andersen's model and Kroeger's model of utilization of health care facilities. These models

were developed to examine health care conditions prevailing in developed countries but had to be applied to conditions in Ghana, a developing economy which are somehow different from health care facilities in developed economies.

3. The study has also built on existing studies on utilization of health care facilities such as those by Ponce and Cunningham (2006), Okonko and Ngene (2004), and Bour (2002). Findings from the study have complimented existing studies on access to and utilization of health care services, thus providing more insights into factors that determine utilization of both orthodox and alternative health care services in Africa.
4. The study's outcome has provided a basis for further study in the utilization of health care facilities. The study was made at a time National Health Insurance Policy was being launched in various districts in the country. A useful comparison can therefore be made with any future study to find out the impact of the introduction of health insurance policy on health care services utilization. Such comparisons will form useful foundation for assessing funding policies in the health care sector. It provides opportunity for replicating the study in other parts of Ghana to ascertain whether the factors identified as affecting utilization of health care facilities are uniform as found out in the two districts. In effect, this study has constituted a good foundation upon which comparative studies can be undertaken.

Recommendations

After a critical analysis of the findings and conclusions drawn in the thesis, a number of recommendations have been made to help improve upon access to health care facilities and services within the two study areas and also improve upon health care delivery in the country in general.

Recommendations to improve upon access

Considering the fact that hospitals are not readily available in rural settlements,

1. The Ministry of Health, should in collaboration with local communities, develop simple structures which will serve as 'ready on hand' health care facilities so that no one will have to move more than the WHO stipulated distance of eight kilometres to reach a health care facility.
2. In areas where it is still not possible to site a facility, district health management teams must develop efficient mobile clinics that could move to market centres to make orthodox health care available to rural communities on a regular basis.

Recommendation to improve upon quality of service

1. Collaborative efforts must be made to bring together operators of all forms of health care facilities to ensure that clients receive the best from their combined efforts since they continue to operate side by side to make health care delivery holistic.
2. There is no argument about the fact that drug stores serve many more people in both rural and urban centres. The current spatial distribution and the mode of their operations, they cannot be done away with. Having

therefore recognized the significant role they perform in making orthodox services available to people, it is recommended that The Ministry of Health in collaboration with Pharmacy Council must develop a strong training and monitoring strategy to regulate their operations to ensure that quality services are rendered to those who patronise their services.

Limitations and Suggestions for Further Research

This study has some limitations. These are outlined as follows:

1. A survey was used in this which is one limitation of the study. Therefore, a study of this nature requires a census in order to cover every respondent for true representation and generalisation.
2. This study covered only two districts in the Central Region. This is a small area since there were a hundred and ten districts in Ghana as at the time of the study. There is the need for conducting such a study across the country to ensure that findings could inform a national policy on operations of all health care facilities in the country.
3. This study only examine access to and use of health care facilities without extending to challenges faced by clients. It is therefore recommended that further studies are done to investigate into challenges faced by service providers and clients as a way of ensuring improvements in health care delivery in the country.

BIBLIOGRAHPHY

Abdella, A. (2010). Maternal mortality trend in Ethiopia. *Ethiopian Journal of Health Development. 24(1)*:115–212.

Adam, V. Y., & Awunor, N. S. (2014). Perceptions and factors affecting utilization of health services in a rural community in Southern Nigeria. *Journal of Medicine and Biomedical Research*, *13*(2), 117-124.

Adams, A. M., Chowdhury, A. M., & Bhuiya, A. (2000). Gender, socieconomic development and health-seeking behaviour in Bangladesh. *Social Science & Medicine-Elsevier. 51*(3), 361-371.

Adeleke, O. A., & Danfillo, I. S. (2005). Utilization of oral health services by mothers of preschool children in Jos North Local Government Area, Plateau State, Nigeria. *Malawi Medical Journal*, *16*(2), 33-36.

Adibo, M. (1986). *Population growth and access to health facilities.* National Conference on Population Growth and National Reconstruction. April 7-10, 1986, Acccra, Ghana, University of Ghana.

Afework, M. F. (2010). Achieving the maternal health millennium development goals in Ethiopia: Where are we and what needs to be done. *Ethiopian Journal of Health Development*, *24* (1), 87-88

Africa: Statistics South Africa. (2014). *Mortality and causes of death in Africa.* Pretoria: South Africa.

Agyei-Baffour, P., Kudolo, A., Quansah, D. Y., & Boateng, D. (2017). Integrating herbal medicine into mainstream health care in Ghana: clients' acceptability, perceptions and disclosure of use. *BMC complementary and alternative medicine*, *17*(1), 513-514.

Agyepong, I. A. (1999). Reforming health service delivery at district level in Ghana: the perspective of a district medical officer. *Health Policy and Planning*, *14*(1), 59-69

Ahmed, M. (2005). Bridging research and policy. *The Journal of Development Studies Association*, *17*(6), 765-773.

Ahmed, S. M., Tomson, G., Petzold, M., & Kabir, Z. N. (2005). Socioeconomic status overrides age and gender in determining health-seeking behaviour in rural Bangladesh. *Bulletin of the world health organization*, *83*, 109-117.

Aids Fonds (2014). *Activity and Financial Report*. Amsterdam: Aids Fonds.

Aids Fonds. (2010). *Bridging the Gaps: HIV and Key Populations*. Application for funding on HIV and Key Populations. Amsterdam: Aids Fonds.

AIHW (2011). *Access to health and services for Aboriginal and Torres Strait Islander people.* Cat. no. IHW 46: Canberra

Ajiboye, S. K., & Adebayo, D. O., (2012). T*eachers' Perception of Needs for Elementary School Counselling in Ilorin Metropolis*, Nigeria. Retrieved from:https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Ajiboye%2C+S.+K.%2C+%26+Adebayo%2C.

Ajumako-Enyan-Essiam District Assembly. (2011) *Profile of district.* Unpublished data. Author.

Akosah-Sarpong, K. (2008). *Liberia: Troubled by human sacrifice*. Retrieved from http://kofiakosah sarpong.blogspot.com/2007/08/featureliberia.

Akuamoa, R. O. (2011). *Effects of employee turnover on productivity*. *The case study of east forest product limited, Akimoda. Report for award of BBA (Marketing) Degree.* Ghana, Presbyterian University College.

Al-Kabir, A. (1984). *Effects of community factors on infant and child mortality in rural Bangladesh*. Netherlands, Voorburg Netherlands International Statistical Institute.

Al-Mujtaba, M., Cornelius, L. J., Galadanci, H., Erekaha, S., Okundaye, J. N., Adeyemi, O. A., & Sam-Agudu, N. A. (2016). Evaluating religious influences on the utilization of maternal health services among Muslim and Christian women in North-Central Nigeria. *BioMed Research International*, *2(4), 12-18*.

Ali, M., Hotta, M., Kuroiwa, C., & Ushijima, H. (2005). Emergency obstetric care in Pakistan: potential for reduced maternal mortality through improved basic EmOC facilities, services, and access. *International Journal of Gynecology & Obstetrics*, 91(1), 105-112.

Allotey, J. (2013). Financing Health Care in Ghana: Is One-Time Insurance Premium the Answer? Annual independent health sector review for 2008. *Alternative Medicine,* 18(13),32-38.

Alwar, J., Mtonga, V., & Sikatoye, B. (2000). Report of the Summative Evaluation of the Essential Obstetric Care Project IN Mpongwe, Masaiti and Lufwanyama. Retrieved from: https://www.africaportal.org/ publications/the-gap-between-the-health-status-of-rural-and-urban-women-in-ghana-a-case-study-of-patients-at-a-mission-hospital-in-the-ashanti-region/

Amoah, S. K., Sandjo, L. P., Bazzo, M. L., Leite, S. N., & Biavatti, M. W. (2014). Herbalists, traditional healers and pharmacists: a view of the tuberculosis in Ghana. *Revista Brasileira de Farmacognosia*, *24*(1), 89-95.

Amporfu, E. (2009). The Gap between the Health Status of Rural and Urban Women in Ghana: A Case Study of Patients at a Mission Hospital in the Ashanti Region. *The Ghana Policy Journal*, *3, 6-23*.

Andersen, R., & Newman, J. F. (1973). Societal and individual determinants of medical care utilization in the United States. *The Milbank Memorial Fund Quarterly. Health and Society*,4, 95-124.

Arhin-Tenkorang, D. (2001). *Mobilizing resources for health: The case for user fees revisited* (No. 81). Center for International Development, Harvard, Harvard University.

Arrey, A. E., Bilsen, J., Lacor, P., & Deschepper, R. (2016). Spirituality/religiosity: A cultural and psychological resource among Sub-Saharan African migrant women with HIV/AIDS in Belgium. *PloS one*, *11*(7), e0159488- e0159494.

Aryeetey, G., Jehu-Appiah, C., Spaan, E., De 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?. *Social science & medicine*, *72*(2), 157-165.

Asante, E. (2010). *Scientific medical practitioners and traditional medicine in contemporary Ghana: A study of attitudes and perceptions* (Unpublished Doctoral dissertation), Ghana, University of Cape Coast.

Asch, S. M., Kerr, E. A., Keesey, J., Adams, J. L., Setodji, C. M., Malik, S., & McGlynn, E. A. (2006). Who is at greatest risk for receiving poor-quality health care? *New England Journal of Medicine*, *354*(11), 1147-1156.

Asenso-Okyere, W., Anum, A., Osei-Akoto, I., Adukonu, A. (1998). Cost recovery in Ghana. Are there any changes in health care seeking behaviour? *Health Policy and Planning*, *13*(2),181-188.

Asenso-Okyere, W.K. (1995). Financing health care in Ghana. World Health Forum 16:86-91 Ashanti Region, Ghana. *Health Policy*, *69*(3), 375-388.

Asian Development Bank, (2007). *Gender issues in health delivery systems, Gender checklist. Health.* Retrieved from http://www.adb.org.

Assimeng, M. (1981). *Social Structure of Ghana: A study in persistence and change.* Tema, Ghana, Ghana Publishing Corporation.

Association of American Medical Colleges. (2011). State Physician Workforce Data Book D.C. AAMC.Attending a health care in South Los Angeles County. *Journal of community health 9 (1): 35-43.*

Babalola, S., & Fatusi, A. (2009). Determinants of use of maternal health services in Nigeria-looking beyond individual and household factors. *BMC Pregnancy and Childbirth*, *9*(1), 43-89.

Babbie, E. R. (1992). *The practice of social research*, California, Wadsworth Pub. Co.

Baker, D. P., Leon, J., Smith Greenaway, E. G., Collins, J., & Movit, M. (2011). The education effect on population health: A reassessment. *Population and Development Review*, *37*(2), 307-332.

Baker, J. & Liu L. (2006). The determinants of primary health care utilization: a comparison of three rural clinics in southern Honduras. *GeoJournal 66 (4), 295–310.*

Baker, S. R., Pankhurst, C. L., & Robinson, P. G. (2006). Utility of two oral health-related quality-of-life measures in patients with xerostomia. *Community Dentistry and Oral Epidemiology*, *34*(5), 351-362.

Baltussen, R., & Ye, Y. (2005). Quality of care of modern health services as perceived by users and non-users in Burkina Faso. *International Journal for Quality in Health Care*, *18*(1), 30-34.

Bank, W. (1997). Republic of Ghana health sector support program. *Staff Appraisal Report*, (16467-GH). Retrieved from: https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&scioq=Traditional+Values%2C+Guide+to+Effective+Community+Based+Health+Care.+In+International+Conference+AIDS.+Timyan%2C+J.+S.+G.

Bannerman, C., Offei, A. K., & Kyereme, K. (2002). *Health care quality assurance manual*. Accra, Ghana, Ghana Health Service/Ministry of Health.

Bar-Anan, Y., Liberman, N., Trope, Y., & Algom, D. (2007). Automatic processing of psychological distance: evidence from a Stroop task. *Journal of Experimental Psychology: General*, *136*(4), 610-723

Baral, Y. R., Lyons, K., Skinner, J., & van Teijlingen, E. R. (2012). Maternal health services utilization in Nepal: progress in the new millennium? *Health science journal*, *6*(4), 618-643.

Basu, S., Andrews, J., Kishore, S., Panjabi, R., & Stuckler, D. (2012). Comparative performance of private and public health care systems in low-and middle-income countries: A systematic review. *PLoS Medicine*, *9*(6),17-69.

