SCHOOL OF PUBLIC HEALTH
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AVAILABILITY AND UTILIZATION OF HEALTH CARE SERVICES AND THE HEALTH-RELATED QUALITY OF LIFE OF OLDER ADULTS IN GREATER ACCRA

BY

CECILIA ELIASON

(10191674)

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DECLARATION

I certify that this thesis has not been submitted for any degree and is not being submitted as part of candidature for any other degree.

I also certify that the thesis has been written by me and any help received in writing this thesis and all resources used have been acknowledge.

.....

CECILIA ELIASON

(Candidate)

26/03/2019

DATE

.....

PROF. RICHARD M. ADANU

(Principal Supervisor)

26/3/2019

DATE

.....

PROF. AUGUSTINE ANKOMAH

(Supervisor)

26/03/2019

DATE

.....

DR. AMOS K. LAAR

(Supervisor)

DATE 26/3/19

DEDICATION

This thesis is dedicated to God and my family

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ABSTRACT

Background

Although ageing is a desired phenomenon, it is associated with health-related challenges which affect the quality of life of older adults. These increase the demand for health care services as a growing number of older people are living with chronic diseases and disabilities. This study assessed the availability and utilization of health care services and the health-related quality of life of older adults living in Greater Accra region in Ghana.

Methods

It was a cross-sectional study using quantitative and qualitative approaches. The survey involved a total of 500 older adults aged 60 years and above, residing within the catchment areas of six selected health facilities in Greater Accra and assessed the factors influencing utilization, health-seeking behaviour, and health-related quality of life. The qualitative aspect explored the availability of health care services for older persons through key informant interviews with eleven curative and preventive health professionals working in the s ix selected health facilities. Thematic content analysis was employed in the qualitative data analysis. The survey utilized an integrated questionnaire that included health care utilization, health-seeking, and SF-36 Health survey for health-related quality of life among community-dwelling older adults. Descriptive, bivariate and multivariate logistic regression analyses were employed to examine the associations between population characteristics, use of health care services, health-seeking behaviour and health-related quality of life.

Results

Four major themes emerged from the key informant interviews that included; accessibility of services, availability of special services for older persons, affordability of health services and knowledge of policy for care of older persons. Dedicated services for older adults did not exist. However, some general curative and preventive services were available in the existing formal health system. Also, knowledge of the existence of a policy framework for older persons was inadequate among health workers. Utilization of healthcare was good (65%) among older adults. Determinants of utilization were age, residential status, source of income, employment, benefit from government, health status rating and diagnosed with chronic disease. Majority of the respondents (89%) intended to seek treatment from the hospital and did so when they fell sick. Employment status of the older person influenced their health-seeking behaviour. The overall health-related quality of life was good (mean score 57.5) despite the low physical health component score (43.8). The predictors of overall health-related quality of life were marital status, a rating of current health status, diagnosed with chronic disease and utilization of health care service.

Conclusion

Dedicated health care services for older adults were not available in the formal health system. Utilization of health care services was good. Majority of older adults sought health care from hospitals when they fell ill. Overall health-related quality of life was good, but the physical health functioning was limited. Population characteristics and utilization of health care services were significantly associated with health-related quality of life but health seeking behaviour was not. This study recommends that a dedicated service for the older adults need to be instituted. This may provide the basis for health management of older persons and will also help the central and local

government to devise appropriate health intervention strategies to improve and promote the health-related quality of life of older persons.

Key words: Older adults, health care service utilization, health seeking behaviour and health related quality of life

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LIST OF ABBREVIATIONS AND ACRONYMS

BM	Behavioural Model
CBHCMS	Community Based Health Care Management System
EBM	Emerging Behavioural Model
GHS	Ghana Health Service
HICs	High-Income Countries
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HRQOL	Health-Related Quality of Life
HSU	Health Service Utilization
IECT	Information Education Communication and Training
IN-DEPTH	International Network for the continuous Demographic Evaluation of Population and Their Health in developing countries
LMICs	Low- and Middle-Income Countries
MCS	Mental Component Score
MOH	Ministry of Health
NCDs	Non-Communicable Disease
NHIS	National Health Insurance Scheme
PCS	Physical Component Score
PHC	Primary Health Care
QOL	Quality of Life
RHMT	Regional Health Management Team
SAGE	Study on Global Ageing and Adult Health
SDG	Sustainable Development Goals
SSA	Sub Saharan Africa
UN	United Nations
UNFPA	United Nations Population Fund
WHO	World Health Organization
WHOQOL	World Health Organization Quality of Life

CHAPTER ONE

1.0. INTRODUCTION

Ageing is a normal, progressive, and irreversible process that affects individuals, families, communities, and societies universally (AlShaali & Al Jaziri, 2015). According to Harman (2006), it is a phenomenon characterized by deterioration in the ability of individuals to function optimally and results from advancement in age and changes in structure and function. Ageing changes are attributed to multiple factors including genetic defects, development, inborn ageing process environment and disease which affect the human life expectancy at birth (Harman, 2006).

Moorley and Corcoran (2014) assert that the relevance and contribution of individuals to the fabric of society fades as they age. These observations they attributed to reduced functional status, disability, lack of community services, inaccessible transportation, lack of affordable housing, loss of meaningful relationships and personal desire to withdraw from society (Moorley & Corcoran, 2014).

1.1. Background

The United Nations reports on ageing indicate that in 2017, there were 962 million people aged 60 years and over, this comprised 13% of the world's population(United Nations, 2016). The rate of growth of persons aged 60 years and above is estimated at 3% annually. It is conjectured that by 2030, the number would be 1.4 billion and in 2050 it would be 2.1 billion and this could increase to 3.1 billion in 2100 (United Nations & Social Affairs, 2013). Global life expectancies are predicted to increase to 83 years in high-income countries (HICs) and 75 years in low-income and middle-

income countries (LMICs) by 2050 (Chatterji, Byles, Cutler, Seeman, & Verdes, 2015).

In low and middle income countries (LIMCs), the population of older persons is estimated to increase from 554 million in 2013 to nearly 1.6 billion by 2050 (United Nations & Social Affairs, 2013). Consequently, this estimated increase in the ageing population would result in the annual growth rate of low and middle income countries to thrice that of high income countries in the world (Chatterji et al., 2015; Suzman, Beard, Boerma, & Chatterji, 2015; The Lancet, 2000).

The issue of ageing societies which was thought to be a phenomenon occurring in only industrialized western countries has become an issue in the low and middle income including Sub-Saharan Africa (SSA)(United Nations, 2016). Life expectancy at birth in SSA rose from 36.7 years in the 1950s to 48.4 years in 2005 and this is estimated to reach 68 years during the 2045-2050 (Darkwa, Mazibuko, & Candidate, 2002). In LMICs, older persons are ageing at faster rates than for HICs, with deterioration in the health of the older population (Aboderin & Beard, 2014).

Ageing is a global public health concern. Challenges associated with population ageing can be addressed by changes in policies and behaviour, especially those that promote healthy ageing (Aboderin & Beard, 2014). Consequently, the demographic changes in the aged population occurring alongside globalization and socio-economic barriers, degenerating cultural values and morals, growing HIV/AIDS epidemic and increasing burden of non-communicable diseases, calls for urgent policy interventions to reduce the negative impact on low and middle-income countries (Azevedo & Johnson, 2011; Ministry of Employment and Social Welfare, 2010).

Globally, the United Nations (UN) and its agencies play key roles like drawing the attention of the international community to population ageing. The UN held its first assembly on ageing in Vienna in 1982 (United Nations & Social Affairs, 2013). A chain of global conferences were held by UN in the 1990s and the year 1999 were designated as 'The Year of the Older Person' with the institutionalization of October 1st as the date of the aged (Aboderin, 2004b; Apt, 2012).

These conferences resulted in the adoption of an International Plan of Action on ageing in 2002, in Madrid, at the second UN Assembly on the aged. This signalled the beginning of discourse of population ageing in Africa (Apt, 2012). The main element of the Madrid Plan of action requires governments to address the needs of the aged, such as improvements in health, living arrangements, nutrition and access to social amenities among other things which contribute to the human development of every country (Apt, 2012; GSS, 2013).

As a result, the importance of issues related to population ageing has been recognized at the international, regional, sub-regional, and national levels. The African policy framework and plan of action on population ageing was inaugurated in December 2004 and adopted by Heads of state and governments of the Organizations of Africa Unity (OAU) (now known as African Union) to bring out the awareness of the needs and welfare of older persons on the continent (Tawiah, 2013). The main focus of the policy and framework is to direct the African Union Member States to institute, monitor and evaluate suitable integrated national policies, and programmes, to address the individual, and collective needs of older persons (Kwankye, 2013; Ministry of Employment and Social Welfare, 2010).

The number of older persons in Africa is expected to increase from 5.7million to 182.6 million by 2050 (Mboya, Jarre, & Bridel, 2002) with the largest population of older people living in West Africa especially in Nigeria and Ghana (Aboderin & Beard, 2014).

As people grow older, their need for health care increase (Araujo de Carvalho et al., 2015). Ageing is a time of multiple illnesses; chronic diseases such as arthritis, rheumatism, vascular lesions of the central nervous system including stroke, heart conditions, high blood pressure and disability are excessively high among older people (Debpuur, Welaga, Wak & Hodgson, 2010). In addition, most older people, particularly women, are faced with poor shelter, isolation, inadequate healthcare, inadequate and insecure income (Mba, 2013).

There is an increase of multimorbidity (two or more long-term disorders) among 65% of older people aged between 65-84 years, and 82% of people aged 85 years (Barnett et al., 2012). These increase in multimorbidity among older persons represent a challenge for the health care system (Council & Population, 2001). Older persons face a great burden of morbidity and disability from chronic diseases compared to young adults. Aboderin and Beard (2014) carried out a preliminary analysis of the Global Burden of Diseases and identified nutritional deficiencies, cirrhosis of the liver, diabetes, cardiovascular and circulatory diseases among aged population (Aboderin & Beard, 2014; Murray et al., 2012). These has implications for the quality of life of older persons, especially in settings where health care delivery is inadequate.

The availability of health care service for the aged population varies across countries. Health care delivery for the aged in high-income countries is delivered by well-equipped public health facilities and nursing homes (Chukwudi, Uyilewhoma, &

Chukwudi, 2015). Older adults in the United States of America have access to primary care visit, hospital consultation, home care services and nursing home beds (Kleinpell, Fletcher, & Jennings, 2008; Latham & Ackroyd-Stolarz, 2014). Also, the average number of visits older persons make to their doctor is an average of eight times per year as compared to the average five visits per year made by the general population (Thompson, Robinson, & Beisecker, 2004).