Batta, R., Lejeune, M., & Prasad, S. (2014). Public facility location using dispersion, population, and equity criteria. *European Journal of Operational Research*, *234*(3), 819-829.

Bell, J. (2014). Doing your research project: *A guide for first-time researchers*. UK, McGraw-Hill Education.

Bennett S. & Gilson L. (2001). Health financing: *Designing and implementing pro- poor Policies*. London, DFID Health System for Poor Resource Centre.

Bennett, S., Singh, S., Ozawa, S., Tran, N., & Kang, J. (2011). Sustainability of donor programs: Evaluating and informing the transition of a large HIV prevention program in India to local ownership. *Global Health Action, (4) 67-91.*

Bernstein, E., Bernstein, J., Lowe, R. A., Crowder, V. R., Kellerman, A. L., Lowestein, S. R., & Marx, J. A. (1997). *Timely access to health care: the critical role of EM*. Society for Academic Emergency Medicine: Washington, USA.

Bertakis, K. D., Azari, R., Helms, L. J., Callahan, E. J., & Robbins, J. A. (2000). Gender differences in the utilization of health care services. *Journal of Family Practice*, *49*(2), 147-147.

Bhatt, S. & Santha, T. (2003). Factors influencing the care-seeking behaviour of chest symptomatics: a community-based study involving rural and urban population in Tamil Nadu, South India. *Tropical Medicine & International Health*, *8*(4), 336-341.

Bibby, P., & Shepherd, J. (2004). *Developing a new classification of urban and rural areas for policy purposes–the methodology*. England, *DEFRA*. University of London.

Blanford, J. I., Kumar, S., Luo, W., & MacEachren, A. M. (2012). It'sa long, long walk: accessibility to hospitals, maternity and integrated health centers in Niger. *International Journal of Health Geographics*, *11*(1), 24-49.

Boeren, E. (2011). Gender differences in formal, non-formal and informal adult learning. *Studies in Continuing Education*, *33*(3), 333-346.

Boeren, E. (2011). Gender differences in formal, non-formal and informal adult learning. *Studies in Continuing Education*, *33*(3), 333-346.

Boonstra, E., Lindbaek, M., Ngome, E., Tshukudu, K., & Fugeli, P. (2003). Labelling and patient knowledge of dispensed drugs as quality indicators in primary care in Botwsana. *Qual Saf. Health care*, 12, 168-175.

Bostock, L. (2001). Pathways of disadvantage? Walking as a mode of transport among low-income mothers. *Health and social care in the community*, 9 (1)11-18.

Bottini, R., & Casasanto, D. (2010, August). Implicit spatial length modulates time estimates, but not vice versa. In *International Conference on Spatial Cognition* (pp. 152-162). Springer, Berlin, Heidelberg.

Bourne, P. A. (2009). Self-evaluated health of married people in Jamaica. *Health*, *1*(04), 332-352.

Bowerman, B. L., & O'Connell, R. T. (1979). *Time series and forecasting*. North Scituate, MA: Duxbury Press.

Bradley, E. H., McGraw, S. A., Curry, L., Buckser, A., King, K. L., Kasl, S. V., & Andersen, R. (2002). Expanding the Andersen model: The role of psychosocial factors in long-term care use. *Health Services Research*, *37*(5), 1221-1242.

Breman, J. G., Jamison, D. T., Measham, A. R., Alleyne, G., Claeson, M., Evans, D. B., ... & Musgrove, P. (Eds.). (2006). *Disease control priorities in developing countries*. New York, The World Bank.

Buor D 2005. Determinants of utilization of health services by women in rural and urban areas in Ghana. *Geo Journal*, 61(1): 89-102.

Buor, D. (2002). Distance as a predominant factor in the utilization of health services in the Kumasi metropolis, Ghana. *Geojournal, 56 (2):* 145-157

Buor, D. (2003). Analysing the primacy of distance in the utilization of health services in the Ahafo-Ano South district, Ghana. *The International Journal of Health Planning and Management*, 18(4), 293-311.

Buor, D. L. (2004). Gender and the utilization of health services in the Ashanti Region, Ghana. *Health Policy*, 69(3), 375-388.

Burket, M. (2006). *Advancing Reproductive Health and Family Planning through Religious Leaders and Faith-Based organizations*. Retrieved from:http://www.pathfinder.org/site/DocServer/FBO_final_reference.pdf Headquarters9 Galen Street, Suite 217 Watertown ,USA.

Busia, K. (2005). Medical provision in Africa–Past and present. *Phytotherapy Research: An International Journal Devoted to Pharmacological and Toxicological Evaluation of Natural Product Derivatives*, *19*(11), 919-923.

Cacioppo, S., Bianchi-Demicheli, F., Frum, C., Pfaus, J. G., & Lewis, Cain, M., & Mittman, R. (2002). Diffusion of innovation in health care. *California health care foundation* Cambodia. *Public health, 118 (1) 21-30.*

Canagarajah, S. and Ye, X. (2001). *Public health and education spending in Ghana in 1992-98*: *Issues of equity and efficiently.* Washington DC: The World Bank.

Canagarajah, S., & Ye, X. (2001). *Public Health and Education Spending in Ghana in 1992-98: Issues of Equity and Efficienty* (2579). Washington DC. World Bank Publications.

Carr, D. (2004). Improving the health of the world's poorest people. *Health bulletin*, 5(1), 1-34.

Carrillo, J. E., Carrillo, V. A., Perez, H. R., Salas-Lopez, D., Natale-Pereira, A., & Byron, A. T. (2011). Defining and Targeting Health Care Access Barriers. *Journal of Health Care for the Poor and Underserved* 22(2):562–75.

Carter, M. A., & Lee, S. D. (2009). *U.S. Patent No. D605,613*. Washington, DC: U.S. Patent and Trademark Office.

Castro-Leal, F., Dayton, L. & Mehra, K. (2000). *Public spending on health care in Africa: do the poor benefit?* Bulletin of the World Health Organization, 78(1). Retrieved from: http://www.who.int/bulletin /pdf/2000.

Chankova, S., Atim, C., & Hatt, L. (2010). *The impact of health insurance in low-and middle-income countries*. *Scheme*. Retrieved from: https:// scholar.google.com/scholar?hl=The+impact+of+health+insurance+in+l

owincome+countries.+Ghana%27s+National+Health+Insurance+Scheme.

Chaulagai, C. N. (1993). Urban community health volunteers. *World Health Forum* 14 (1):16-19.

Chen, F. M., Fryer, G. E., Phillips, R. L., Wilson, E., & Pathman, D. E. (2005). Patients' beliefs about racism, preferences for physician race, and satisfaction with care. *The Annals of Family Medicine*, *3*(2), 138-143.

Chen, S., Sullivan, N. Y., Lu, Y. E., & Shibusawa, T. (2003). Asian Americans and mental health services: A study of utilization patterns in the 1990s. *Journal of Ethnic and Cultural Diversity in Social Work*, *12*(2), 19-42.

Chen, Y. G. (2010). *Characterizing Growth and Form of Fractal Cities with Allometric Scaling Exponents: Discrete Dynamics in Nature and Society.* Beijing, China. Hindawi Publishing Corporation.

Cho, M. J., Park, J. I., Bae, A., Bae, J. N., Son, J. W., Ahn, J. H., Lee, D. W., Lee, Y. M., Lee, J. Y., Jang, S. M., Jung, I. W., Cho, S. J., & Hong, J. P. (2012). *The epidemiological survey of mental disorders in Korea.* Seoul*:* Ministry of Health & Welfare.

Churchill, G. A. (1979). A paradigm for developing Better Measures of Marketing Constructs. *Journal of Marketing Research*, *125*(18), 2212-2221.

Collier, P., Dercon, P. & Mackinnon, J. (2002). Density versus quality in health care provision: Using household data to make budgetary choices in Ethiopia. *World Bank Economic Review 16,* 425-48.

Conger, R. D., Conger, K. J., & Martin, M. J. (2010). Socioeconomic status, family processes, and individual development. *Journal of Marriage and Family*, *72*(3), 685-704.

Core, R. T. (2014). R: *A language and environment for statistical computing. R Foundation for Statistical Computing*. Vienna, Austria. Institute publishing.

Cost, T. (2012). *Benefit Analysis II–Travel Time Costs. Victoria Transport Policy Institute. Pobranez.* Retrieved from http://www. vtpi. org/tca/tca0502. pdf (6.07. 2016).

Couclelis, H. (2000). From sustainable transportation to sustainable accessibility: Can we avoid a new tragedy of the commons? *Information, Place, and Cyberspace,* 9(16) 341-356.

Couclelis, H., & Getis, A. (2000). Conceptualizing and measuring Council on Foreign Relations (CFR) (2013). Non-Communicable Diseases country analysis of demographic and health survey data. *PloS one*, *6*(2), e17155-e17162.

Creswell, J. W., (2006). Understanding mixed methods research. *Designing and Conducting Mixed Methods Research*, 3(6)1-19.

Creswell, J. W., & Plano Clark, V. L. (2011). Choosing a mixed methods design. *Designing and Conducting Mixed Methods Research*, *2*, 53-106.

Crooks, V., Kingsbury, P., Snyder, J., & Johnston, R. (2010). What is known about the patient's experience of medical tourism? *BMC Health Serv. Res. 10: 266-10.*

Cunningham, P. J. (2006). What accounts for differences in the use of hospital emergency departments across US communities? *Health Affairs*, *25*(5), w324-w336.

Currie, J. (2003). Distance to hospital and children's use of preventive care: is being closer better, and for whom. *Economic inquiry 14(3)* :15-23

Cutler, D. M., & Lleras-Muney, A. (2007). *Education and Health. Policy Brief # 9. US,* National Poverty Center, University of Michigan.

Cutler, D. M., & Lleras-Muney, A. (2007). *Education and Health. Policy Brief* 9. *National Poverty Center, University of Michigan*. *Cycling*, Cambridge, MA, MIT Press.

Damnyag, L. (2004). Determinants of antenatal care use in Ghana. *Journal of African Economies*, *13*(2), 277-301.

Datzova, B. (2003). *Health care reform and inequality of access to health care in Bulgaria*. Geneva, Switzerland, UNRISD.

Delamater, P. L., Messina, J. P., Shortridge, A. M., & Grady, S. C. (2012). Measuring geographic access to health care: raster and network-based methods. *International journal of health geographics*, *11*(1), 15-21

Diala, C., Pennas, T., Choi, P., & Rogers, S. (2012). *Barriers to uptake of malaria prevention and treatment during pregnancy in Cross River and Nasawara States, Nigeria*. Washington DC, C-Change/FHI 360.

Dirstein, R., & Moore, R. (2004). *U.S. Patent No. D495,192*. Washington, DC: U.S. Patent and Trademark Office.

Dixon, A., Robertson, R. & Bal, R. (2010). The experience of implementing choice at point of referral: A comparison of the Netherlands and England. *Health Econ Policy Law*. 5, 295-317.

Dixon, A., Robertson, R., Appleby, J., Burge, P., Devlin, N., & Magee, H. (2010). *Kingsfund*. London: The King's Fund.

Dole, E. J., Rhyne, R. L., Zeihmann, C. A., Skipper, B. J., McCabe, M. L., & Dog, T. L. (2000). The influence of ethnicity on use of herbal remedies in elderly Hispanics and non-Hispanic whites. *Journal of the American Pharmaceutical Association, 40*(3), 359-365.

Dovlo, D., & Nyonator, F. (2004). Migration by graduates of the University of Ghana Medical School: a preliminary appraisal. *Hum Resource Dev J*, *3*(1)8-17.

Downing, A. & Sethi, D. (2001). *Health issues in transport and the implications for policy*. United Kingdom, Department of International Development.

Doyal, L. (2001). Sex, gender and health: the need for a new approach. *Bmj* 32,1061-1063.

Dudovskiy, J. (2016). *Positivism research philosophy*. Retrieved from: https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Dudovskiy%2C+J.+%282016%29.+Positivism+research+philosophy.+&btnG=#d=gs_cit&u=%2Fscholar%3Fq%3Dinfo%3AoH7s_uEdCHkJ%3Ascholar.google.com%2F%26output%3Dcite%26scirp%3D0%26hl%3Den.

Duke, M. R., Moore, R. S., & Ames, G. M. (2011). PTSD treatment-seeking among rural Latino combat veterans: A review of the literature. *Journal of Rural Social Sciences*, *26*(3), 157-172.