Similarly, studies in Estonia found that 80% of older persons had visited a general practitioner or specialist within a year (Alkhawaldeh et al., 2014), while in Canada, the average number of health care services utilization such as specialist physician visits, emergency department visits, inpatients admissions, drug claims, laboratory claims, X-rays, CT scans, MRI scan) was 70.3 events for adults aged 65 years and above within a year (Nie, Wang, Tracy, Moineddin, & Upshur, 2008).

In contrast, in low-and middle- income countries, families had traditionally provided health care support which is less reliable (Kwankye, 2013). In addition, the utilization and availability of health care services among older persons are poorly reported (Osuchukwu et al., 2015). In Uganda for instance, about half of older people used informal care such as traditional healers with about 20% considering their illness to be mild so did not require health care. Twenty percent also had financial barriers, and 6% complained of unavailability of quality of care (Wandera, Kwagala, & Ntozi, 2015). In Ghana, a study by Exavery and colleagues reported that one-third older people (31.5%) had used the health care services in the last three years (Exavery & Klipstein-Grobusch, 2011).

It is estimated that adults 65 years and older account for 43% of all hospital admissions and 38% of hospital discharges (Fox et al., 2012) in HICs. Similarly, studies have found out that older patients were significantly more dependent and had greater total nursing care needs and were less likely to be discharged home (Ellenbecker, Samia, Cushman, & Alster, 2008; O'Connell, Hawkins, Baker, & Ostaszkiewicz, 2011). Paradoxically, in sub-Saharan Africa older people have less utilization of health care services than younger people (Aboderin & Beard, 2014).

In traditional African societies, care of older adults is considered the responsibility of the family (Eboiyehi, 2010). With the absence of formal social support systems, care and support for the aged adults are rendered by close relatives in the form of provision of accommodation or living with their relatives, money for their upkeep and health care (Eboiyehi, 2010). The older persons are seen as core of civil society fabric and play a significant role in bridging relations made tense by poverty, war and conflict (Apt, 2002). In Asia, Latin America, and Africa, traditional care systems are rooted in complex family systems, that include reciprocal and assistance among the generations with older people at the receiving end and also playing an active role (Apt, 2002).

However in sub-Saharan Africa, rapid urbanization, migration and privation have influenced relationship between generations and also within communities (Apt, 1996; Apt, 1994). In addition, dignity, and respect for the aged amongst family members would sooner than expected wane off and older adults would be expected to cater for themselves (Apt, 2012). These will affect the situation of older person, as a result of the changes caused by ageing since there is often a greater need for assistance with daily activities and personal care (AL-Omari, 2014).

The health care of the aged constitutes a significant unmet need (Wandera et al., 2015). Ageing and health are growing concerns in the discourse on ageing in sub-Saharan Africa. Two major concerns emerge: firstly, the vulnerability of older persons to detrimental health outcomes which includes a high prevalence of non-communicable diseases and disabilities, and secondly limited access to health care (R. Andersen & Newman, 2005a). This is an indication that the care of the aged has not been fully integrated into primary health care. There is therefore the need for the care of the aged to be addressed by both policymakers and programme implementers. Health needs in terms of use of health care services among older persons showed poorly organized, and inadequate home care, as part of primary health care service (Abdulraheem & others, 2007).

Health care services utilization among the aged is influenced by several factors including structural(location and its relationship to access to public transport), administrative (how efficiently the health facility is being manged and organized) cost of health care, and health-seeking of the people (Manzoor, Hashmi, & Mukhtar, 2009). With an increasing aged population, the use of health care services among older adults requires a better understanding of factors influencing patterns of health care service utilization (Alkhawaldeh et al., 2014).

1.1. Statement of Problem

The population of older persons in Ghana has increased more than seven-fold between the 1960 and 2010 population census (WHO, 2014). It is expected that the probability of reaching 65 years would increase to about 50%. These facts combined with the 2.4% annual population increase in Ghana (National Population Council, 2011) means that quality of life for the aged is a subject that cannot be ignored or overlooked.

Improving access to health care services for the aged is important in eliminating disparities in health care and enhancing the quality of life for current and future aged populations (Yagoda, 2005).

Health care remains a major challenge for the older adults in Ghana as they have a greater incidence of chronic illnesses. A study in Ghana by Araujo de Carvalho et al (2015) identified some priority problems among the older adults including: undiagnosed and untreated hypertension; functional impairment and social isolation; poor utilization of health care services by older people; inadequate preparedness of the health workforce to care for older people; high rate of sensory impairment (visual impairment and hearing loss), for which the following interventions were proposed: sensitization of communities to the health needs of older adults; building health workforce capacity at all levels to care for the aged; creation of age-friendly health facilities; broadening insurance coverage to cover a wide range of services for the aged; provision of hearing and visual improvement devices for people in need and creating and empowering support groups to assist with screening, education, management and care of older people in communities (Araujo de Carvalho et al., 2015; Valtorta, Moore, Barron, Stow, & Hanratty, 2018).

Furthermore, access to basic health care services remains a key issue for the older population in Ghana. The World Health Organization's study on global ageing adults (WHO SAGE IN-DEPTH) in Ghana, reported that the proportion of aged who needed health care in the last three years increased with increasing age while quality of life worsened with increasing age; urban residents needing more care than rural residents (Awoke et al., 2017). The increasing prevalence of chronic illness among the aged population and its negative impact on their quality of life makes the availability of

health care services for the aged even more important if the quality of life of the aged can be improved (Awoke et al., 2017).

Currently, there is no evidence to show that the interventions proposed by the National Ageing policy have been implemented. Neither are there any evidence to show improvement in health care services nor increasing utilization by the aged. Moreover, there is inadequate implementation of strategies to address health needs and improve the quality of life of the older adults. In addition, there is a paucity of research linking health service availability, utilization and health-seeking behaviour with the health-related quality of life of the aged in the Ghanaian context.

1.2. Theoretical Framework

This study was underpinned by the Emerging Behavioural model (EBM) - phase 4 of health service utilization proposed by Andersen (1995). The behavioural model (BM) was initially developed to study characteristics of individuals and families. To determine the utilization of health services, define and measure equity in access to health care and to guide policy development that promotes equitable access (Andersen, 1968). The model was also initially designed to explain the use of formal health service rather than on health outcomes (Andersen, 1995).

The EBM reveals the multiple influences on health services use and health status (Andersen, 1995). It also includes feedback loops showing that outcome, in turn, affects subsequent predisposing factors and perceived need for services as well as health behaviour (Andersen, 1995). The model defines the use of health care services as a function of one's predisposition to use services, factors which enable or impede

use and their need for care. It consists of three categories of determinants: predisposing characteristics, enabling characteristics and need based characteristics.

According to Andersen, the predisposing characteristics determine the fact that an individual is more or less likely to use health services based on demographic characteristics, position within the social structure and belief in benefits of the use of health services (Andersen, 1995). An individual who believes that health services are useful for treatment will likely utilize those services. The demographic characteristics including age, gender marital status and family size and past illness represent biological essentials suggesting the likelihood that people will need health services (Andersen, 1995). The model asserts that individuals with different demographic characteristics have different types and amount of illness resulting in different patterns of utilizing health care services (Wolinsky et al., 1983).

The social structure is measured by a broad array of factors that determine the status of a person in a community, his or her ability to cope with presenting problems, and commanding resources to deal with this problem and how healthy or unhealthy the physical environment is likely to be. The measures used to assess social structure include education, occupation, social network, employment, family size, religion and ethnicity. Individuals with different social structural characteristics have different lifestyles resulting in different patterns of health services utilization (Gelberg, Andersen, & Leake, 2000).

The enabling characteristics in the behavioural model reflect the fact that, while the individual may be predisposed to use health services, he or she will not use these services unless able to do so (Andersen, 1995; Andersen, Davidson, & Baumeister,

2013). The ability to use health services depends on one's family resources including income/socioeconomic, health insurance, type of regular source of care and access to regular source of care and community level resources such as ratios of health care providers and facilities available to the population, the cost of health care services, region of the country and urban/rural residence.

The behavioural model stipulates that even in the presence of the appropriate levels of the predisposing and enabling characteristics, individuals perceive some need for using health service (Ronald Max Andersen, 2008). Need is usually measured by self-report of symptoms, functional limitations or perceived health levels (Andersen & Newman, 2005). In other words, need is the basic and direct stimulus for the use of health services when the appropriate levels of predisposing and enabling characteristics exist.

The inclusion of the health care system in the model elucidates the important determinants of population's use of services and its pattern of use over time. In addition, it gives recognition to the significance of national health policy, resources and the organization of the health care system. Furthermore, it recognise health personnel, types of health services, and availability of health facilities in the communities where people can have access to the services, and make use of them (Rebhan, 2008; Andersen, 1995). Resources comprise the volume and distribution of both labour and capital, including education of health care personnel and available equipment. Organization refers to how a health care system manages its resources, which ultimately influences access to and structure of health services. The External environment includes the physical, political, and economic components that have an important input for understanding utilization of health services.

The model further depicts that health behaviours determine health outcomes. These health behaviours include personal health practices such as health-seeking behaviours, belief, attitudes, values and knowledge that people have about health and health services, which influence their subsequent perception of need and use of health services (Andersen, 1995). The outcomes of the model include the perceived and evaluated health status (measured by the health-related quality of life) and consumer satisfaction (Rebhan, 2008).

Health-Related Quality of Life (HRQOL) is part of QOL and is considered to be an important construct in describing one's overall health status (Dai, Jia, & Liu, 2015). It is a multidimensional construct with several domains and relevance to virtually all areas of human function. QOL is the subjective evaluation of an individual's ability affected by physical, mental, and social potential. It is able to convey the overall well-being and includes aspects such as happiness and satisfaction with life as a whole (Kirchengast & Haslinger, 2008).

The core domains of HRQOL which follows the WHO definition of health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Also considers the physical emotional mental social aspect of health. The WHO Quality of life group defined HRQOL as "a multidimensional construct covering physical, emotional, mental, social, and behavioural components of well-being and functioning as subjectively perceived by a person, depending on the cultural context, and value system one is living in" (WHOQOL, 1993).

The Andersen model is useful because of its flexibility in allowing researchers to choose independent variables related to their specific hypotheses. Furthermore, the

adaptations of the model to study different outcome variables in later life, spanning the utilisation of health care (Wolinsky & Johnson, 1991), formal social care (Bass & Noelker, 1987) and informal care (Gaugler & Kane, 2001) demonstrates its usefulness for gerontological research. This model has been used extensively to predict health care use since its inception more than 40 years ago (Phillips, Morrison, Andersen, & Aday, 1998).

The relationship between the use of health care services and HRQOL among older people has been studied from several perspectives, with a focus on HRQOL as a predictor of health care utilization (Borglin, Jakobsson, Edberg, & Hallberg, 2005; Gallegos-Carrillo et al., 2008). It has been questioned whether low HRQOL levels are associated with high service usage rates, and results have consistently revealed a positive association among numerous populations. However, other studies have found a negative correlation between the use of health care services and HRQOL levels in aged people (Lam, Fong, Lauder, & Lam, 2002)(Lam, Fong, Lauder & Lam, 2002; Parkerson et al., 2005).

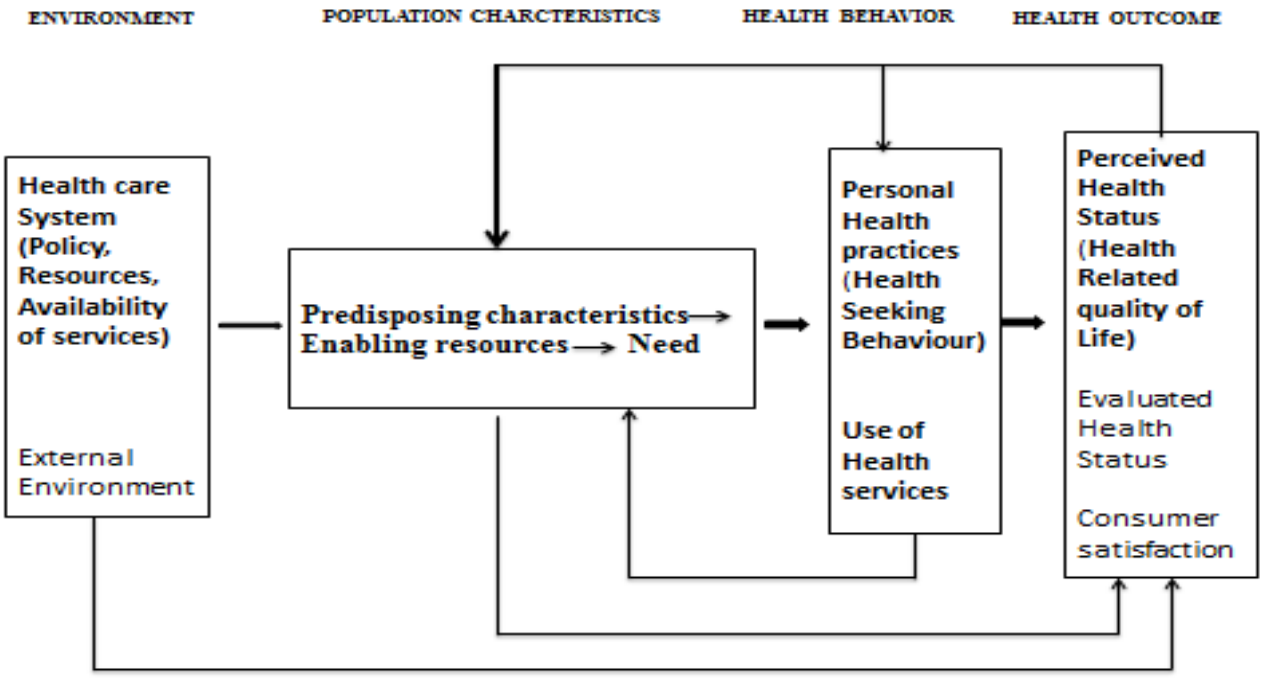

Figure 1: Andersen's Emerging Behavioural Model of Health Services Utilization (Phase 4)

Source: Andersen, 1995

1.3. Justification of the Study

Ghanaians are living longer and the proportion of the population older than 60 yeras is projected to reach 12% in 2050 from close to 7% in 2010. The Government of Ghana in 2010 approved a national policy on ageing and two years later sought support from WHO in moving from policy to practice.

The World Health Organization country assessment report on ageing and health in Ghana identified inadequate health-care infrastructure, insufficient supply of medicine, lack of health-care facilities and providers for the needs of older adults (World Health Organization, 2014). At the facility level, factors that influenced delivery of health care to older adults there were contextual, clinical and system challenges. These include: poor patient attendance at health clinics; short consultation

time with physicians /health workers leaving little or no time for patient education; an inadequate number of staff; limited staff training on the issues of older people; and almost non-existent formal patient education (World Health Organization, 2014). In addition, rural settings have fewer health care providers, long distance to health facilities, and transportation challenges (Sodzi-Tettey & others, 2014; WHO, 2014).

Knowledge of factors influencing utilization of health care services among the older people in Ghana will be useful for designing effective approaches to enhancing longevity and improving the quality of life of the aged. Assessing the availability of health resources and utilization by the aged would be useful to policymakers for the development of an actionable plan to improve healthcare policies and its implementations. The study will also contribute to the existing literature on health care utilization among the aged with different social and cultural environment.

The study would help to prioritize the kind of services to be provided for the aged in the face of limited resources to improve the health-related quality of life of older people. It is important to assess the health care service utilization and the quality of life of the ageing adult within the urban area to identify the differences in functioning and those at risk.

Assessment of the health-related quality of life of older persons will inform health promotion interventions and program to improve the well-being of older adults in the community. Understanding the health needs of the older persons from their perspective is important. These perceptions would help to develop health interventions aimed at the aged population to live healthier and productive lives.

1.4. Objectives

The main objective of the study is to assess the availability and utilization of health care services and the health-related quality of life of the older adults in Greater Accra, Ghana.

1.4.1. Specific Objectives

a. To explore the availability of health care services for the older adults in Accra
b. To assess the utilization of health care services by older adults
c. To assess the health-seeking behaviours of the older adults.
d. To assess the health-related quality of life of the older adults.
e. To determine the influence of health care services utilization on health-related quality of life of the older adults.
f. To determine the influence of Health seeking behaviour on health-related quality of life

1.4.2. Research Hypothesis

a. H_O: There is no significant relationship between population characteristics of respondents and utilization of health care services.

   $H_{1:}$ The population characteristics of older adults have a significant relationship with health care services utilization.

b. H_O: There is no significant relationship between population characteristics and health seeking behaviour of respondents.

   H_1: There is a significant relationship between population characteristics and health seeking behaviour of respondents.

c. H_o: There is no significant relationship between population characteristics and health-related quality of life of respondents.

   $H_{1:}$ The population characteristics have a significant relationship with the health-related quality of life of older adults.

d. H_o: There is no significant relationship between utilization of health care services and health-related quality of life of the respondents.

   $H_{1:}$ The utilization of health care services has a significant relationship with the health-related quality of life of older adults.

e. H_o: There is no significant relationship between health seeking behavior and health-related quality of life of older adults.

   $H_{1:}$ The health-seeking behaviour of older adult has a significant relationship with the health-related quality of life of the aged.

1.5. The operational definition of terms

Aged /older person – any older adult aged 60 years and above

Availability: the presence of health care services when and where accessible and affordable to older adults.

Health care services- provision of primary health and specialist care for the aged or older adults.

Utilization – visit to a health facility to see a physician, review or for medical or surgical intervention attention

Health care facility – is a hospital, clinic or specialized place for providing health care.

Health-related quality of life - is the subjective assessment of the physical and mental well- being of an individual.

Health -seeking behaviour – one's attitude towards the onset of illness and getting in touch with health care provider, the type of health care patient sought help from and reasons for the choice of healthcare and reason for not seeking help from health professionals.

CHAPTER TWO

2.0. LITERATURE REVIEW

2.1. Introduction

This chapter presents a review of the literature on the area of study and relevant information on what is known about the subject. The purpose of the review was to identify existing knowledge relating to the aims of the study. The review was discussed under the theoretical framework of the study; health care system, the context of ageing, factors influencing utilization of health care services, health-seeking behaviour and health-related quality of life of older adults. The literature review highlighted current research findings on the subject matter and identified gaps in the literature. A systematic search of peer-reviewed, published literature was conducted from various databases CINAHL, SCOPUS, HINARI, Science Direct, AJOL, SAGE, Google Scholar, and PubMed. Keywords and phrases used for the searches either individually or in combination to find related studies included aged, elderly, older adults, health care services, utilization of health care services, health-seeking behaviours, self- rated health status and profile of morbidity among older people, factors affecting health care utilization among the older population and health-related quality of life of older people.

2.2. Theories and Models

Theoretical models of health care utilization that informed health behaviour were discussed. These include health belief model (HBM), the theory of plan behaviour (TPB) and health utilization model. Two of the models HBM and TPB share commonality with health care utilization.

2.2.1. Health Belief Model

The Health Belief Model (HBM) is a health behaviour change model that explains and predicts health-related behaviours with respect to uptake of health services (figure 2). The model was first developed in 1950 by a group of social psychologists (Hochbaum, Kegeles, Leventhal and Rosenstock) in the United States Public Health services in order to understand why individuals fail to use behaviours such as disease prevention strategies for the early detection of disease as well as sick-role and illness behavior (Hochbaum, Rosenstock, & Kegels, 1952). The model has been applied to study human behaviour in the context of diseases or illness.

The theory hypothesizes that people are likely to engage in a given health-related behavior to the extent that they (a) perceive that they could contract the illness or be susceptible to the problem (perceived susceptibility); (b) believe that the problem has serious consequences or will interfere with their daily functioning (perceived severity); (c) believe that the intervention or preventative action will be effective in reducing symptoms (perceived benefits); and (d) perceive few barriers to taking action (perceived barriers) (Henshaw & Freedman-Doan, 2009). Individual factors influence the perception of illness or disease such as age, gender, race, and socioeconomic status. A fifth original factor, cues to action, are incidents which serve as a reminder of the severity of the illness or threat, is an important social factor related to health care utilization (Henshaw & Freedman-Doan, 2009; Rosenstock, 1974, 1990). The combination of these factors causes a response that often manifests into action, provided it is accompanied by a rational alternative course of action to explain the failure of people to participate in programs to prevent and detect diseases (Champion & Skinner, 2008; Mikhail, 1981). The intensity of cues needed to affect an action

varies between individuals by perceived susceptibility, seriousness, benefits and barriers.

The theory's intuitive logic and clearly stated central tenets make it appealing (Brewer & Rimer, 2008). Other strengths are its ability to explain health-related behaviours and provide the useful theoretical basis for analysing cognitive dimensions of behaviour (Orji, Vassileva, & Mandryk, 2012). In addition, it has proven to identify health behaviour correlates (Brewer & Rimer, 2008). The HBM is limited by its ability to predict long-term health-related behaviours. Also, behaviours that are taken for non-health related issues and habitual behaviours are also not accounted for by the theory (Champion & Skinner, 2008). In addition, it does not integrate socioeconomic and environmental issues into the framework and conspicuously there is no relationship between the constructs which makes measurements difficult (Orji et al., 2012).