Dunkwa East District Health Information Office. (2018). *Disease management within health care facilities*. Unpublished data. Author.

Dush, C. M. K., & Amato, P. R. (2005). Consequences of relationship status and quality for subjective well-being. *Journal of Social and Personal Relationships*, *22*(5), 607-627.

Dutton, D. G. (1986). The outcome of court-mandated treatment for wife assault: A quasi-experimental evaluation. *Violence and Victims*, *1*(3), 163-175.

Dzoyem J. P., & Eloff J. N. (2015). Anti-inflammatory, anticholinesterase and antioxidant activity of leaf extracts of twelve plants used traditionally to alleviate pain and inflammation in South Africa. *Journal of Ethnopharmacology.* 160(3):194–201.

Ekor, M. (2013). The growing use of herbal medicines: issues relating to adverse reactions and challenges in monitoring safety. *Frontiers in Pharmacology*, *4* (5)177-181.

Ellison-Loschmann, L., & Pearce, N. (2006). Improving access to health care among New Zealand's Maori population. *American Journal of Public Health*, *96*(4), 612-617.

Elujoba, A. A., Odeleye, O. M., & Ogunyemi, C. M. (2005). Traditional medicine Development for medical and dental primary health care delivery system in Africa. *African Journal of Traditional, Complementary and Alternative Medicines*, *2*(1), 46-61.

Emch, M., Root, E. D., & Carrel, M. (2017). *Health and medical geography*. New York. Guilford Publications.

emergency departments across US communities? *Health Affairs*, *25*(5), w324-w336.

Esteves, A. M., (2012). Social impact assessment: The state of the art. *Impact Assessment and Project Appraisal*, *30*(1), 34-42.

Evans, D. B., ... & Musgrove, P. (2nd Ed.). (2006). *Disease control priorities in developing countries.* The World Bank Annual Report. Co-publication of Oxford University Press and The World Bank.

Fadare, S. O. (2011). Banking sector liquidity and financial crisis in Nigeria. *International Journal of Economics and Finance*, *3*(5), 3-11.

Federal Department of Foreign Affairs FDFA (Ed.) (2003). *Access to health*

Fiagbe, P., Asamoah, D., & Oduro, F. T. (2012). *Assessing the role of transport in the achievement of maternal mortality reduction in Ghana.* Retrieved from: URL: http://dx.doi.org/10.5539/ijbm.v7n5p256.

Fikree, F. F. & Pasha, O. (2005). *Role of gender in health disparity: The South Asian context.* Retrieved http://www.popcouncil.org 01/10/2007.

Frieden, T. R. (2010). A framework for public health action: the health impact pyramid. *American Journal of Public Health*, *100*(4), 590-595.

Friel, S., Berry, H., Dinh, H., O'Brien, L., & Walls, H. L. (2014). The impact of drought on the association between food security and mental health in a nationally representative Australian sample. *BMC Public Health*, *14*(1), 1102-1119.

Frimpong, P. B. (2013). The quest for equity in the provision of health care in Ghana. *African Review of Economics and Finance*, *4*(2), 254-272.

Fuenzalida-Puelma, H. L., O'Dougherty, S., Evetovits, T., Cashin, C., Fund, K. (2006). *Kings Fund briefing: access to health care and minority ethnic groups.* London. Kings Fund.

Garfield, R. & Young, K. (2015). *Adults who remained uninsured at the end of 2014.* Menlo Park, Calif.: Henry J. Kaiser Family Foundation.

Gautam, S., Li, Y., & Johnson, T. G. (2014). Do alternative spatial health care access measures tell the same story? *GeoJournal*, *79*(2), 223-235.

Gazella, K. A. (2012). *The definitive guide to cancer: An integrative approach to prevention, treatment, and healing*. NY, USA, Celestial Arts.

Gen. Salud, G. E., (2007). M. E. D., & EPS, H. H. *Politica de humanización. Geneva*: Switzerland: WHO press.

Gertler, P. J., & Molyneaux, J. W. (1994). How economic development and family planning programs combined to reduce Indonesian fertility. *Demography*, *31*(1), 33-63

Gertler, P., & Sturm R. (1997). Private health insurance and public expenditures in Jamaica. *Journal of Econometrics, 77:237-58.*

Getis, A. (2000). Introduction. *Journal of Geographical Systems*, *2*(1), 1-3.

Ghana Health Service (GHS), (2014*). Ghana Health Service 2016 Annual Report.* Accra: Ghana, Ministry of Health.

Ghana Health Service (GHS), (2015). *Ghana Health Service 2016 Annual Report.* Accra: Ghana, Ministry of Health.

Ghana Health Service (GHS), (2017). *Ghana Health Service 2016 Annual Report*. Accra, Ghana, Ministry of Health.

Ghana Statistical Service (GSS). (2012). Population and Housing Census 2010. Accra: Author.

Ghana Statistical Service, (2006). *2000 population and housing census: National analytical report*. Accra: Ghana, Ghana Statistical Service.

Ghana Statistical Service(GSS), Ghana Health Service(GHS), ICF International, (2008). *Ghana Demographic and Health Survey 2008*. Rockville, Maryland, USA: GSS, GHS & ICF International.

Ghana Statistical Services. (2012). *2010 Population & housing census*. Accra: Ghana, Ghana Statistical Services.

Ghana, (2000). Health care. *Country commercial guides for Ghana*. New York, USA, Gilford Press.

Gilson, L., Doherty, J., Loewenson, R., & Francis, V. (2007). *Challenging Inequity Through Health Systems. Final Report of the Knowledge Network on Health Systems.* Retrieved from: http://researchonline .lshtm.ac.uk/7136/

Glaesmer, H., Wittig, U., Brähler, E., Martin, A., Mewes, R., & Rief, W. (2009). Sind Migranten häufiger von psychischen Störungen betroffen?. *Psychiatrische Praxis*, *36*(01), 16-22.

Glinos, I. A., Baeten, R., Helble, M., Maarse, H. (2010). A typology of cross-border patient mobility. *Health Place, 16*:1145–1155.

GOG, (2003). *Ghana Poverty Reduction Strategy*: *An Agenda for Growth and Prosperity*. Accra: Government of the Republic of Ghana.

Goliath, (2007). *Disparities in adolescent health and health care: Does socioeconomic status matter?* Retrieved from http://goliath.ecnext. com/coms2/gi

Gosh, R. & Bharati, P. (2003). Haemoglobin status of adult women of two ethinic groups living in peri-urban area of Kolkata city, India: a micro level Study. *Asia –pacific journal of clinical nutrition*, *12(4)*: 451-9

Greczyn, B. (2005). Different Ethics, Different Results: How Ethical Framework Shape Environmental Justice Concerns. *J. Legal Prof.*, *34(6)*, 227-232.

Grube, M., Kaufman, K., & York, R. (2013). *Decline in utilization rates signals a change in the inpatient business model. Health Affairs Blog.* Retrieved from http://healthaffairs.org

Guagliardo, M. F. (2004). Spatial accessibility of primary care: concepts, methods and challenges. *International Journal of Health Geographics*, *3*(1), 3-14.

Gulliford, M. (2005). Socioeconomic deprivation and proximity to general practices in England. *Journal of public health* 27(3):308-319.

Gulzar, L. (1999). Access to health care. *Journal of Nursing Scholarship*, 31(1) 13-19.

Gupta, S. K., Sen-Mazumdar, K., Gupta, S., Sen-Mazumdar, A., Gupta, S. (1998). Patient education programme in bronchial asthma in India: Why, how, what and where to communicate. *Indian Journal of Chest Diseases and Allied sciences*, 40(2): 117-24.

Gutierrez, V. F. & Wallace, S.P. (2005). Equity of access to health care for older adults in four Latin American cities. *Pan American Journal Public Health*, 17(5-6): 394-409.

Halás, M., Klapka, P., Kladivo, P. (2014). Distance-decay functions for health and through health: Report of the High-Level working group on Health care lessons from a demonstration project in India and Pakistan. *International Journal of Social Psychiatry*, 48(3):163-76

Hamid, A. M., Sitbon, O., Humbert, M., Jaïs, X., Ioos, V., Provencher, S., & Simonneau, G. (2005). Long-term response to calcium channel blockers in idiopathic pulmonary arterial hypertension. *Circulation*, *111*(23), 3105-3111.

Harvard Health Publication, (2010). *Health Information and Medica*

Hausmann-Muela S. Hausmann-Muela, J., Muela, R., & Nyamongo, I. (2003). Health Organization. *Bulletin of the World Health Organization*, *90*, 97-103.

Henry, J. D. & McDonald, S. (2010). Angry responses to emotional events: The role of impaired control and drive in people with severe traumatic brain injury. *Journal of Clinical and Experimental Neuropsychology*, *32*(8), 855-864.

Hjortsberg, C. A. & Mwikisa, C. (2003). Cost of access to health services in Zambia. *Health Policy and Planning, 17(1):*71-77.

Hochhausen, L., Le, H. N. and Perry, D. F. (2011). Community-based mental health service utilization among low-income Latina immigrants Community. *Mental Health Journal 47(1):*14–23.

Hofer, A. N., Abraham, J. M. & Moscovice, I. (2011). Expansion of coverage under the patient protection and affordable care act and primary care utilization. *Milbank Quarterly*, *89(1)*:69–89.

Hollander, E., & Benzaquen, S. D. (1997). The obsessive-compulsive spectrum disorders. *International Review of Psychiatry*, 9(1), 99-110.

Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social relationships and mortality risk: A meta-analytic review. *PLoS Medicine*, *7*(7), 133-141

Horan, T. A., Lee, P. W., Schooley, B. L., & West, P. A. (2010). Rural hospital emergency departments across US communities. *Health Affairs, 25*(5), 324-336.

Hovhannisyan, S. (2004). Health care in Aremenia. *BMJ,* 329, 522-523.

Hu, R., Dong, S., Zhao, Y., Hu, H., Li, Z. (2013). Assessing potential spatial accessibility of health services in rural China: a case study of Donghai County. *International Journal of Equity Health. 12*(1):35–46.

Huang, E. S. & Finegold, K. (2013). Seven million Americans live in areas where demand for primary care may exceed supply by more than 10 Percent. *Health Affairs*, 32(3):614–21.

Hughes, G. D., Aboyade, O. M., Clark, B. L., & Puoane, T. R. (2013). The prevalence of traditional herbal medicine use among hypertensives living in South African communities. *BMC Complementary and Alternative Medicine*, *13*(1), 38-52.

Hughes, G. D., Puoane, T. R., Clark, B. L., Wondwossen, T. L., Johnson, Q. & Folk, W. (2012). Prevalence and predictors of traditional medicine utilization among persons living with aids (PLWA) on antiretroviral (ARV) and prophylaxis treatment in both rural and urban areas in South Africa. *African Journal of Traditional, Complementary and Alternative Medicines*, *9*(4):470–484.

Huq, M. N. and Tasnim, T. (2007). Maternal education and child health care in Bangladesh. *Maternal and Child Health Journal*, *12*(1):43-51.

Huq, M. N. and Tasnim, T. (2007). Maternal education and child health care in Bangladesh. *Maternal and Child Health Journal*, *12*(1):43-51.

Ibrahim, M. A. l., Mohammed, A., Isah, M. B., Aliyu, A. B. (2014). Anti-trypanosomal activity of African medicinal plants: A review update. *Journal of Ethno-pharmacology*, *154*(1): 26–54.

Ikeako, L. C., Onah, H. E., & Iloabachie, G. C. (2006). Influence of formal maternal education on the use of maternityservices in Enugu, Nigeria. *Journal of Obstetrics and Gynaecology*, *26*(1), 30-34.

Information. Retrieved from https://www.health. harvard.edu/

International Monetary Fund. (2000). *Global Poverty Report*. G8 Okinawa Summit. Okinawa. MDB/IMF.

ISSER. (2012). *Is the way we've been building roads to prosperity which are also our roads to perdition*. Accra, Ghana, University of Ghana.

Jacobsen, P. L., Racioppi, F. & Rutter H. (2009). *Cycling Safety*: *City Cycling*. Cambridge, MA: MIT Press.

Jahangir, E., Irazola, V., & Rubinstein, A. (2012). Need, enabling, predisposing, and behavioral determinants of access to preventative care in Argentina: Analysis of the national survey of risk factors. *PLoS One*, *7*(9) 23-41.