Despite its limitations, HBM has stood the test of time. Three general approaches can be used to increase utilization within the framework which includes: increasing perceptions of individual susceptibility to illness and severity of symptoms, decreasing the psychological or physical barriers to treatment or increasing the perceived benefit of the treatment (Henshaw & Freedman-Doan, 2009).

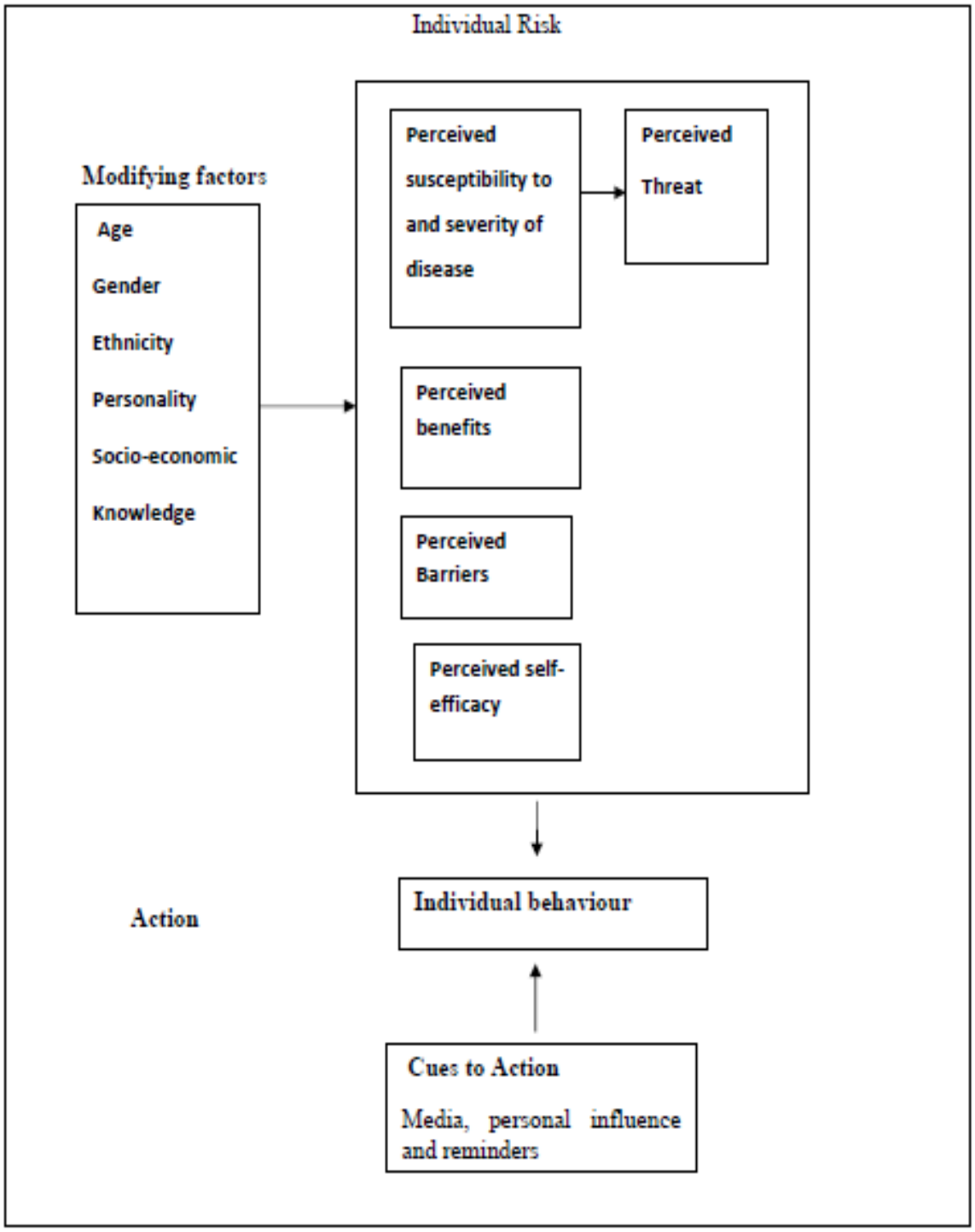

Figure 2: Health Belief Model
Source: Rosenstock et al. (1990)

2.2.2. Theory of Planned Behaviour

The theory of planned behaviour (TPB) was developed by Ajzen a social psychologist has been widely applied to understand a variety of health behaviours (Figure 3). The theory evolved from the theory of reason behaviour in the 1980s with the goal of expanding the scope of the theory of reason action. The theory assumed that individuals make logical, reasoned decisions to engage in specific behaviour by evaluating the information available to them (Ajzen, 1991). According to Ajzen and Fisbein (1980), the most important determinant of behaviour is the individual's behavioural intent and describe the constructs as follows (Ajzen & Fishbein, 1980):

1. Behaviour: the transmission of intention or perceived control into action.
2. Behavioural Intention: Indication of how hard people are willing to try and of how much an effort they are planning to exert, in order to perform the behaviour. These are influenced by a person's attitude toward performing the behaviour, the perceived social pressure, called subjective norm and perceived behavioural control
3. Attitude: It is the degree to which the person has a favourite or unfavourable evaluation of the behaviour under consideration and is the first determinant of behavioural intention.
4. Subjective norm: It is the second predictor of behavioural intention and defined as the influence of social pressure that is perceived by the individual (*normative beliefs*) to perform or not perform a certain behaviour and weighted by the individual's motivation to comply with those perceived expectations (motivation to comply)
5. Perceived Behavioural Control: Describe as the third antecedent of behavioural intention, this construct is defined as the individual's belief

concerning how easy or difficult performing the behaviour will be and often reflects actual behavioural control.

The theory of planned behaviour assumes a causal link between attitudes, subjective norms and perceived behavioural control and behaviours, through behavioural intentions. This theory has been applied to a variety of health behaviours and has received support for its utility in predicting health behaviour (Ajzen, 2011).

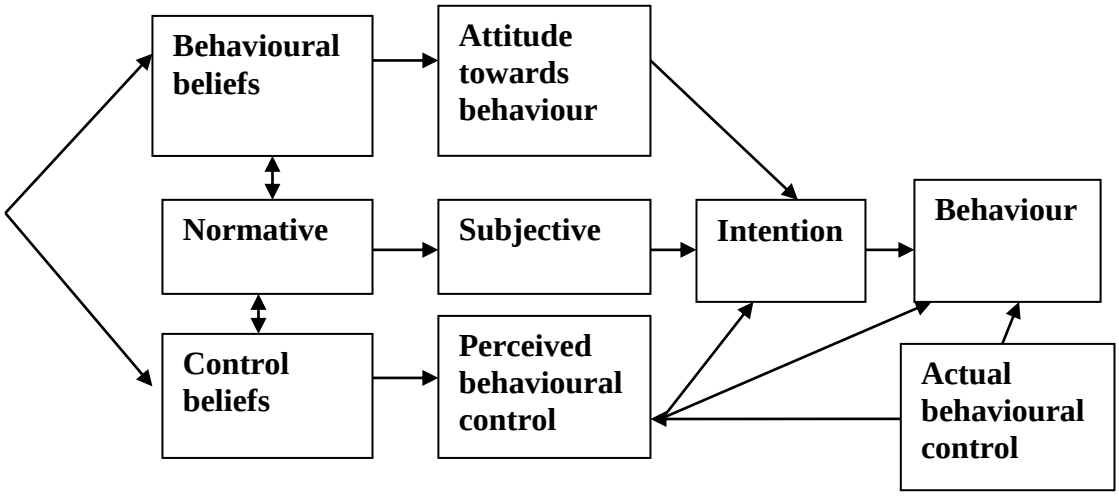

Figure 3: Theory of Planned Behaviour

Source Ajzen (1991)

The strength of the theory of planned behaviour is that it can explain the relationship between behavioural intention and actual behaviour, help predicts health-related behavioural intention and explain individuals' social behaviour by considering 'social norm' as an important variable (Ajzen, 2011; Ajzen & Fishbein, 1980). Assessment of the causal link by Brewer and Rimer contend that highly specific behavioural intention measures that match the intended behaviour are required. They further observed that the influence of attitude on behaviour is not always mediated by

intentions and assert that both intentions and attitude change depend on factors such as fear, threat, mood changes or past experiences, making their relationships to behaviour something of a moving target. The need for more clarification and definitions of the construct in the TPB has been brought up by (S. Sutton, 1997). A meta-analysis focused on establishing the usefulness of this theory component has shown promising results (Munro, Lewin, Swart, & Volmink, 2007). The Other limitation is its overt dependence still on rational processes, despite the fact that rationality is not always guaranteed in real –life decision making (Mullen, Hersey, & Iverson, 1987).

2.2.3. Anderson's Behavioural Model of Health Service Utilization

The theoretical approach that guided this study was the Behavioural model (BM) of health service utilization (HSU) developed by Roland Andersen, an American medical sociologist and health services researcher (Please refer Figure 1). The model was initially developed in 1968 to assist the understanding of why families use health services; to define and measure equitable access to health care; and assist in developing policies to promote equitable access (Andersen, 1995). The model has since gone through its fourth phase after criticism of its strengths and weaknesses. It is a multilevel model that considers the individual and contextual determinants of health service use. The contextual characteristics of the model are the same as the traditional individual characteristics which predispose, enable or determine the need for health service use (Babitsch, Gohl, & von Lengerke, 2012).

Originally, the model paid attention to the family as a unit of analysis, because Andersen believed the medical care an individual receives is most certainly a function

of the demographic, social and economic characteristics of the family as a unit. The model suggests that people's use of health services is a function of their predisposition to use services, ability to secure services, and need for health care (Andersen, 1995). These predisposing, enabling and need components each has sub-components consisting of a series of variables which are utilized to explain health services use. Andersen also posits that the model functions both to predict and explain the use of health services (Andersen & Newman, 2005)

Predisposing components include demographic characteristics of age, gender representing the biological requirements; social factors which measures status of the person in the community such as education, occupation, ethnicity and family status, and health beliefs sub-component consisting of attitudes, values, and knowledge related to health and health services (Andersen, Davidson, & Baumeister, 2013; Babitsch et al., 2012).

Enabling factors are conditions that make health service resources available to the individual. It includes individual's income, health insurance status and access to a source of regular care, the nature of that regular source of care. In addition, transportation, travel time to and waiting time for health care are enabling factors that must be present for use to take place, where people live and work (Babitsch et al., 2012).

In the presence of predisposing and enabling conditions, the individual or his family must perceive illness or the probability of its occurrence for use of health service to take place. The need factors include the perceived and actual need for health services.

According to Andersen and Davidson (2001), perceived need include how people view and experience their own general state of health (e.g., excellent, good, fair or poor), functional state and illness symptoms and evaluated need includes professional assessment and objective measurements of patients health status and need for medical care (Andersen et al., 2013)

Aday and Andersen developed the second phase of BM of health service use which reported that utilization studies need to examine use in the context of health outcomes. The systematic concepts of health care which includes current policy, resources and organization with an outcome of interest of consumer satisfaction (Aday & Andersen, 1974; Ronald M. Andersen, 1995). The inclusion of the health care system in the second phase of the model depicts the importance of national health policy, the resources and the organization of the health care system as important determinants of the population's use of service.

The third phase of the model was stimulated by the explicit recognition of health services in maintaining and improving the health status of the population both as perceived and as evaluated by professionals. Although, the model remains the main use of health services it also recognizes the external environment (including physical, political and economic components) as an important input for understanding the use of health service. In addition, it recognizes personal health practices such as diet, exercise and self- care as interacting with the use of formal health services to influence health outcome (Andersen, 1995).

The fourth phase of Andersen's model focuses on the individual as the unit of analysis and goes beyond health care utilization, to health outcome as the interest (Andersen et

al., 2013). This model has been applied extensively in studies investigating the use of health services especially the 1995 version of the BM (Babitsch et al., 2012).

The model consists of four major contextual components namely: environmental which includes the health care system and external environment; population characteristics that consist of predisposing characteristics, enabling resources and need; health behaviours include personal health practices and use of health care services and the outcomes are perceived health status, evaluated health status, consumer satisfaction and quality of life.

The model also portrays the multiple influences on health services use and health status outcomes and includes feedback loops showing that outcome in turn affects subsequent predisposing factors and perceived need as well as health behaviour. It also has the quality of life as an outcome of interest in the model. The use of the framework relationships helps to determine the directionality of the effect following a change in an individual's characteristics or environment (Andersen et al., 2013). For example, if one experiences an increase in need as a result of an infection, the Andersen model predicts this will lead to an increased use of services (all else equal).

The **Health Care System** includes the resources and organization that provide health care services to the individual. The resources are the labour, health policies and finances assigned to health care which consist of health personnel, structures in which health care and education are delivered, the equipment and materials used in providing health services (Andersen & Newman, 2005). The organization looks at the access and structure of the health care system. Access refers to the means through

which the patient gains entry to the health care system and health policies that influence health care. Structure in the organization deals with the characteristics of the system that determine what happens to the patient following entry to the system such as services of primary care provider, utilization of ancillary personnel, the process of referral to other sources of care, admission procedure, type of hospitalization and how they are structured to render services. In addition, the structure includes the location of service within the community, provider mix, quality control, oversight and outreach and education programs (R. Andersen & Newman, 2005b; Ronald M Andersen et al., 2013).

The **External Environment** assesses the health-related measures of the physical environment including quality of housing, water, and air. Population health indices such as mortality and morbidity rates of the community determine how healthy the environment is. These characteristics of the environment can influence health behaviour and outcomes directly or indirectly in a multiple ways (Andersen et al., 2013).

The **Population Characteristics** component of the model has three constructs which include predisposing, enabling and need factors that determine an individual use of health service. Predisposing characteristics are the demographic and socio-cultural characteristics that exist prior to their illness as well as the genetic susceptibility of the individual. The enabling factors facilitate individuals to use services which include the availability of resources such as income, health insurance, a regular source of care, travel, extent and quality of social relationships, availability of free service and access to care. Need factors motivate service use, it depends on the

functional status and health problems as perceived by the individual. The perception about the importance and magnitude of a health problem or symptom will lead to a decision to seek health care (Aday & Andersen, 1974; Wandera et al., 2015). Perceived (symptoms such as pain) and evaluated (diagnoses) need factors are the important reasons to understand care-seeking among individuals (Aday & Andersen, 1974).

Health Behaviours component in the model includes the construct of personal health practices and use of health services. Personal health practices are health behaviour performed by the individual that influence their health status. According to Donabedian (1980), it consists of exercise, stress reduction, alcohol and tobacco use, self-care and adherence to the medical regimen as well as care providers' interaction with patients in the process of care delivery. Personal health practices also include personal health beliefs such as health attitudes, knowledge about health care and the decision to seek health. The use of personal health services is an essential component of health behaviours in a comprehensive model of access to care(Ronald M Andersen et al., 2013). Utilization of health care services is influenced by predisposing, enabling and need factors in the model. This is measured by the individuals' interaction with the health care system for medical care or intervention such as physician contact or dental care.

The outcome of interest includes perceived and evaluated health status and satisfaction with the health care. The perceived health status signifies the extent to which an individual can live a functional, comfortable without pain and the outcome measure includes generally perceived health status, activities of daily living and

disability. Evaluated health status depends on an objective assessment of health status by a health professional(Ronald M Andersen et al., 2013) . Consumer satisfaction indicates the perception of health care received by individuals. It depends on the ratings of travel time, waiting time, communication with providers and technical care received.

Quality of life, one of the outcomes of the model was added because Andersen, Davidson and Baumeister (2013) posit that health behaviours affect more than an individual's health. Furthermore, quality of life measures are increasingly employed by health policymakers, managers, providers, payers, patients and researchers both as outcomes of health care delivery and subsequent determinants of need and health status (Andersen et al., 2013). It has four broad domains; physical health, psychological health, social relationships and healthy environment (Skevington, Lotfy, & O'Connell, 2004). In this study, the health-related quality of life was used as the outcome of health care service utilization to assess the perception of an older adult who uses the health care system. The feedback loops in the model depicted by arrows from the outcomes to health behaviours and population characteristics allow insights about how access and utilization might come to be improved.

The Andersen health model is a reliably accepted tool for the study of health service utilization. The use of phase four of Andersen and Newman's behavioural model is appropriate as a conceptual foundation for understanding human behaviour and the individual characteristics that influence the use of health service and its effect on the health-related quality of life among older adults residing in the communities. The model is flexible and has been widely applied to studies of health care use among different populations to explain the collective influence of environmental and

individual factors that influence health services use. The Andersen-Newman BM of health service use is appropriate to the discussion within this study because the model not only determines the factors that influence the use of health care but also lends itself to the evaluation of health-related quality of life of older adults.

2.3. Population Ageing

Population ageing is the process of continuous increase in the population of persons aged 60 years and over in the total population (Tawiah, 2013). The world's population is ageing at a remarkable rate due to a decrease in fertility and increase in life expectancy over the last two decades. According to the World Population Prospects:2017 revision, the number of persons aged 60 years and above is expected to more than double by 2050 and triple by 2100, rising from 962 million globally in 2017 to 2.1 billion in 2050 and 3.1 billion in 2100 (United Nations, 2016). The population of persons aged 60 years and above is growing at the rate of three percent annually, with the largest population of persons above 60 years in Europe (United Nations, 2016). It is expected that by 2050 almost all the regions of the world will have a quarter or more of their populations at 60 years and above except in Africa (United Nations, 2016).

Of these older people, 80% will live in low- and middle-income countries (LMICs). All regions are expected to see an increase, although it should be milder in some regions, such as Africa where the projected increase is from 3.3% in 2000 to 6.9% in 2050. But in Latin America and the Caribbean, the increase should be from 5.4% in 2000 to 16.9% in 2050, higher than the current European average (WHO, 2014). However, in China, the increase would be more remarkable from 6.9% in 2000 to

about 22.7% in 2050. In Europe, the proportion of older people is estimated to reach 33.6% by 2050, while in sub-Saharan Africa the projected figure is 8.3%. It is expected that the gap between less developed regions and more developed regions in the ageing population would widen over the decades, with two-thirds of the world's ageing population residing in less developed regions. According to the United Nations, the ageing population in less developed regions will quadruple from 2000 to 2050. This raises important considerations for the African continent given that most countries fall within the less and least developed categories (United Nations, 2009). The World Health Organization estimated that the number of people aged 60 years and older in sub-Saharan Africa (SSA) is projected to reach 67 million by 2025 and 163 million by 2050. By 2030, projections indicate that the ageing population in South Africa will form 11.5% of its total population followed by Ghana with 9.5% and Kenya 6.7% (Tawiah, 2013)

Ageing and health is a growing concern in the discourse on ageing in SSA. Two major concerns emerge: first, the "vulnerability of older persons to detrimental health outcomes" including a high prevalence of non-communicable diseases (NCDs) and disabilities. The second is the limited access to healthcare. The marginalization of health services for the aged in Africa has impacted the delivery of preventive, curative and rehabilitation care to the older population. While population ageing represents, in one sense, a success story for mankind, it also poses profound challenges to public institutions that must adapt to a changing age structure (World Health Organization, 2002). In addition, as older persons increase in age their physical as well as psychological cognitive and social function declines and are at greater risk of physical and cognitive decline, disability and death (De, Bonacci, & Giraldi, 2011a).

Ghana, like other SSA countries, has increased more than seven-fold in the number of aged population from 213,477 in the 1960 census to 1,643,381 in the 2010 census (World Health Organization, 2014). According to the 2010 census, 6.7% of Ghana's population was over 60 years with a higher proportion of women than men living to be 70 years and over (World Health Organization, 2014). This is to be expected in view of females having higher life expectancy than males. The proportion of older persons in Ghana is one of the highest proportions of persons aged 60 years and above in sub-Saharan Africa (Mba, 2010). It is expected that this proportion will increase in the coming decades as a result of continued campaigns to reduce fertility and mortality. The issue of population ageing has significant social and economic implications for the individual, family and society. As people live longer, their need for health care increases, as most of them tend to live with chronic diseases and disability. It, therefore, behoves on all to come on board to address the issue of elderly care in the sub-region.

2.4. Ghana National Ageing Policy

International recognition of ageing as policy was initiated at the first World Assembly on Ageing held in Vienna, Austria in 1982 to address ageing concerns and its implications for national development. Several ageing related conferences were held that included, the 1984 International Conference on Population and Development, The Second World Assembly on Ageing held in Madrid in 2002, the Twenty-Second ordinary Session of the OAU Labour and Social Affairs Commission held in Windhoek, Namibia in 1999, the Expert Meeting hosted by the African Union (AU) in 2000, the 38th Session of Heads of State and Government held in Durban, South Africa in 2002 (Apt, 2012; Apt 2002). At these conferences, national Governments

committed themselves to initiate policy intervention to address the issues of an older person. The series of global conferences convened by the United Nations in the 1990s notably the International Year of Older Persons (IYOP) in 1999 and the institutionalization of October 1st as the date of the aged, all contributed to a better global understanding of the challenges facing older persons. These efforts culminated in the adoption of an International Plan of Action on Ageing in 2002 in Madrid at the Second UN Assembly on the Aged. This marked the beginning of awareness and discussions of population ageing in Africa as part of the wider global debate on ageing in the developing world, which has gathered momentum in recent years (Apt, 2012).