James, S., Chisholm, D., Murthy, R. S., Kumar, K. K., Sekar, K., Saeed, K., & Mubbashar, M. (2002). Demand for, access to and use of community mental health care: Lessons from a demonstration project in India and Pakistan. *International Journal of Social Psychiatry*, *48(*3), 163-176.

Jamison, D. T., Breman, J. G., Measham, A. R., Alleyne, G., Claeson, M., Evans, D. B., ... & Musgrove, P. (Eds.). (2006). *Disease control priorities in developing countries*. Washington DC, The World Bank.

Jordan, H., Roderick, P., Martin, D., & Barnett, S. (2004). Distance, rurality and the need for care: Access to health services in South West England. *International Journal of Health Geographics, 3*(6):21-33.

Joshi, C., Torvaldsen, S., Hodgson, R., Hayen A. (2014). 'Factors associated with the use and quality of antenatal care in Nepal: a population-based study using the demographic and health survey data. *BMC Pregnancy and Childbirth, 14* (1), 94-107.

Jusot, F., Or, Z., & Sirven, N. (2012). Variations in preventive care utilization in Europe. *European Journal of Ageing*, *9*(1), 15-25.

Kacevicius, G., & McEuen, M. (2010). Purchasing of health care *Journal of Health Planning and Management*, *18*(4), 293-311.

Kaddar, M., Stierle, F., Schmidt-Ehry, B., & Tchicaya, A., (2000). Access of the poor to health care in Sub-Sahara Africa. *Revue Tiers Monde*, 41(23),164-171,

Kaiman, J., Smith, D., Anand, A., Watts, J., Kingsley, P., Hooper, J., &

Kaplan, R. M., & Kronick, R. G. (2006). Marital status and longevity in the United States population. *Journal of Epidemiology & Community Health*, *60*(9), 760-765.

Kapur, N. (2012). Implementation of mental health service recommendations in England and Wales and suicide rates, 1997–2006: Across-sectional and before-and-after observational study. *The Lancet*, *379* (9820), 1005-1012.

Karakayali, N. (2009, September). Social Distance and Affective Orientations. *Sociological Forum*, *24*(3)538-562.

Katende, C. (1992). *The effect of accessibility to clinics on infant and child mortality: the cases of Liberia and Zimbabwe*. Washington DC,National Research Council.

Katende, C. (1994). The impact of access to health services on infant and child Mortality in rural Uganda. *African Population Studies*.*7*(4) 9-17.

Kaul, S., You, W., & Boyle, K. J. (2012). Delivery at home versus delivery at a health care facility–a case study of Bihar, India. *Health Promotion International*, *10*(5), 189-197.

Kavi, E., Abanga, R. A., Kudolo, P. A. & Morna, E. (2008). *Survey on the practice of traditional medicine in the operational area of eight ACDEP-Member primary health care programmes in the Upper East and Northern Regions of Ghana*. Health Unit, Ghana, Association of Church Based Development NGOs (ACDEP).

Kaye, D. K. (2004). Gender inequality and domestic violence: implications for human immunodeficiency virus (HIV) prevention. *African Health Sciences*, *4*(1), 67-70.

Kickbusch, I. S. (2001). Health literacy: Addressing the health and education divide. *Health Promotion International*, *16*(3), 289-297.

Kiecolt-Glaser, J. K., & Newton, T. L. (2001). Marriage and health: his and hers. *Psychological bulletin*, *127*(4), 472-493.

Kofie, R. Y. & Møller-Jensen, L. (2001). Towards a framework for delineating sub-districts for primary health care administration in rural Ghana: A case study using GIS. *Norsk Geografisk Tidsskrift*, *55*(1), 26-33.

Kohli, S., Sahlen, K., Sivertun, Å., Löfman, O., Trell, E., & Wigertz, O. (1995). Distance from the Primary Health Center: a GIS method to study

geographical access to health care. *Journal of Medical Systems*, *19*(6), 425-436.

Koivusalo, M. (1999). Decentralisation and equity of health care provision in Finland. *BMJ: British Medical Journal*, *318*(7192), 1198-1217.

Kotwal, N., & Prabhakar, B. (2009). Problems faced by single mothers. *Journal of Social Sciences*, *21*(3), 197-204.

Kotwal, P. P. (2009). Tuberculosis of the hand: clinical presentation and functional outcome in 32 patients. *The Journal of Bone and Joint Surgery. 91*(8), 1054-1057.

Kroeger, A. (1983). Anthropological and socio-medical health care research in developing countries. *Social Science & Medicine*, *17*(3), 147-161.

Kumar, R. (2005). *Research Methodology: A step by step guide for beginners.* Australia: SAGE Publications Ltd.

Kusi-Bempah, M. (2011). *Spatial analysis of the use of traditional medicine in urban areas of Ghana: A case study of Kumasi Metropolis.* Doctoral dissertation. , Ghana ,KNUST Printing Press.

Kusumaningtyas, H. H. (2017). *Hubungan Sensitivitas Etika Kedokteran Mahasiswa Program Studi Profesi Dokterdengan Kepuasan Pasien di RSUD Dr. Moewardi.* Doctoral dissertation. Indonesia: Universitas Sebelas Maret.

Lagomarsino, G., Garabrant, A., Adyas, A., Muga, R., & Otoo, N. (2012). Moving towards universal health coverage: Health insurance reforms in nine developing countries in Africa and Asia. *The Lancet*, *380*(9845), 933-943.

Leonard, K. L. (2000). *Incentives in rural health Cameroon, in Africa changing markets for health and vertinary service.* London. *The new institutional issues*. Macmillan.

Leslie, J. (1992). Women's time and the use of health services. *Ids Bulletin*, *23*(1), 4-7.

Levin, B. R. (1988). Frequency-dependent selection in bacterial populations. *Philosophical Transactions of the Royal Society of London. B, Biological Sciences*, *319*(1196), 459-472.

Levy, A. R., Bruen, B. K., & Ku, L. (2012). Peer reviewed: health care reform and women's insurance coverage for breast and cervical cancer screening. *Preventing chronic disease*, *9(23)67-77*.

Li, Y. N., Nong, D. X., Wei, B., Feng, Q. M., & Luo, H. Y. (2016). *The Lifespan: The Commonwealth Fund 1998 Survey of Women's Health*, Springer: Singapore. *Innovative Vaccines in China*.

Lincoln, Y. S., Lynham, S. A., & Guba, E. G. (2011). Paradigmatic controversies, contradictions, and emerging confluences, revisited. *The Sage handbook of qualitative research*, *4*, 97-128.

Liss, D. T., Fishman, P. A., Rutter, C. M., Grembowski, D., Ross, T. R., & Reid, R. J. (2013). Specialty use among patients with treated hypertension in a patient-centered medical home. *Journal of General Internal Medicine*, *29*(5), 732-740.

Liu, H., & Reczek, C. (2012). Cohabitation and US adult mortality: An examination by gender and race. *Journal of Marriage and Family*, *74*(4), 794-811.

Liu, Y., Yuan, Z., Liu, Y., Jayasinghe, U. W., & Harris, M. F. (2014). Changing community health service delivery in economically less-developed rural areas in China: impact on service use and satisfaction. *BMJ Open*, *4*(2)23-34.

Lo, K. M., & Fulda, K. G. (2008). Impact of predisposing, enabling, and need long walk: accessibility to hospitals, maternity and integrated health centers in Niger. *International journal of Health Geographics*, *11*(1), 24-39.

Lönnroth, K., Thuong, L. M., Linh, P. D., & Diwan, V. K. (2001). Utilization of private and public health-care providers for tuberculosis symptoms in Ho Chi Minh City, Vietnam. *Health Policy and Planning*, *16*(1), 47-54.

Lu, C., Chin, B., Lewandowski, J. L., Basinga, P., Hirschhorn, L. R., Hill, K., ... & Binagwaho, A. (2012). Towards universal health coverage: An evaluation of Rwanda Mutuelles in its first eight years. *PLoS One*, *7*(6)21-43

Lüeschen, G., Cockerham, W. C., & Siegrist, J. (2003). Socioeconomic status and health among the aged in the United States and Germany: A comparative cross-sectional study. *Social Science & Medicine*, *57*(9), 1643-1652.

Lurie, N., & Dubowitz, T. (2007). Health disparities and access to health. *Jama*, *297*(10), 1118-1121.

Lwelamira, J., & Safari, J. (2012). Choice of place for childbirth: prevalence and determinants of health facility delivery among women in Bahi District, Central Tanzania. *Asian Journal of Medical Sciences*, *4*(3), 105-112.

Lwelamira, J., & Safari, J. (2012). Choice of place for childbirth: prevalence and determinants of health facility delivery among women in Bahi District, Central Tanzania. *Asian Journal of Medical Sciences*, *4*(3), 105-112.

Macassa, G. (2014). Precarious employment and health outcomes in Sweden: A systematic review. *Journal of Public Health and Epidemiology*, *8*(9), 169-174.

Macias, E. P., & Morales, L. S. (2000). Utilization of health care services among adults attending a health fair in South Los Angeles County. *Journal of Community Health*, *25*(1), 35-46.

Malison, M. D., & Hovhannisyan, S. G. (2004). Health care in Armenia. *British Medical Journal,* 329(7465): 522–523.

Malison, M. D., Sekeito, P., Henderson, P. L., Hawkins, R. V., Okware, S. I., & Jones, T. S. (1987). Estimating health service utilization, immunization coverage, and childhood mortality: a new approach in Uganda. *Bulletin of the World Health Organization*, *65*(3), 325-341.

Målqvist, M., Sohel, N., Do, T. T., Eriksson, L., & Persson, L. Å. (2010). Distance decay in delivery care utilization associated with neonatal mortality. A case referent study in northern Vietnam. *BMC Public Health, 10*(1), 762-779.

Manzoor, I., Hashmi, N. R., & Mukhtar, F. (2009). Determinants and pattern of health care services utilization in post graduate students. *Journal of Ayub Medical College Abbottabad*, *21*(3), 100-105.

Manzoor, I., Hashmi, N. R., & Mukhtar, F. (2009). Determinants and pattern of health care services utilization in post graduate students. *Journal of Ayub Medical College Abbottabad*, *21*(3), 100-105.

Marais, A., Steenkamp, V., & Du Plooy, W. J. (2015). Conditions frequently self-treated with herbal remedies by patients visiting a tertiary hospital in Gauteng, South Africa. *South African Family Practice*, *57*(1), 8-11.

Maternal Health Channel, (2014). *Is Korle-Bu at a breaking point?* Retrieved from http://www.mhcghana.com/programmes/61

Matthews, J. L., & Matlock, T. (2011). Understanding the link between spatial distance and social distance. *Social Psychology*, *42*(3), 185-198.

Mbiti, J. S. (,1975). *The prayers of African religion*. Orbis Books. Botswana, *Heinemann* educational Publishers.

Meade, M. S. and Earickson, (2000). Medical Geography (Second edition) The Measurement, Learning and Evaluation (MLE) Project, (2012) 2011 Baseline Survey for the Senegal Urban Health Initiative. *International Medical Journal, 522(2)154-163.*

Meade, M. S., & Emch, M. (2010). *Medical geography (3rd ed),* New York, Guilford Press.

Meessen, B., Van Damme, W., Tashobya, C. K., & Tibouti, A. (2006). Poverty and user fees for public health care in low-income countries: lessons from Uganda and Cambodia. *The Lancet*, *368*(9554), 2253-2257.

Mesa-Lago, C. (1985). Health care in Costa Rica: boom and crisis. *Social Science & Medicine*, *21*(1), 13-21.

Meyer, R., Köhler, J., & Homburg, A. (2016). *Explosives*. John Wiley & Sons.

Migge, B. & Gilmartin, M. (2011). Migrants and health care: investigating patient mobility among migrants in Ireland. *Health & Place*, *17*(5), 1144-1149.

Mills, A., Ataguba, J. E., Akazili, J., Borghi, J., Garshong, B., Makawia, S., ... & McIntyre, D. (2012). Equity in financing and use of health care in Ghana, South Africa, and Tanzania: implications for paths to universal coverage. *The Lancet*, *380*(9837), 126-133.

Ministry of Health (2012). *Holistic assessment of the health sector programme of work*. Retrieved from http://www. mohghana.org/UploadFiles/ Publications/2012%20Holisti%20Assessment%20Report%20ofoe 1307 15062103.pdf.

Mohammed Shariful Islam and Shamima Aktar, (2011), Measuring Physical Accessibility to Health Facilities – A Case Study on Khulna City, *World Health and Population,* 12(3) 33-41.