The Madrid International Plan of Action on Ageing (MIPAA) that was adopted in 20002 challenged UN member countries to develop actions plans and programmes to enhance the re-integration and self-reliance of the older persons into the mainstream society. In addition, it also seeks to ensure the recognition of their needs for income security in old age, support for the provision of their basic needs, advocacy and raising public awareness of the benefits of active ageing and inter-generational solidarity for sustainable development. Earlier, the 1994 International Conference on Population and Development had called on governments to ensure greater equity for the aged and elimination of all forms of violence and discrimination against them. As well as strengthen formal and informal support systems and safety nets for elderly persons. In support, the World Health Organization reiterates that it is time that governments, international organizations and civil society enact active ageing policies and programmes to enhance the health, participation and security of older persons (Kalache & Gatti, 2003; World Health Organization, 2002).

The African Union (AU) in line with this, developed policy frameworks and plan of action on ageing that called for (Ministry of Employment and Social Welfare, 2010):

- Strengthening social protection schemes for elderly persons, particularly the long-term care of the poor and frail (mostly women);
- Recognising and ensuring the provision of geriatric health care and supporting the caregiving services provided by older persons to grandchildren, orphans including those affected by HIV/AIDS and other disadvantaged young people;
- Eliminating violence and other crimes against older persons especially women;
- Promoting life-long education, training, healthy and active ageing;
- Providing assistance to meet the special needs of older persons who are caught up in conflict and other humanitarian/emergency situations; and
- Support gender-sensitive research on population ageing.

To achieve this, the resolution called for changes in attitude, policies and practices at all levels in all sectors (Ministry of Employment and Social Welfare, 2010).

A national committee on ageing was formed in Ghana by the Ministry of Employment and Social Welfare to study carefully the policy imperatives and initiate practical steps to close the policy gaps. A draft National Policy on Ageing in collaboration with the Centre for Social Policy Studies (CSPS) of the University of Ghana was prepared and submitted to cabinet in March 2003 (Ministry of Employment and Social Welfare, 2010). The 2003 draft was never finalised neither was it implemented, but the policy as a comprehensive document was not implemented.

After various stages of the review process with stakeholders, the overarching goal of the National ageing policy was to achieve the overall social, economic and cultural re-integration of older persons into mainstream society to enable them as far as practicable to participate fully in the national developing process (Ministry of Employment and Social Welfare, 2010). This implies recognition and provision of the fundamental human rights and opportunities such as independence, active participation in society, benefit from community support and care, self-fulfilment in pursuit of educational and other opportunities and to live with dignity, security and freedom from exploitation. The main objectives of the National Ageing policy were to:

a. Fully realize all human rights and fundamental freedoms of all older persons;
b. Achieve secure ageing, which involves reaffirming the goal of eradicating poverty in old age and building on the United Nations Principles for older persons;
c. Empower older persons to fully and effectively participate in the economic, social and political lives of their societies, including through income-generating and voluntary work;
d. Provide opportunities for individual development, self-fulfillment and well-being throughout life as well as in late life, through, for example, access to lifelong learning and participation in the community while recognizing that older persons are not one homogeneous group;
e. Ensure the full enjoyment of economic, social and cultural rights, and civil and political rights of persons and the elimination of all forms of violence and discrimination against older persons;

f. Ensure commitment to gender equality among older persons through, inter alia, gender-based discrimination;
g. Recognise the cultural importance of families, intergenerational interdependence, solidarity and reciprocity for social development;
h. Provide health care, support and social protection for older persons including preventive and rehabilitative health care;
i. Facilitate partnership between all levels of government, civil society, and private sector and older persons themselves in translating the International Plan of Action into practical action;
j. Harness scientific research, expertise and the potential of technology to address individual and societal health implications of ageing
k. Empower older persons to effectively participate in making decisions that directly affect them (Ministry of Employment and Social Welfare, 2010).

The policies and strategies that were to be promoted and implemented by the government to improve the living conditions of older persons in Ghana include:

a. Upholding the Fundamental Human Rights of Older Persons
b. Ensuring Active Participation of Older Persons in Society and Development
c. Reducing Poverty among Older Persons
d. Improving Health, Nutrition and Well-Being of Older Persons
e. Improving Housing and Living Environment of Older Persons
f. Strengthening the Family and Community to Provide Support to Older Persons
g. Improving Income Security and Enhanced Social Welfare for Older Persons
h. Providing Adequate Attention to Gender Variations in Ageing

i. Strengthening Research, Information Gathering and Processing, and Coordination and Management of Data on Older Persons
j. Enhancing Capacity to Formulate, Implement, Monitor and Evaluate Policies on Ageing
k. Improving Financing Strategies to Ensure Sustainability of Implementation of Policies and Programmes of Older Persons.

The National ageing policy which was approved by cabinet in 2010 and launched in 2011 has seen very little by way of implementation. The MOH/GHS which was expected to implement the Health and nutrition component of the Ageing policy do not have any implementation plan. In addition, there is very poor knowledge on the policy among health workers, neither is there any guideline of the standard of health care or rehabilitation on older people (World Health Organization, 2014). The Policy, Planning, Monitoring and Evaluation Directorate of the MoH is now coordinating the health-sector response, while a focal person has been appointed in the Family Health Division of the GHS to do the same (World Health Organization, 2014).

Barriers to operationalization of the National ageing policy action plan include: absence of a National Council on Older People; apparent lack of commitment and interest in issues involving older people by MMDAs, politicians, diplomatic missions as well as the donor community; inadequate funding due to competition for scarce resources which usually target children, adolescents, and women of reproductive age; lack of specific training of doctors and nurses in geriatric care, leading to the inappropriate labelling of all illnesses among older people as due to old age; poor access to services for older people, and services which are scattered and few; a health insurance scheme that does not cover male cancers, only breast and cervical cancers,

though it does not cover related biopsy and histology services; lack of awareness and interest in membership of pensioners' associations; breakdown of traditional social and family support mechanisms; unavailability of up-to-date disaggregated data on older people (World Health Organization, 2014).

2.5. Health Services for Older People

The World Health Organization (WHO) in 2015 published its first World report on ageing and health. A year later, the World Health Assembly (WHA) adopted the Global Strategy and Plan of Action on Ageing and Health in 2016 with a clear directive for action across health and social sectors (de Carvalho et al., 2017). At the same time, through the United Nations, member states adopted the 2030 Agenda for Sustainable Development (Resolution, 2015) pledging that no one will be left behind and that every human being will have an equal opportunity to fulfil their potential with dignity (de Carvalho et al., 2017). The focus of clinical care for older people was the major reform presented in the report. The world report on ageing recommends prioritizing intervention that optimizes older people's physical and mental capacities over their life course which requires a change in the way health and social services are organized (Resolution, 2015).

The World Health Organization defined Universal Health Coverage (UHC) as 'ensuring that all people and communities receive the quality services they need and are protected from health threats, without financial hardships' (Peltzer et al., 2014). Similarly, the third goal of the Sustainable Development Goals (SDG), which states that 'ensuring healthy and promoting well-being for all at all ages' – would be difficult to achieve without transforming health and social systems to meet the challenges of the ageing population. According to the United Nations, older people

should be provided with health care to help them maintain or regain an optimum level of physical well-being and prevent the onset of illness since as one age there is an increase in chronic illness and disability with increasing financial burden on health care services (Fulmer & Li, 2017; Mate, Berman, Laderman, Kabcenell, & Fulmer, 2017). The reforms proposed called for adopting affordable, integrated and person-centred service delivery models and comprehensive systems of long-term care, based in the communities where older people can access in order to achieve the UHC and the SDGs by;

- organizing services to respond to older people's diverse levels of capacity as well as their needs and preferences;
- extending coverage of services to all older people – at present many older people, particularly those who have been in the informal workforce or who have filled caregiving roles, have very limited access to even basic services;
- ensuring that coverage extends to services that provide interventions that are key for maintaining intrinsic capacity and functional ability of older people (for example comprehensive assessment and care plans, restorative surgery, assistive devices, functional nutritional supplements, multimodal physical exercises and long-term care);
- developing sustainable financing mechanisms that can protect older people and their families from undue financial burdens and that provide system incentives for the provision of the services older people need (Peltzer et al., 2014; WHO, 2004).

This calls for the transformation of the health care service delivery towards the needs of the older people. The delivery of health care should be comprehensive with the aim

to maximize a complete wellness of the older individual instead of focus on management of diseases.

Population ageing is associated with an increase in the rates of age-related chronic diseases including diabetes, heart diseases, hypertension, rheumatoid disease, dementia and fractures associated with falls, osteoporosis, digestive problems, insomnia and pain that are common among older adult (Alhamdan et al., 2015; WHO, 2015). In addition, older people suffer from inadequate cognitive and physical functioning which result in an inability to perform activities of daily living independently as well as expensive health care costs with increase emergency department visits and inpatient hospitalizations (Mate et al., 2017). The increasing rates of chronic diseases among the older adults require the need for health promotion and disease prevention interventions as well as disease management within health care services.

Primary Health Care (PHC) plays important role in maintaining the health of older people in the community. According to WHO, it is the principal vehicle for delivery of health care at the community level and as the first line of contact, PHC needs to be accessible and appropriate to the needs of the older people (Mate et al., 2017; Woo, Mak, & Yeung, 2013). In view of this, WHO organized a series of national groups to solicit the views of older persons and their service providers on barriers to care and their suggestions for change (WHO, 2004).

This initiative resulted in the development of a set of guidelines published in 2004, called ‘Active ageing: Towards age-friendly primary health care’. The guidelines covered three main areas relating to (1) information, education, communication and

training, (2) health care management systems, and (3) the physical environment of primary care centres, accompanied by a list of toolkits useful for achieving age-friendly primary care centres (Alhamdan et al., 2015; Mate et al., 2017; Woo et al., 2013). The PHC toolkit is targeted at sensitizing and educating PHC providers about the needs of older peoples (WHO, 2004).

With regards to Information, Education, Communication and Training (IECT), the guidelines stipulated that service providers in the PHC should receive basic training in age, gender, and culturally sensitive practices that address knowledge, attitude and skill. In addition, they should receive basic training in the core competencies of elder care. The PHC centres should provide age, gender and culturally appropriate education and information on health promotion, disease management and medications for older persons as well as their informal carers in order to promote empowerment for health. The PHC providers should regularly review the use of medications including complementary therapies such as traditional medicines and practices (WHO, 2004).

In the area of Community-Based Health Care Management Systems, the guidelines state that the PHC centres should focus the administrative procedures to the needs of the older person and be cost sensitive to facilitate access to care by low-income persons. The centres should adopt a continuity of care within the community and between the community and secondary and tertiary level. There should be mechanisms that would facilitate and coordinate access to social and domiciliary care services. Maintain proper documentation to support continuity of care and provision of social services for clients. Involvement of old people in decision making

concerning the organization of the community-based care services and services available should be provided (WHO, 2004, p. 2).