Molyneux, M. E., & Neilson, J. P. (2003). Reproductive health in rural Malawi: a population-based survey. *BJOG: An International Journal of Obstetrics & Gynaecology*, *110*(10), 902-908

Montagu, D., Yamey, G., Visconti, A., Harding, A., & Yoong, J. (2011). *Mortality: the cases of Liberia and Zimbabwe. Panel on the Population Mortality.* Voorburg: Netherlands, International Statistical Institute,

Mosadeghrad, A. M. (2012). Implementing strategic collaborative quality management in health care sector. *International Journal of Strategic Change Management, 4*(3-4), 203-228.

Mosadeghrad, A. M. (2014). Factors influencing health care service quality. *International Journal of Health Policy and Management,* 3(2), 77-84.

Mota, R. E. M., Lara, A. M., Kunkwenzu, E. D., & Lalloo, D. G. (2009). Health seeking behavior after fever onset in a malaria-endemic area of Malawi. *The American journal of tropical medicine and hygiene*, *81*(6), 935-943.

Muriithi, M. K. (2013). The determinants of health-seeking behavior in a Nairobi slum, Kenya. *European Scientific Journal, ESJ*, *9*(8)23-33.

Naiditch, M., & Dourgnon, P. (2010). The preferred doctor scheme: a political reading of a French experiment of gate-keeping. *Health Policy*, *94*(2), 129-134.

Nanda, P. (2002). Gender dimensions of user fees: implications for women's utilization of health care. *Reproductive Health Matters*, *10*(20), 127-134.

National Academies of Sciences, Engineering, and Medicine (2018) The Integration of Immigrants into American Society. *East European Journal of Society and Politics*, *3*(3), 157-161.

Nemet, G. F., & Bailey, A. J. (2000). Distance and health care utilization among the rural elderly. *Social Science & Medicine*, *50*(9), 1197-1208.

Neuman, W. L. (2013). *Social Research Methods: Pearson New International Edition*. Kirby Street, London: Pearson Education Limited.

Newbrander, W., & Sacca, S. (1996). *Cost sharing and access to health care for the poor: equity experiences in Tanzania*. Draft Document submitted to the Ministry of Health, Tanzania and the Health and Human Resources Analysis for Africa. Boston, USA: USAID Africa Bureau.

Nketiah-Amponsah, E., & Hiemenz, U. (2009). Determinants of consumer satisfaction of health care in Ghana: does choice of health care provider matter? *Global Journal of Health Science*, *1*(2), 50-69.

Noland, R. B., & Lem, L. L. (2002). A review of the evidence for induced travel and changes in transportation and environmental policy in the US and the UK. *Transport and Environment*, *7*(1), 1-26.

Nteta, T. P., Mokgatle-Nthabu, M., & Oguntibeju, O. O. (2010). Utilization of the primary health care services in the Tshwane Region of Gauteng Province, South Africa. *PloS one*, *5*(11)23-32.

NY,Amityville Publishers.

Obuobi and Ahmad (1998). Health Delivery and Private Sector Participation New York, United Nations.

Odu, J. O., & Afebende, G. B. (2015). Undergraduate students' perception and Utilization of electronic information resources and services in the university of Calabar library, Calabar, Nigeria. *Information Technologist*, *12*(2)12-23.

Office on Women's Health, (2003). *Barriers limiting access to health care*. Retrieved from http://www.4woman.gov.

Ogwurike, S. C. (2005). Influence of occupational status on patronage and choice of eye care services. *Nigerian Journal of Surgical Research*, *7*(3), 281-284.

Okaila, A. (2001). Traditional Vs. Western Medicine-African Context. American *Journal of Medical and Biological Research, 2*(4)91-96.

Okonkwo, J. E. N., & Ngene, J. N. (2004). Determinants of poor utilization of orthodox health facilities in a Nigerian rural community. *Nigerian Journal of Clinical Practice*, *7*(2), 74-78.

Oliva-Moreno. J., Zozaya, N., & Lopez-Valcarcel, B. G. (2010). Opposite poles: A comparison between two Spanish regions in health-related quality of life, with implications for health policy. *BMC Public Health*. *10*: 576-86.

Oliver, A. & Mossialos, E. (2004). Equity of access to health care: outlining the foundations for action. *Journal of Epidemiology & Community Health*, *58*(8), 655-658.

Oni, O., & Agboje, I. A. (2010). Determinants of choice of health care providers among farming and non-farming households: evidence from selected rural areas of Ibadan. Nigeria. University of Ibadan.

Onoka, C. A., Hanson, K. & Onwujekwe, O. E. (2012). Low coverage of intermittent preventive treatment for malaria in pregnancy in Nigeria: demand-side influences. *Malaria Journal 11*(3): 77-82.

Onokerhoraye, A. G. (1999). Access and utilization of modern health care facilities in the petroleum producing region of Nigeria: The case of Bayelsa State. *BMJ 12, 159-162*.

Oppong, J. R. & Hodgson, M. J. (1994) Spatial accessibility to health care facilities in Suhum District. *Ghana Professional Geographer*, *46*(2) 199-209.

Overbosch, G. B., Nsowah-Nuamah, N. N. N., Van den Boom, G. J. M., & Oxaal, Z. *with Baden, S. (1996). Challenges to women's reproductive health: maternal mortality, Sweden, Briefing prepared for the Swedish International Development Cooperation Agency (SIDA).*

Oxaal, Z., & Cook, S. (1998). *Health and poverty gender analysis. Briefing prepared for the Swedish International Development Cooperation*

Agency (SIDA) (No. 46). BRIDGE Report. Brighton Institute of Development Studies.

Oxford Dictionary of English (2nd edition, revised), 20 (2).32-33, Retrieved from https://doi.org/10.1108/09504120610647429.

Pell, C., Straus, L., Andrew, E. V., Meñaca, A., & Pool, R. (2011). Social and cultural factors affecting uptake of interventions for malaria in pregnancy in Africa: a systematic review of the qualitative research. *PloS one*, *6*(7).12-43.

Peter, C., Müller R., Cieza, A., & Geyh, S. (2012). Psychological resources in spinal cord injury: A systematic literature review. *Spinal Cord. 50* (3):188–201.

PHAST, (2011). *Participatory Hygiene and Sanitation Transformation: a new approach to working with communities.* Retrieved from https://www.who.int/water_sanitation_health/hygiene/envsan/EOS96-11a.pdf.

Phillips, S. P. (2005). Defining and measuring gender: A social determinant of health whose time has come. *International Journal for Equity in Health*, *4*(1), 11-19.

Pillai, S. A., & Green, M. A. (2010). Plasmonics for photovoltaic applications. *Solar Energy Materials and Solar Cells*, *94*(9), 1481-1486.

Ponce, N. A., Hays, R. D., & Cunningham, W. E. (2006). Linguistic disparities in health care access and health status among older adults. *Journal of General Internal Medicine*, *21*(7), 786-791.

PPME-GHS, (2005). *Policy planning, monitoring and evaluation division: Facts and figures*, Accra Ghana, Ghana Health Service.

Pradeepa, R., Prabhakaran, D., & Mohan, V. (2012). Emerging economies and diabetes and cardiovascular disease. *Diabetes technology & therapeutics*, *14*(S1), S-59. Predisposing, and behavioral determinants of access to preventative care in Argentina: Analysis of the national survey of risk factors. *PLoS One*, *7*(9)12-21.

Prüss-Üstün, A., Corvalán, C., & World Health Organization. (2017). Preventing disease through healthy environments: Towards an estimate of the environmental burden of disease WHO. 2006; Geneva, Switzerland. *World Health Organization*.

Prüss-Ustün, A., Wolf, J., Corvalán, C., Neville, T., Bos, R., & Neira, M. (2016). Diseases due to unhealthy environments: an updated estimate of the global burden of disease attributable to environmental determinants of health. *Journal of Public Health*, *39*(3), 464-475.

Qureshi, N. A. (1996). *Strategies for enhancing the use of primary health care services by nomads and rural communities in Saudi Arabia*., 2(2) 326-333., Retrieved from http://www.emro.who.int/publications/emhj/. 10/11/2004

Ranerup, A., Norén, L., & Sparud-Lundin, C. (2012). Decision support systems for choosing a primary health care provider in Sweden. *Patient Education and Counseling*, *86*(3), 342-347.

Ransom, E. I. & Yinger, N. V. (2002). *Role of transport in accessing maternal health services.* Washington, D.C., Population Reference Bureau.

Rasmussen, K. A., & Wingate, L. R. (2011). The role of optimism in the interpersonal-psychological theory of suicidal behavior. *Suicide and Life-Threatening Behavior*, *41*(2), 137-148.

Regitz-Zagrosek, V. (2012). Sex and gender differences in health: Science & Society Series on Sex and Science. *EMBO reports*, *13*(7), 596-603.

Reid, R. J. (2013). Specialty use among patients with treated hypertension in a patient-centered medical home. *Journal of General Internal Medicine*, *29*(5), 732-740.

Reynders, A., Kerkhof, A. J. F. M., Molenberghs, G., & Van Audenhove, C. (2014). Attitudes and stigma in relation to help-seeking intentions for psychological problems in low and high suicide rate regions. *Social Psychiatry and Psychiatric Epidemiology*, *49*(2), 231-239.

Ricketts, T. C., & Goldsmith, L. J. (2005). Access in health services research: the battle of the frameworks. *Nursing Outlook*, *53*(6), 274-280.

Robards, J., Evandrou, M., Falkingham, J., & Vlachantoni, A. (2012). Marital status, health and mortality. *Maturitas*, *73*(4), 295-299.

Roberts, D. M., Asare, J.B., Mogan, C., Adjase, & Osei, A. (2013). *The mental health system in RHO archives*. Retrieved from http://www.rho.org, 01/10/2007.

Robson, C. (1993). *Real world research: A resource for social scientists and practitioners-researchers.* Massachusetts, Blackwell Pushers.

Rosenberg, M. W., & Hanlon, N. T. (1996). Access and utilization: continuum of health service environments. *Social Science & Medicine*, *43*(6), 975-983.

Rosero-Bixby, L. (2004). Spatial access to health care in Costa Rica and its equity: A GIS-based study. *Social Science & Medicine*, *58*(7), 1271-1284.

Rossmann, C. (2010). Gesundheitskommunikation im Internet. Erscheinungsformen Potenziale, Grenzen. *Handbuch Online Kommunikation 9(3)338-363.*

Sai, F. T. (1967). Making the community healthy in Proceedings of the Ghana. *Academy of Sciences*, *11*, 1-11

Satcher, D. (2003). Overlooked and underserved: Improving the health of men of colour. *American Journal of Public Health*, 93(5): 707-709

Savedoff, W. D., de Ferranti, D., Smith, A. L., & Fan, V. (2012). Political and economic aspects of the transition to universal health coverage. *The Lancet*, *380*(9845), 924-932.

Scheiermann, C., Kunisaki, Y., Jang, J. E., & Frenette, P. S. (2010). Neutrophil microdomains: linkingheterocellular interactions with vascular injury. *Current opinion in hematology*, *17*(1), 25-33.

Schmidt, J. O., Ensor, T., Hossain, A. & Khan, S. (2010). Vouchers as demand side financing instruments for health care: a review from the Bangladesh maternal voucher scheme. *Health Policy* 96: 98–107.

Sedgwick, J. (2000). *Popular filmgoing in 1930s Britain: A choice of pleasures*. UK, University of Exeter Press.

Seligman, M. E. P. (2911). *Flourish: A Visionary New Understanding of Happiness and Wellbeing.* New York, Free Press.

services in SDC-Health. Swiss Agency for Development and Cooperation SDC 3003, Bern. Retrieved from http://www.sdc-health.ch

Shabaya, J., & Konadu-Agyemang, K. (2004). Unequal access, unequal participation: some spatial and socio-economic dimensions of the gender gap in education in Africa with special reference to Ghana,

Zimbabwe and Kenya. *Compare: A Journal of Comparative and International Education*, *34*(4), 395-424.

Shaw, T. (2007). *Women's health: An emerging definition. National conference of state legislatures.* Retrieved from http://www.ncls.org 01710/2007

Siddique, M. K. B., Islam, S. M. S., Banik, P. C., & Rawal, L. B. (2017). *Signals of change in the inpatient business model.* Retrieved from http://healthaffairs.org.