In the area of Physical Environment for the Age-Friendly facility, adherence to the universal design of a PHC facility should be applied. Availability of transport to the facility should be affordable and safe for older persons. Information should be made readily available for old people to facilitate orientation within the PHC facility (Woo et al., 2013). Service providers should have identification and assignment of service providers for the aged. The PHC should be well lighted with non-slip floor surfaces, a comfortable and clean environment (WHO, 2004).

Curative and preventive health care services should be made available throughout life including old age. The health care needs of the aged should be of priority to health care providers to help detect, provide appropriate intervention, management and planned a follow-up to avert complications that may arise. In addition, health screening of older adults in the communities should include health promotion activities health assessment, physical health assessment, targeted health education and management of acute emergencies (Woo et al., 2013).

Ghana in the bid to achieve universal health care introduced a National Health Insurance Scheme (NHIS) which was established into law under Act 650 in 2003. The scheme was launched in order to '…provide basic health care services to a person resident in the country through mutual and private health insurance schemes' (Dixon, Tenkorang, & Luginaah, 2013; Dovie, 2018; Odeyemi & Nixon, 2013). The scheme uses equitable financing mechanism and has improved access, worked load, health infrastructure and care for vulnerable groups including children and the aged. The

NHIS is financed by subscriber's premium payment from their Social Security contributions and funds from the Government of Ghana which is approved through the parliament. Registration and renewal of NHIS are free for people aged 70 and above (Abebrese, 2011; Dovie, 2018).

Even though, NHIS is free for the older persons above 70 years to aid access to health care service, the scheme does not cover a significant proportion of older person, resulting in less access to health care services, late detection of diseases and increasing rates of chronic diseases and poor quality of life among the elderly population (Fonta, Nonvignon, Aikins, Nwosu, & Aryeetey, 2017). This invariably would lead to increase health care needs for an older person with its associated cost implications.

Availability of health care facilities for the aged has been one of the major challenges of health care in Ghana (Yiranbon et al., 2014). Majority of older people trek more than one kilometre to access medical care, according to Help Age Ghana (Yiranbon et al., 2014). With the increase in the number of health centres in the rural areas, most of them lack the necessary facilities to help solve the overwhelming health care burden of the aged. Yiranbon et al., (2014) reported that 57% of the older persons confirmed that there is no good health care facility within their neighbourhood. Among the 43% that confirmed they have access to health care facilities within their neighbourhood, most of them indicated that they only have access to basic district health care services which are usually below the standard in regional and tertiary hospitals where services are better rendered. In respective of the location of the aged health care services, they should be made available with all the basic facilities at the regional or tertiary levels.

2.6. Health Care Delivery in Ghana

In Ghana, two governmental bodies oversee health care infrastructure and delivery; the Ministry of Health (MOH) and Ghana Health Service (GHS). Until 1996, the MOH oversaw the direct provision of health service delivery in Ghana. Today, health service delivery is provided by GHS. The goal of MOH is, "to improve the health status of all people living in Ghana through effective and efficient policy formulation, resource mobilization, monitoring and regulation of the delivery of health care by different health agencies" (MOH, 2017)

MOH works on policy formulation, the monitoring and evaluation of health service delivery throughout the country, resource allocation for health services and the regulation of health services delivery. MOH also develops the framework for the regulations of food, drugs and health service delivery (Pehr, 2010). With the passing of Act 525, the responsibilities of health service delivery were consolidated within GHS. In addition, the MOH has oversight responsibility over all tertiary, professional regulatory bodies, mission and private hospital such as; Korle-Bu Teaching Hospital, Okomfo Anokye Teaching Hospital, Christian Health Association of Ghana, Ghana Ambulance Service, Ghana Medical and Dental Council, The Pharmacy Council, Ghana Registered Nurses and Midwives Council and Traditional and Alternative Medicine Council (www.moh-ghana.org).

The Ghana Health Service (GHS) was established in 1996 as a Public Service body under Act 525 as required by the 1992 constitution, to ensure access to health services at the community, sub-district, district and regional levels. The GHS is an autonomous executive agency of the Ministry of Health (MOH) and responsible for the implementation of all national health policies (Agyepong, 1999).. GHS'

independence is designed primarily to ensure that the agency has a greater degree of managerial flexibility to achieve its responsibilities, in contrast to what would be permissible within the civil service. The GHS is also independent of the Teaching Hospitals, Private and Mission Hospitals but collaborates to ensure the health of the nation. It is mandated "*To provide and prudently manage comprehensive and accessible quality health services with an emphasis on Primary Health Care in accordance with approved national policies.*" and a shared vision to ensure "*A Healthy population with Universal Access to Quality Health Service."* (GHS, Annual Report 2014).

The delivery of health care is mainly in the hands of the Ghana Health Service (GHS). The functions of GHS includes, developing strategies and technical guidelines to achieve national policy goals and objectives; undertaking management and administration of health resources within GHS, promoting healthy living and habits among residents and establishing effective disease surveillance, prevention and control (Nyonator, Awoonor-Williams, Phillips, Jones, & Miller, 2005). As a result of a government decentralized reform of the health sector, the health delivery is mainly operated at the 10 regional levels (GHS, undated-b). The regional levels offer mainly curative services, which are delivered at the regional hospitals and public health services centre of the regional hospitals managed by the Regional Health Management Team (RHMT) (Adjei, 2003). At the district level, curative services are provided by district hospitals. Many of these district hospitals are faith-based hospitals collaborating with the government health institution for health delivery. Traditional birth attendants and traditional healers also receive recognition at the district and sub-district levels (Salisu & Prinz, 2009).

For the urban centres, polyclinics serve as the equivalent of rural health centres. The polyclinics also serve as the first point of contact of primary health care in urban centres and therefore "provide a mixture of preventive and curative care and use the regional hospitals for referrals. Polyclinics are usually larger, offer a more comprehensive array of services, are manned by physicians and can offer complicated surgical services and are mainly in metropolitan areas (GHS, undated-e).

Traditionally, in the rural areas health centres have been the first point of contact between the formal health delivery system and the client. It is headed by a Medical Assistant and staffed with program heads in the areas of midwifery, laboratory services, public health, environmental health and nutrition. Each health centre is meant to serve a population of approximately 20,000. They provide basic curative and preventive medicine for adults and children as well as reproductive health services. The health centre is equipped to provide minor surgical services such as incision and drainage. Majority of the cases are referred to the higher levels and they augment their service coverage with outreach services.

Information on health service usage by older adults such as percentage of primary care visits, hospital consultations and Home care services are dearth in the health report of the GHS (GHS, 2015). There is a dearth of information on the kind of services available for older adults as well as intervention implemented at the facility to ensure healthy ageing for older adults in Ghana. In the developed region of the world, health care is often provided by well-equipped public health facilities and designated daycare centres for older adults. Paradoxically, in most sub-Saharan African countries, availability and utilization of health care services among the elderly are poorly reported (Osuchukwu et al., 2015).

2.7. Factors affecting Health Care Utilization

Borras (1994) defines health care utilization as 'obtaining care provided by the health care services in the form of health care contact' (Borras, 1994). Health service use is associated with several factors such as sociodemographic status, socioeconomic status, organizational structure and health financing and the health status of the individual. In order to explain this process, most studies conducted among the elderly have used the behaviour model developed by Andersen. It has three components namely: predisposing variables or sociodemographic characteristics that determine a higher probability of using the services, enabling variables, those that can hinder or enable the use of services; and need for care variables, understood as the perception of a change in one's health (Fernandez-Olano et al., 2006).

Predisposing factors include demographic characteristics such as age, sex and education that influence the status of health and use of healthcare services. Physical health conditions, such as chronic diseases, functional disability and the number of sick days represent the need for healthcare services. Enabling variables to encompass a variety of resources that provide means to healthcare services, including socioeconomic status, health insurance coverage, living arrangement, and the existence of spouse or social network (Jang, Kim, & Chiriboga, 2005).

A systematic review of studies using the Andersen behavioural model of health services use to determine the factors that influence health service use, Babitsch et al (2012) contend that predisposing factors (age, sex, marital status, education and ethnicity) and enabling factors (income, health insurance, and having a regular source of care or doctor) were in the majority of the studies reviewed.

In a study among Nepalese older adults on determinants of utilization of HCS, Sanjel, Mudbhari, Risal, & Khanal (2012) outlined that 72.1% of older adults aged between 70 to 79 years visited health personnel in the past one year followed by those aged 80 years or more (68.8%) and then 60 to 69years (65.4%). In addition, older adults with educational level up to a secondary level were found to be visiting the health personnel more than the individual with primary and higher levels of education and elderly who are able to read and write. Higher education has been shown to be a strong predictor for HSU in most studies (Ameh, Gómez-Olivé, Kahn, Tollman, & Klipstein-Grobusch, 2014; Sanjel et al., 2012). In addition, factors such as marital status, activities of daily living, living with a chronic disease showed a significant association with utilization of health care (Sanjel et al., 2012).

However, Alkhawaldeh et al. (2014) in their study among Jordanian older adults maintain that, factors that significantly associated with increased use of primary health care service for the past 6 and 12 months were; increasing age, being unemployed or retired, having no formal education or only a primary school education, having a chronic illness and those having poor self-rated general health status. In addition, older adults who perceived their general health status to be poor tend to use more PHC services during the period (Alkhawaldeh et al., 2014). This is because older adults living with chronic conditions tend to use the health centres more for reviews. Notwithstanding that the majority of older adults in this study had a high rate of chronic illness and this confirms the increased use of PHC within the year under review.

Similar studies on HSU and predisposing factors report that females were higher users of health services than male, while older adults living with their family and spouses were more likely use health services than those who were staying alone (Chukwudi et al., 2015; Hopman, Heins, Korevaar, Rijken, & Schellevis, 2016). With regard to enabling factors, health insurance coverage influenced the use of health services. In their study among older Koreans, Jang, Kim and Chiriboga (2005) report that about 73% of the sample had health insurance coverage consisting of private and public insurances and of the several enabling factors, health insurance coverage was a key determinant in use of health services (Jang, Kim, & Chiriboga, 2005).

Previous studies in China, among older adults with cardiovascular diseases, contend that health insurance status showed a strong association with care utilization (Dou, Liu, Zhang, & Wu, 2015; Hopman et al., 2016). In addition, socioeconomic status played an important role in outpatient care utilization in China. Wealthy people tended to tend to use more health services than poorer people (Dou et al., 2015). However, a study among older Ghanaian, posit that enabling factors were among the greatest indicators of health and health care utilization among the aged (Saeed, Xicang, Yawson, Nguah, & Nsowah-Nuamah, 2015).