Smith, F. (2003). Drug use in sub-Saharan Africa: quality in processes-safety in use. *Qual Saf Health Care*, 12(8):164-175.

Sodzi-Tettey, S., Aikins, M., Awoonor-Williams, J. K., & Agyepong, I. A. (2012). Challenges in provider payment under the Ghana National Health Insurance Scheme: A case study of claims management in two districts. *Ghana Medical Journal*, *46*(4), 189-203

South Africa, (2013). *Findings from death notification. Statistics South Africa: The capability approach.* Retrieved from http://plato.stanford. edu/entries/capability-approach.

Statistics Denmark. (2014). *Immigrants in Denmark 2014*. Denmark, University Press.

Stoller, N. (2003). Space, place and movement as aspects of health care in three women's prisons. *Social Science and Medicine*, 56(11):2263-2275.

Sudha, G., Nirupa, C., Rajasakthivel, M., Sivasusbramanian, S., Sundaram, V.,

Sulemana, A., & Dinye, R. D. (2014). Access to health care in rural systems for choosing a primary health care provider in Sweden. *Patient Education and Counseling*, *86*(3), 342-347.

Szaflarski, M. (2013). Spirituality and Religion Among HIV-Infected Individuals. *HIV/AIDS Rep* 10: 324–332.

Szczepura, A. (2005). Access to health care for ethnic minority populations. *Postgraduate Medical Journal* 81:141-147.

Tabachnick, B G. & Fidell, L. S. (2001). *Using Multivariate Statistics (Fourth Edition,)* Hardcover Needham Heights, MA: Allyn & Bacon.

Tabachnick, B. G., & Fidell, L. S. (2001). Principal components and factor analysis. *Using Multivariate Statistics*, *4*, 582-633.

Tatar, M., Mollahaliglu, S., Sahin, B., Aydin S, Maresso, A. & Hernandez-Quevedo, C. (2011). Health Systems in Transition. *Health System Review*. 13(6):1–186.

Thaddeus, S. & Maine, D. (1990). *Too far to walk: Maternal mortality in context.* Baltimore, USA, John Hopkins University.

Thompson, R., Miller, N., & Witter, S. (2003). *Health-seeking behaviour and rural/urban variation in Kazakhstan.* Wiley Inter-Science USA,Press: University of York.

Thomson, S., Osborn, R., Squires, D., & Jun, M. (2013). *International profiles of health care systems, 2013* (Australia, Canada, Denmark, England, France, Germany, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden, Switzerland, and the United States). *New York: Commonwealth Fund*.

Thuan, N. T. B., Lofgren, C., Lindholm, L., & Chuc, N. T. K. (2008). Choice of health care provider following reform in Vietnam. *BMC Health Services Research, 8(1)16-28.*

Thumi, K. C., & Horsefield, G. E. (2004). Traditional Values, Guide to Effective Community Based Health Care. In *International Conference on AIDS*. Retrieved from: https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&scioq=Traditional+Values%2C+Guide+to+Effective+Com

Timyan, J., Brechin, S. J. G., Measham, D. M., & Ogunleye, B. (2018). *Access to care in Africa: more than a problem of distance*. UK, Routledge.

Traylor, A. H., Schmittdiel, J. A., Uratsu, C. S., Mangione, C. M., & Subramanian, U. (2010). Adherence to cardiovascular disease medications: does patient-provider race/ethnicity and language concordance matter? *Journal of general internal medicine*, *25*(11), 1172-1177.

Twain, M. (2006). *Mark Twain: The complete interviews*. Alabama, University of Alabama Press.

Twumasi, P. A. (1975). Developing a health care system in Ghana. *Journal of the National Medical Association*, *67*(5), 339-345.

Uchendu, O. C., Ilesanmi, O. S., & Olumide, A. E. (2013). Factors influencing the choice of health care providing facility among workers in a local government secretariat in south western Nigeria. *Annals of Ibadan Postgraduate Medicine*, *11*(2), 87-95.

UNDP. (2007). *Terms of reference for thematic window on culture and development*. Spain MDG achievement fund, Retrieved from http://www.undp.org.

United Nations. *General Assembly - Sixty Seventh Session A/67/L.36.* New York, *United Nations*. UN.

Upper Denkyira District Assembly. (2011). *Profile of District*. Unpublished data.

Upper-Denkyira West District Health Information Office. (2018). *Orthodox health care facilities.* Unpublished data.

Üstün, T. B., Kostanjsek, N., Chatterji, S., & Rehm, J. (Eds.). (2010). *Measuring health and disability: Manual for WHO disability assessment schedule WHODAS 2.0*. Geneva, World Health Organization.

Uzochukwu, B. S., Akpala, C. O., & Onwujekwe, O. E. (2004). How do health workers and community members perceive and practice community participation in the Bamako Initiative programme in Nigeria? A case study of Oji River local government area. *Social Science & Medicine*, *59*(1), 157-162.

Valencia, R. R. (2012). *The evolution of deficit thinking: Educational thought* and *practice*, (1st edition). Routledge

Valencia, R. R. (2012). *The evolution of deficit thinking: Educational thought and practice*. Routledge.

Van den Broek, N. R., White, S. A., Ntonya, C., Ngwale, M., Cullinan, T. R., Molyneux, M. E., & Neilson, J. P. (2003). Reproductive health in rural Malawi: a population-based survey. *BJOG: An International Journal of Obstetrics & Gynaecology*, *110*(10), 902-908

Van Eijk, A. M., Bles, H. M., Odhiambo, F., Ayisi, J. G., Blokland, I. E.,Rosen, D. H., ... & Lindblade, K. A. (2006). Use of antenatal services and delivery care among women in rural western Kenya: A community based survey. *Reproductive Health*, *3*(1), 2-16.

Varatharajan, D. (2004). Provision of health care by the government. *Indian Journal Medical Ethics*. Retrieved from. *http://www.issuesinmedicalethics.*

Varatharajan, D. (2004). Provision of health care by the government. *Indian J* various strategies. *Tropical Medicine & International Health*, *17*(1)6-18

Vian, T. (2008). Review of corruption in the health sector: theory, methods and interventions. *Health policy and planning*, *23*(2), 83-94.

Victoor, A., Delnoij, D. M., Friele, R. D., & Rademakers, J. J. (2012). Determinants of patient choice of health care providers: a scoping review. *BMC health Services Research*, *12*(1), 272

Victoor, A., Delnoij, D. M., Friele, R. D., & Rademakers, J. J. (2012). *Vietnam, 1993-98.* Retrieved from: elibrary.worldbank.org

Vissandjée, B., Weinfeld, M., Dupéré, S., & Abdool, S. (2001). Sex, gender, ethnicity, and access to health care services: Research and policy challenges for immigrant women in Canada. *Journal of International Migration and Integration 2*(1), 55-75.

Vlassoff, C. (2007). Gender differences in determinants and consequences of health and illness. *Journal of Health, Population, and Nutrition*, *25*(1), 47-58.

Vrangbaek, K., Robertson, R., Winblad, U., Van de Bovenkamp, H., & Dixon, A. (2012). Choice policies in Northern European health systems. *Health Economics, Policy and Law*, *7*(1), 47-71.

Wagstaff, A. (1999). *Measuring equity in health care financing: reflections on (and alternatives to) the World Health Organization's Fairness of Financing Index*. New York, The World Bank.

Wagstaff, A. (2000). *Unpacking the causes of inequalities in child survival*: The case of Cebu, the Philippines. *Development Research Group.* Geneva, World Bank.

Wagstaff, A. (2010). Estimating health insurance impacts under unobserved heterogeneity: The case of Vietnam's health care fund for the poor. *Health economics*, *19*(2), 189-208.

Wagstaff, A. & van Doorslaer E. (2001). *Paying for health care: quantifying fairness, catastrophe and impoverishment, with applications to Vietnam*, 1993-98. Retrieved from: elibrary.worldbank.org.

Wallace, S. P., & Villa, V. M. (2003). Equitable health systems: cultural and structural issues for Latino elders. *American Journal of Law & Medicine*, *29*(2-3), 247.

Wang, Q. (2005). *Disability and American families: 2000*. US Bureau of the Census, Census 2000 special reports. Washington, DC: US Department of Commerce.

Wang, W., Winner, M., & Burgert-Brucker, C. R. (2017). Limited Service Availability, Readiness, and Use of Facility-Based Delivery Care in Haiti: A Study Linking Health Facility Data and Population Data. *Global Health: Science and Practice*, *5*(2), 244-260.

Wang, W., Winter, R., Mallick, L., Florey, L., Burgert-Brucker, C., & Carter, E. (2015). *DHS Analytical Studies*. United State: United States Agency for International Development.

Ware, V. (2013). *Improving the accessibility of health services in urban and regional settings for Indigenous people* (Vol. 27). Australian Institute of Health and Welfare: Canberra. Retrieved from: http://hdl.handle.net/10536/DRO/DU:30069870

Wasserman, D., Hoven, C. W., Wasserman, C., Wall, M., Eisenberg, R., Hadlaczky, G., & Saiz, P (2015). *A randomized controlled trial of school-based suicide preventive programmes: The Saving and Empowering Young Lives in Europe* (SEYLE) study. *Lancet. 385*(9977), 1536-1544.

Watkins, D. A., Olson, Z. D., Verguet, S., Nugent, R. A., & Jamison, D. T. (2015). Cardiovascular disease and impoverishment averted due to a salt reduction policy in South Africa: An extended cost-effectiveness analysis. *Health Policy and Planning*, *31*(1), 75-82.

While, D., Bickley, H., Roscoe, A., Windfuhr, K., Rahman, S., Shaw, J., & Kapur, N. (2012). Implementation of mental health service recommendations in England and Wales and suicide rates, 1997–2006: A cross-sectional and before-and-after observational study. *The Lancet*, *379*(9820), 1005-1012.

Whitehead, M. (2000). William Farr's legacy to the study of inequalities in health. Bulletin of the World Health Organization. *The International Journal of Public Health, 78*(1) : 86-87

WHO (2013). *Mortality database documentation*: 1 May 2013 update. Geneva: World Health.

WHO (2014). *Preventing suicide: A global imperative*. : Geneva ,WHO.

WHO, (2005). *Health situation assessment of the Peoples Republic of China, Office of the WHO representative in China and Social Development* . Beijing, Department of China State Council Development Research Centre.

WHO, (2005). *Measuring access to reproductive health services, Report of WHO/UNFPA Technical Consultation* .Geneva, WHO:

WHO/SHS/NHP/95.5 (2000). *Lessons from cost-recovery in health Forum on health sector reforms.* Geneva, Switzerland. Council Development Research Centre.

WHO/WHD (1998). *Improve access to maternal health services.* Geneva, Switzerland: Council Development Research Centre.

Wierzbicka, M., Józefiak, A., Szydłowski, J., Marszałek, A., Stankiewicz, C., Hassman-Poznańska, E., ... & Puacz, E. (2013). Recommendations for the diagnosis of human papilloma virus (HPV) high and low risk in the prevention and treatment of diseases of the oral cavity, pharynx and larynx. Guide of experts PTORL and KIDL. *Otolaryngologia Polska*, *67*(3), 113-134.

Wikinson, R. G. (2002). *Income inequality, social cohesion and health: Clarifying the -A reply to Muntaner and Lynch The political economy of social inequalities: consequencies for health and quality of life*.

Wild, K., Barclay, L., Kelly, P., & Martins, N. (2012). The tyranny of distance: maternity waiting homes and access to birthing facilities in rural Timor-Leste. *Bulletin of the World Health Organization*, *90*, 97-103.

Will, R. (2012). *Contraceptive use in China: US-China Today*. China, USC US-China Institute.

Williams, E., & Tomison, A. M. (2013). *Monitoring and evaluating community-based interventions for children and families in the asia-pacific region. child abuse and neglect: Challenges and Opportunities*. New Delhi, India, Jaypee Brothers Medical Publishers (P) Ltd.

Wilson, F. L. (2000). Measuring patient's ability to read and comprehend: a first step in patient education. *Nursing Connections 13*(3): 19-27

Winter, S. G. (2003). Understanding dynamic capabilities. *Strategic Management Journal*, *24*(10), 991-995.

Woodley, J. (2001). Bioadhesion. *Clinical Pharmacokinetics*, *40*(2), 77-84.

World Bank (2001). *Poverty reduction strategies sourcebook, Consultative draft.* Washington DC, World Bank.

World Health Organization (2000*). Health systems: improving performance in the world health report 2000.* Geneva: World Health Organization.

World Health Organization (2010). *Monitoring the building blocks of health systems: A handbook of indicators and their measurement strategies*. Geneva, WHO Press.

World Health Organization (2012). *Trends in maternal mortality: 1990 to 2010. in Estimates developed by: WHO, UNICEF, UNFPA and the World Bank.* Geneva: World Health Organization Pres.

World Health Organization (2013). *Global Action Plan for the Prevention and Control of Non-Communicable Diseases, 2013–2020*. Geneva: World Health Organization.

World Health Organization (2013). *World Malaria Report.* WHO: *Switzerland*.

World Health Organization (2014). *Global Status Report on Non-Communicable Diseases 2014.* Geneva, World Health Organization.

World Health Organization (WHO) (2010). *Factsheets of health statistics.* Swaziland, WHO.

World Health Organization, (1999) *The world health report. Making a difference.* Geneva, World Health Organization.

World Health Organization, (2008). *Report on the global tobacco epidemic, 2008: the MPOWER package.* Geneva, World Health Organization.

World Health Organization. (1946). *Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference.* Retrieved from: *http://www. who.* int/governance/eb/who_ constitution_en. pdf.

World Health Organization. (2000). *The world health report 2000: health systems: improving performance*. Geneva: World Health Organization.

World Health Organization. (2017). *Leading the realization of human rights to health and through health: report of the High-Level working group on the health and human rights of women, children and adolescents.* Switzerland, WHO Press.

Wu, Z., & Hart, R. (2002). The effects of marital and non-marital union transition on health. *Journal of Marriage and Family*, *64*(2), 420-432.

Yamakawa, Y., Kanai, R., Matsumura, M., & Naito, E. (2009). Social distance evaluation in human parietal cortex. *PloS one*, *4*(2)43-60.

Yanagisawa, S., Mey, V., & Wakai, S. (2004). Comparison of health-seeking behaviour between poor and better-off people after health sector reform in Cambodia. *Public health*, *118*(1), 21-30.

Yang, Z., Zhang, J., Xiao, J., Xing, X., Lu, J., Weng, J., ... & Tian, H. (2015). Association between family history risk categories and prevalence of diabetes in Chinese population. *PLoS One*, *10*(2)43-58

Yates, K., (2009). Realising benefits in primary healthcare infrastructures. *Facilities*, *27*(3/4), 74-87.

Yates, W. R., Lund, B. C., Johnson, C., Mitchell, J., & McKee, P. (2009). Attention-deficit hyperactivity symptoms and disorder in eating disorder in patients. *International Journal of Eating Disorders*, *42*(4), 375-378.

Yeboah, I. E. (2000). Structural adjustment and emerging urban form in Accra, Ghana. *Africa Today*, 6(9)61-89.

Young, J. E., Klosko, J. S., Weishaar, M. E., & Kierdorf, T. (2005). Schematherapie. *Ein praxisorientiertes Handbuch. Paderborn: Junfermann*, *600*. Retrieved from: www.schematherapie-stuttgart.de

Yu, X., Chen, S., Chen, X., Jia, J., Li, C., Liu, C., et al. (2015). Clinical management and associated costs for moderate and severe Alzheimer's disease in urban China: A Delphi panel study. *Trans Neurodegenerative*; 4(2)15-23.

Zimmerman, I. L., Steiner, V. G., & Pond, R. E. (2012). *Preschool Language Scale:* Spain: *Spanish*. Pearson/Psychological Corporation.

Zimmerman, R. K., (2016). 2014–2015 Influenza vaccine effectiveness in the United States by vaccine type. *Clinical Infectious Diseases*, 63(12) 1564–1573.

APPENDIX

MODULE A: KNOWLEDGE AND USE OF HEALTH CARE FACILITIES

Types of Facilities

1. What are the health care institutions available in this area for people who become sick or

need care for any ailment? (Identify as many as possible)

FACILITY	DISTANCE FROM YOUR PLACE OF SETTLEMENT (KM)

2. What other facilities in addition to those above are used by people in this area when they

are sick?

i……

ii……

iii……

iv……

3. When was the last time you got sick?.....

3b. What did you suffer from?.....

4. How severe was the sickness?

a. Very severe

b. Severe

c. Not severe

5. What did you do?

a. Went for treatment

b. Self medication

c. Did nothing

d. Other (Specify)……..

6. If you went for treatment, which health care facility did you use?

a. Hospital [ ]

b. Clinic [ ]

c. Bought drugs from the drug seller [ ]

d. Herbalist [ ]

e. Prayer Camp [ ]

f. Other (Specify) [ ]

6b. What was the main reason for using that health care facility?

a. It is the nearest health care facility

b. It is the cheapest in terms of cost

c. the care providers are friendly

d. the sickness was considered spiritual

e. I wanted to get better quickly

f. Other (Specify)……

7. How much did you pay for the treatment?.....

8. Who paid for the cost of treatment?.....

9. How far is that facility from your place of residence?.....

10. How did you get there?

a. Walking [ ]

b. Taxi [ ]

c. Trotro [ ]

d. Mini-bus [ ]

e. Other (Specify)……

11. Why did you choose that mode of transport?.....

……

12. How long does it take you to get there by:

Mode of transport	**Time taken to reach Facility**
Walking	
Taxi	
Trotro	
Mini-bus	
Other (Specify)……	

13. Did you have to wait for some time before getting the mode of transport you used?

Yes [ ] No [ ]

14. If yes for how long did you have to wait before getting the mode of transport you used?.....

14b. Did you have to change means of transport before getting to the health care facility?

a. Yes b. No

14c. What modes of transport did you change?.....

15. How much do you pay for transport to get to the hospital if you use

Mode of Transport	**How much it Cost ¢**
Taxi	
Trotro	
Mini-bus	

16. How satisfied were you in terms of:

	Very satisfied	Satisfied	Not satisfied
Cost of services			
Quality of service			
Your involvement in diagnosis			
Attitude of service providers			

17. If the need arises for you to go for treatment from any ailment will you go to the same health facility? A. Yes B. No

If yes, go to Q20

18. If you will go to a different facility which facility will you go?.....

19. What reasons can you give for changing to a new health care facility?

……

……

……

……

20. When was the last time an adult member of your household fell sick?

……

21. Where did you send the person for treatment?

a. Hospital

b. Clinic

c. Bought drugs from the drug seller

d. Herbalist

e. Prayer Camp

f. Other (Specify)……

22. Why did you take that person there for

treatment?.....

……

23. If you had not gone to the facility you chose, where else would you have

taken that Person to?.....

24. What mode of transport did you use to take the person there?

a. Walking

b. Taxi

c. Trotro

d. Mini-bus

e. Other (specify)……

25. How much did you pay for the mode of transport you used?.....

26. Is the fare high to discourage you from using that health care facility?

a. Yes b. No c. NA

27. When was the last time any child of your household fell sick?.....

28. Where did you take that child for treatment?

a. Hospital

b. Clinic

c. Bought drugs from the drug seller

d. Herbalist

e. Prayer Camp

f. other (specify)……..

29. Why did you take the child to that particular place?.....

……

……

30. Where else could you have taken the child for treatment?

a. Hospital

b. Clinic

c. Bought drugs from the drug seller

d. Herbalist

e. Prayer Camp

f. Other (Specify)

31. How much did you pay for the cost of services for the child? ……

…….

32. How much would it have cost you if you had taken the child to:

Health Facility	How much it Cost ¢
Hospital	
Clinic	
Bought drugs from the seller	
Prayer camp	
Other (specify)	

33. What mode of transport did you use in taking that child for treatment?

a. Walking

b. Taxi

c. Trotro

d. Mini-bus

e. Other (specify)

34. For how long did you have to wait before getting the mode of transport?

a. Less than one hour

b. about one hour

c. more than one hour

d. about three hours

35. If you walked how long did it take you to reach the health facility?

a. Less than one hour

b. about one hour

c. more than one hour

d. about three hours

36. Why did you choose to walk?.....

37. In view of your assessment of the quality of service you received for your child, will you choose the same facility next time any child in your household fell sick? A. Yes B. No

38. If No to Q37, what facility will you choose if any other child fell sick?.....

……

MODULE B ASSESSMENT OF ECONOMIC STATUS

40. Do you consider any person poor in your community? b. Yes b. No

……

41. Why do you consider that person to be poor.…… ……

……

42. Do you consider any person to be rich within your community? a

……

43. Why do you consider that person rich? ……

……

44. How would you describe your status? a. Rich b. Poor

45. Give reasons for your answer……

……

B: HOUSEHOLD ROSTER (Reference Person)

	USUAL RESIDNETS AND VISITORS	RELATION SHIP TO HEADS OF HOUSEHOLD	SEX	AGE	REL IGIO N	ETH NICI Y
Per No.	Please indicate first name of all the persons who belong to this household. Please start with your self	What is his/her relation to you? Interviewer see codes below	Sex Interviewer: fill in sex 1. Male 2. Female	AGE How old is [NAME] Report age in complete years **888 DK**	Relig ion (SEE COD ES)	Ethnic Group (SEE CODES)
46	47	48	49	50	51	52
01						
02						
03						
04						
05						
06						

CODE FOR 48: RELATIONSHIP TO HEAD

01 Head	05 Parent
02 Wife/Husband/Partner	03 Son/Daughter
04 Son in law/ Daughter in law	06 Brother/Sister
07 Father in law/ Mother in law	10 Not related
08 Brother in law/ Sister in law	09 Other relative
08 Parent in law	12 Grand children
11Adopted/Forster child	13 Live in Servant
88 Don't Know	

CODE FOR 51: RELIGION

01 Catholic
02 Protestant
03 Other Christian
04 Moslem
05 Traditional
06 No religion
07 Other
(specify)……

CODE FOR 52: ETHNICITY

01 Fanti	05 Guan
02 Other Akan	06 Mole-Dagbani
03 Ga/Adangbe	07Other Northern
04 Ewe	88 Don't Know
08 Other (specify)	

(Reference Person)

LINE NO.	NAME	OCCUPATION	IF AGE 6+LITERACY/EDUCATION		
	Repeat names	Occupation	Can [NAME] read and write in any language 1 Yes 2.No 8. DK 9. NA	Has [NAME] ever been to any kind of school, including koranic school 1 Yes 2.No 8. DK 9. NA	What is the highest level of school [NAME] completed ? (See codes)
46	**47**	**53**	**54**	**55**	**56**
01					
02					
03					
04					
05					
06					

CODE FOR 56 : EDUCATION
00 None
01 koranic
02 Primary
03 Middle/JSS
05 Higher
88 Don't Know
99 Not Applicable

CODE FOR 53: OCCUPATION
01 Farmer
02 Fisherman/fishmonger
03 Merchant/trader
04 Driver
05 Mechanic
06 Carpenter
07 Tailor/seamstress
16 Retired/Pensioner
08Hairdresser/Barber
09 Daily labourer
10 Student/pupil
11Teacher
12 Civil Servant
13 Other professional
14 Apprentice
15 unemployed
17 House wife/ house husband
18 Other (Specify)…….
99 Not Applicable

LIVING QUARTORS/HOUSEHOLD RESOURCES

57	Type of dwelling	A whole flat in apartment building……..……..01 A whole family house…… ……....02 Individual or collective compound…….……... 03 A part of compound house…… ….04 A part of flat/ family house (not in employers house)……05 A boarding house…… …….....06 Public or private dormitory…… …….07 Accommodation in your employer's house……....08 Other accommodation at your work place……..09	Q

		An improved dwelling ……. ...10 No fix accommodation…… …….11 Other (specify)…… ……..…99	
58	Is this house unit (set of rooms) owned, rented, or live free?	Own…… ……..21 Rented…… ……..22 Live in free (not owned, but not rent being paid)……23 Other arrangement (specify)…… ……...99	
59	How many rooms are available for this household?	1…… ……31 2…… ……32	

		3…… ……33 4…… ……34 5…… ……35 Other (Specify)…… ……99	
60	How many rooms in your household are used for sleeping?	ROOM FOR SLEEPIG…… ……..	
61 **62**	On the average how many people share a room?	1 41 2 42 3 43 4 44 5 45 Other 99	
63	What kind of materials has been used for building his house?	Sandcrete…… ……..41 Landcrete…… ……..42	

		Burnt brick……..43 Swish……44 Wood……45 Corrugated metal/aluminium sheet……46 Other(specify)……99	
64	Material used for roofing of this house?	Tiles……51 Asbestos sheet……52 Corrugated metal/ aluminium sheet…….....53 Concrete (cement)……54 Thatch……...55 Bamboo…….....56	

		Other (specify)…… ……..99	
65	Material used for floor of this house?	Tiles…… ……...61 Cement…… ……...62 Wood…… …….63 Mud/earth…… ……...64 Parquet/Polish wood…… ……...65 Carpet…… ……..66 Other (Specify)…… ……...99	
66	What is the main source of drinking water for your household?	**PIPE WATER** Piped into household/compound…….…… …….71	

		Public house/Neighbors house…….72 **Well Water** Well in house/compound……..73 Public well (outside house)…….74 Bore hole……..……75 **SURFACE WATER** Spring, river, stream, pond, lake, dam, or dugout……76 **RAIN WATER** TANKER TRUCK……..…77 WATER SACHETS (‘PURE WATER)……..…78 BOTTLE (MINERAL)WATER…….79	

		OTHER (SEPCIFY)…… ……99	
67	What is the main source of water your household uses for other purposes including dish washing and laundry?	PIPE WATER Piped into household/compound…….…… …….71 Public house/Neighbors house…….72 Well Water Well in house/compound…… …….73 Public well (outside house)…… …..74 Bore hole…… ……..……75 SURFACE WATER Spring, river, stream, pond, lake, dam, or dugout…….76 RAIN WATER	

		TANKER TRUCK……..…77 WATER SACHETS (‘PURE WATER)…….. 78 BOTTLE (MINERAL)WATER…… ……..…… 79 OTHER (SPECIFY)……99	
68	How long does it take to go there, get water, and come back?	Distance ……. Time (minutes)…….. NA (Water on premises)…… ……99	
69	What toilet type does your household usually use?	FLUSH TOILET OWN WC…….11	

		SHARED WC……...12 PIT TOILET/LATTRINE TRADITIONAL PIT LATERINE……13 VENTILATEDIMPOVED PIT (KVIP) LATRINE……....14 BUCKET/PAN……...15 NO FACILITY/BUSH/FIELD/BEACH……16 OTHER (SPECIFY)……...99	
70	What type of energy does your household use for lightning?	01. Electricity 02. Kerosene 03. Gas 04. Other	
71	What type of fuel does your household	CHAROAL……1	

	usually use for cooking/heating? RECORD ONLY ONE TYPE OF FUEL	FIREWOOD…… ……..2 KEROSINE…… ……3 SAW DUST…… ……...4 GAS…… ……5 ELECTRCITY…… ……6 OTHER (SPECIFY)…… ……7	
72	Does your any member of your household own any of the following a. Canoe/Boat? b. Farmland?	YES NO 1 2 (Go to)	**Q**
73			

	Where does your household usually dispose of its solid waste?	PIT IN COMPOUND ……..……..…. …..1 PUBLIC REFUSE BIN…….……. …….2 PUBLIC REFUSE DUMP…….…… …….3 BUSH…… ……..……..4 BEACH…… ……..……5 LAGOON…… ……6 GUTTERS…… ……7 INDISCRIMINTELY…… ……8 OTHER (SPECIFY)…… ……..…...99	

74	Where does your household usually dispose of its liquid waste?	PIT WITHIN COMPOUND……1 BUSH……..2 BEACH……..3 LAGOON……4 GUTTERS……5 INDISCRIMINTELY……6 OTHER (SPECIFY)……..99	

SOCIO-ECONOMIC CONDITIONS OF THE HOUSEHOLDS

C1: HOUSEHOLD EXPENDITURE WITHIN THE LAST 4 WEEKS

ITEM	SELF	SPOUSE	OTHER(S)	TOTAL
Rent				
Electricity				
firewood/charcoal				
Gas				
Kerosene				
Water				
Transportation				
Food				
a. fish, meat				
b. soup ingredients				
c. cereals				
d. carbohydrates				
e. other items				
School fees				
Clothing				
Health (fees, drugs)				
Remittances				
Donations/dues				
Funerals				
Tithes				

Loans				
Maintenance of equipment				
Payment of credit				
Taxes on business				
Other payments				
Toiletries eg. soap				
Others				
Total				

C2: HOUSEHOLD INCOME WITHIN THE LAST 4 WEEKS

SOURCE	**SELF**	**SPOUSE**	**OTHER(S)**	**TOTAL**
Salary/wages				
Remittance from children				
Remittance from relatives				
Farming: crops				
Livestock				
Fishery				
Trading				
Transport				
Lottery				
Firewood/charcoal				

Interest from money lending				
Loan receipts				
Other 1 (rent, dividends)				
Other 2 (inheritance)				
Other 3				
Other 4				
Totals				

C3 ECONOMIC CONDITONS OF HOUSEHOLD (REFERENCE PERSON MAN/WOMAN QUETIONNAIRE)

Would you please tell me if the following items are owned by any of the members of the household in this house Ghana or access on common with others					**C.4** Was this article bought in the past twelve months?
OWN ACCESS	**ELC. ACCESS**	**COMMON**		**NO**	**YES** **NO**
a. Radio	1	2	3	0	
b. Television	1	2	3	0	1
c. Video Deck	1	2	3	0	0
d. Telephone	1	2	3	0	1
e. Electric or Gas Stove	1	2	3	0	0

f. Refrigerator	1	2	3	0	1
g. Clock or watch	1	2	3	0	0
h. Sofa or chair	1	2	3	0	1
i. Bed with form mattress	1	2	3	0	0
j. Hand Truck	1	2	3	0	1
k. Bicycle	1	2	3	0	0
l. Motor cycle or motor bike	1	2	3	0	1
m. Car/jeep/truck	1	2	3	0	0
n. Tractor	1	2	3	0	1
o. Seaworthy boat or Canoe	1	2	3	0	0
p. Fishing net	1	2	3	0	1
q. Outboard Motor	1	2	3	0	0
r. Lounge Suite	1	2	3	0	1
s. Sewing machine	1	2	3	0	0
t. Table	1	2	3	0	1
u. Freezer	1	2	3	0	0
v. Adult goat	1	2	3	0	1
w Adult sheep	1	2	3	0	0
x Poultry	1	2	3	0	1
					0
					1
					0
					1
					0

	1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0

C.5: ECONOMIC CONDITONS OF HOUSEHOLD (REFERENCE PERSON MAN/WOMANQUETIONNAIRE) CONT'D

NO.	QUESTION	RESPONSES	SKIP TO
69	Does any member of the household own non farm business?	**YES** 1 **NO** 2 **DON'T KNOW** 8	
70	What kind of business is this (the main)		
	Forestry	1 2 8	
	Fishing	1 2 8	
	Manufacturing (making something to sell other than handicraft)	1 2 8	
	Construction	1 2 8	
	Hotel and restaurant	1 2 8	
	Service repair	1 2 8	
	Transport and communication	1 2 8	
	Petty trading	1 2 8	

		1 2 8 1 2 8 1 2 8	
71	On the average per day/week/month/year, what was the net household income? Did it amount in the total to (READ categories) 1.Day 1 week 1 month 1 Year	Day Week 1. Less than 5000 cedis Less than 20,000 cedis 2. 5000-9,999 20,000-49,000 3. 10,000-19,999 50,000-99,999 4. 20,000-49,999 1000,000-199,999 5.More than 50,000 More than 200,000 Month Year 1. Less than 50,000 cedis Less than500,000 cedis 2. 50,000-150,000 500,000-999,999	

		3. 150,001-250,000 1,000,000-4,999,999 4. 250,001-500,000 5,000,000-9,999,999 5.More than 500,000 More than 10,000,000	
	Do you or any member of your household have any debts at the moment? For instance, a loan for a house, or for medical aid, or fiancé moving from abroad to live here?	Yes No (Go to) In total approximately how much money has been borrowed by your households? I will read you the category in cedis 1. Less than 500, 000 2. 500, 000-2,000,000 3. 2,000,000-4,000,000 4. 4,000,000-10,000,000 **5.** More than 10,000,000	
	Apart from the debts you just mentioned, did your	Yes No (Go to)	

	household buy on credit during the past twelve months?	In total approximate for how much money items were bought on credit by your household? I will read you the category in cedis 1 Less than 500, 000 2. 500, 000-2,000,000 3. 2,000,000-4,000,000 4. 4,000,000-10,000,000 5. More than 10,000,000	
	In the past twelve months, did your household manage to save any money?	Yes No (Go to) 1 Less than 500, 000 2 500, 000-2,000,000 3 2,000,000-4,000,000	

		4 4,000,000- 10,000,000 5. More than 10,000,000	
	Overall, is the financial situation of the household better than or worse off than 2000?	Better than 2000……..1 Worse off than 2000……2 Same as 20000……..3	

D. Incidence of Disease of the Last month preceding the survey

Disease	D1. Number of HH member contracting it	D2. State the no. of times being infected in the past month	D3. How treated
Malaria	[ ] [ ] [ ]	[ ]	[ ] [ ]
Typhoid	[ ] [ ] [ ]	[ ]	[ ] [ ]
Diarrhoea	[ ] [ ] [ ]	[ ]	[ ] [ ]
Guinea worm	[ ] [ ] [ ]	[ ]	[ ] [ ]
Scabies	[ ] [ ] [ ]	[ ]	[ ] [ ]
Poliomyelitis	[ ] [ ] [ ]	[ ]	[ ] [ ]
Ringworm	[ ] [ ] [ ]	[ ]	[ ] [ ]
Other (Specify)……	[ ] [ ] [ ]	[ ]	[ ] [ ]

CODE FOR D1.
01 self
02 Spouse
03 Child of reference person
04 Father/mother of reference person
05 Brother /sister of reference person
06 Father/mother in law
07 Brother /sister in law
08 Son/daughter in law
09 Other relative
10 Live in Servant
11Adopted/Forster child
12 Grand children
13 Not related
14 Other (Specify)…….
88 Don't Know

CODE FOR D3

01 Self medication drug
02 Self medication herb
03 Consulted health personnel /doctor
04 Consulted health personnel /nurse
05 Pharmacist/drug store owner
06 Prayers
07 Consulted herbalist
08 Magic/juju
09 No medication

Mortality: Death in household in the last 12 months

Line No.	**D3** Please indicate the first name of all the people who have died in this household in the last 12 months	**D4** Age	**D5** Cause of death	**D6** Date of birth Month Year	**D7** Sex: 1.Male 2. Female	**D8** Date of Death Month Year
01				[ ][ ] [ ][ ]	[ ]	[ ][ ] [ ][ ]
02				[ ][ ] [ ][ ]	[ ]	[ ][ ] [ ][ ]
03				[ ][ ] [ ][ ]	[ ]	[ ][ ] [ ][ ]
04				[ ][ ] [ ][ ]	[ ]	[ ][ ] [ ][ ]
05				[ ][ ] [ ][ ]	[ ]	[ ][ ] [ ][ ]
06				[ ][ ] [ ][ ]	[ ]	[ ][ ] [ ][ ]

E. Consumption

This section is purposely for collecting data on the food intake and the source of food consumed by the household. Please give us the intake for the day or week which ever you can easily remember. [Interviewer: indicate if it is for a week or day]

Food items consumed per day/week (average) and the source(s)

Food	Major Season		Minor Season	
	E1 Per day (Indicate quantity)	E2 Per week (Indicate quantity)	E3 Per day (Indicate quantity)	E4 Per week (Indicate quantity)
i) Grain and cereals				
Bread				
Rice				
Millet				
Dry corn flour				
Other(s)				
ii) Beans, Nuts and Pulse				
Groundnuts				
Cowpea				
Palm nuts				
Other(s) nuts				
iii) Starchy Food				
Plantain				

Yam				
Cassava				
Gari				
Konkote				
Sweet Potatoes				
Sweet Potatoes				
Other starchy food				
v)Fruits and vegetables				
Orange				
Banana				
Pineapple				
Pawpaw				
Mango				
Tomatoes				
Onions				
Pepper				
Okro				
Garden eggs				
Nkuntomire/Green leaves				
Vi) Fats and Oil				
Palmoil				
Groundnuts oil				

Kernel oil				
Coconut oil				
Other (Specify)…….				
Vii) Animal **Product**				
Goat meat				
Mutton				
Beef				
Pork				
Chicken				
Snail				
Fish				
Crab, Lobsters				
Eggs				
Milk				
Other (Specify)……				