In Ghana, Saeed et al (2017) in their study among older adults on the impact of socioeconomic status and medical conditions on health and health care utilization asserts that enabling factors such as income and social class are among the greatest indicators of health care utilization whereas urban dwelling and education were not associated with health care utilization (Saeed et al., 2015). Similarly, previous studies among the older adults in China revealed that enabling factors such as household income, duration of residence, range of migration, type of insurance and where health

insurance is obtained, and chronic disease (need factor) were significantly associated with health service utilization (Zhang, Yu, He & Wang, P, 2018) .

Older adults with chronic illness were more likely to use outpatient and inpatient services, according to Li et al. (2016) chronic illness is important in increasing health service utilization among older adults (Li, Nong, Wei, Feng, & Luo, 2016). This indicates that the need factor is a strong predictor of health service utilization. Similarly, Saeed et al (2015) suggests high rates of utilization of health care among the older population with poorer subjective health and also aged Ghanaians with the worse health use more the limited health care services (Saeed et al., 2015).

Ensuring equal access to health care according to needs regardless of age, gender, ethnic background and capacity to pay is an important goal for health service systems worldwide. The ageing process has raised concerns about equal access to health care for seniors, who are identified to have higher health care needs but often lack the financial capacity to pay (Zhou et al., 2015). Several studies have addressed this issue by examining predisposing factors associated with healthcare utilization among older people including socio-demographic characteristics (e.g. age, gender), income, health insurance and health care needs (Alkhawaldeh et al., 2014; Jang et al., 2005; Nie et al., 2008).

A rapidly ageing population is characterized by increased prevalence of chronic impairment among older adults, specifically cardiovascular and circulatory diseases and cancers replacing infectious and parasitic diseases as the principal causes of deaths (Alam, Liyou, Davis, Tresillian, & Johnson, 2000). The ageing process progresses together with changing lifestyle. This calls for a radical shift in the types of

health problems that the health workers have to deal with, especially the rapid emerging epidemics in chronic, non-communicable diseases most of which are lifestyle based diseases and disabilities (Agrawal & Arokiasamy, 2010). This need factor would increase the use of health care services among the elderly.

Disability prevalence is relatively high among older adults compared with the rest of the population. The proportion of the older adults who have a disability (one or more) is more than five times that of the rest of the population aged less than 60 years according to the 2010 Population Housing Census (GSS, 2013). By the age of retirement, some disability may set in and those already being experienced may become worse. Moreover, a higher proportion of the elderly aged 65 years and above than that of the 60-64-year-olds is more likely to suffer from non-communicable diseases (NCDs) some of which cause disability. Loss of sight is associated with diabetes and paralysis from stroke is often experienced as a complication of hypertension (GSS, 2013).

A study by Roy and Chaudri (2008) in India argued that there is a statistically significant differential in socio-economic and cultural experiences of older men and women. Older women have lower levels of literacy, property ownership, economic independence and social integration than men. This is also worsened by a high likelihood of widowhood and dependent living arrangements. All these factors negatively influence health status and health care utilization among older women including lower rates of hospitalization and outpatient encounters (Roy & Chaudhuri, 2008). Previous studies on the aged have established that older women are universally more exposed to socioeconomic vulnerabilities which affect health and economic outcomes. Evidence from literature also points to higher longevity among women

than men thus increasing the proportion of women in old age. In spite of higher longevity, studies from developed countries indicate a higher frequency of morbidity among women which leads to increased utilization of health care services (Saeed, Xicang, Yawson, Nguah, & Nsowah-Nuamah, 2015).

Economic implications of population ageing are that as population ages, there would be a decline in the labour supply and reduction in the number of workers. This may have negative implications for growth and secure the well-being of the population at large (Kwankye, 2013). Studies have established that older women are more universally exposed to socioeconomic vulnerabilities which affect health and economic outcomes (Jerliu, Toçi, Burazeri, Ramadani, & Brand, 2013).

On determinants of health care utilization, a study by (Okumagba, 2011) on the determinants of choice of health-care service utilization by the elderly in Nigeria included user's fees, level of income, distance from healthcare service, the severity of illness and level of education. The study found user's fees charged by health- care providers to be the most important determinant of choice of health care utilization among the elderly who utilized chemists/pharmacists, medical hawkers and self-medication (Okumagba, 2011).

Household poverty limited older persons' access to health care in Uganda whilst earning wages increased access to health care in the last 30 days for older persons (Wandera, Kwagala, & Ntozi, 2015). Household income has been reported as a significant enabling factor for access to healthcare both in developed and developing countries. In developing countries, the available evidence indicates that access to health care is for pro-rich households with steady income (Sato, 2012). Poverty

reduces the affordability of the healthcare services, irrespective of their availability and greater health need. In Brazil, low socioeconomic status was associated with poor health status and limited access to healthcare (Lima et al., 2009).

Health need factors (severity of illness, NCDs and physical disability) were the most important determinants of access to health care among older persons in Uganda. The severity of illness or inability to work was associated with increased access to healthcare. This confirmed the argument that people seek treatment for severe illnesses and life-threatening conditions (Wandera et al., 2015). A study in the US based on national survey data from the non-institutionalized US individuals older than 50 years from the 2006 and 2008 waves of the Health and Retirement Study reported that older people with worsening health were more likely to use healthcare services (Manski et al., 2013).

2.8. Health Care Seeking Behaviour of Older Adults

Health seeking behaviour theory was made popular by (Tipping, Segall, & Studies, 1995). According to them, providing knowledge about the causes of ill health and choices available will go a long way towards more beneficial health seeking behaviour (Omotoso, 2010). Various researches have established the factors that influence an individual's behaviour toward seeking health care (Bourne, 2009; Chauhan, Kandan, Purty, Samuel, & Singh, 2015; Moe, Tha, Naing, & Htike, 2012). Health seeking behaviour is influenced by a variety of socio-economic variables including sex, age, the social status of women, the type of illness, access to services and perceived quality of the service provided (Tipping and Segall, 1995).

Older adults go through various kinds of disabilities in the form of physiological, physical, mental and social impairment. One major factor which influences the severity of diseases among older adults is Health care seeking behaviour. Health care seeking behaviour is referred to as 'a decision or an action taken by an individual to maintain, attain, or regain good health and to prevent illness' (Bhat & Kumar, 2017). The decisions taken involves all available health care options like visiting a public or private and modern or traditional health facility, self- medication and use of home remedies or not to utilize the available health services (Chauhan et al., 2015). Older people are usually influenced by health care seeking behaviour in their choice of a health care facility. It is important to understand health seeking and factors associated with it since delays in seeking health care can results in irreversible complications among older people(Shukla, Ahmad, Brajesh Anand, & Ranjan, 2017).

Health care seeking behaviour is influenced by factors such as age group, illiteracy, misconception, income, family composition, social isolation and dependency (Bhat & Kumar, 2017; Moe et al., 2012; Shukla et al., 2017). Older persons are often unproductive economically and have financial burden and social dependency which makes them vulnerable to illness and health care (Barrientos, Gorman, & Heslop, 2003; Gorman, 2017).

In a study among older persons in Nairobi on health status and health-seeking behaviour, Waweru (2003) found out that, all the respondents started with self-treatment first before using the hospital. Among the respondents, 26% were currently on medication and 62% of them were buying the over the counter drugs when they felt a need, whilst 2 % preferred traditional healers among those with musculoskeletal

conditions and those with chronic diseases such as hypertension and diabetes preferred the hospital (Waweru, Kabiru, Mbithi, & Some, 2003). Lack of money was the main reason why most of them preferred to self- medication and proportion of those seeking health care reduced with advancing age.

Similarly, study among rural older Indians by Shukla et al (2017) report that 97% of the participants who fell sick took treatment or sought for health care. However, factors such as age, gender, education, socio-economic status and religion were not associated with source and choice of health care facility (Shukla et al., 2017). In contrast, Kishore et al (2015) show that gender can influence health-seeking behaviour. More males (76%) sought health care from the government hospital as compared to the females (33%) (Kishore et al., 2015). This could be related to the fact that older men have income that can influence their health-seeking behaviour compared to females who are solely dependent on others.

A study in a coastal rural area of South India, on determinants of health seeking Chauhan et al (2015) found that in case of illness, most of the respondents (56%) visited public health facilities whilst one third of the study participants visited the private health facilities and 12% visited other health facilities including pharmacies (Chauhan et al., 2015). The reason for the preferred choice was because of accessibility especially for those who do not have a problem with financial constraints.

2.9. Health-Related Quality of Life of older adults

The World Health Organization defines Quality of life as the 'individual's perception of his /her position in life in the context of the culture and value system in which he/she lives in relation to his or her goals, expectation and standards and concerns' (WHO, 1993). It is a subjective assessment of one's state in a multidimensional context in relation to the individual perceived physical health, psychological state, social relationship with others in the community (Damayanthi, Moy, Abdullah, & Dharmaratne, 2018). Based on the above definition, Health-Related Quality of life (HRQOL) was taken as a broad and multidimensional construct that included an aspect of health that influences the quality of life ratings. The term HRQOL was intended to narrow the focus to the effects of health illness and treatment on quality of life. Ageing and senescence affect all these domains and in general reduce the HRQOL (Kirchengast, 2008). As older adults live longer, their health care needs become more important, especially with regards to maintaining independence and improving quality of life. Assessment of HRQOL of older persons helps to determine the well-being and health needs of older adults with disabilities.

HRQOL describes the effect of disease and illness on a person's physical, social, and mental well-being (Owolabi, 2010). It is accessed with the use of Short-Form Health Survey (SF-36), a valid quality of life tool often employed to determine the impact of medical intervention and the outcome of health care services (Mbada et al., 2015). Literature have proved that the SF-36 is culturally sensitive which enables its adaptation and translation in different languages. Literature have proved that the SF-36 is culturally sensitive which enables its adaptation and translation in different languages. A cross-cultural study in SSA, Nigeria to adapt the sf 36 into Yoruba

language and determine its reliability and validity found out that the tool had good criterion, 'known groups' and construct validity, with recommendation of its utilization for clinical and research utilization in the sub region (Mbada et al., 2015).

The ageing process is heterogeneous resulting in two extreme situations that are, an excellent quality of life or a very bad quality of life with various intermediate possibilities that can be found between these extremes (Paschoal, Jacob Filho, & Litvoc, 2007). In the later stages of life elderly experiences, various conditions such as retirement, widowhood, loss of social roles, social support network reduction, loneliness and lack of personal life significance can create obstacles to a better quality of life. However, for the elderly, the cure is not the main purpose so much as the maintenance of a good quality of life and for the health professional, measurement of quality of life is vital for assessing the effects of their treatment and interventions. Research on quality of life among the elderly has gained much importance as an increase in population ageing has become a global concern for healthy ageing (Damayanthi et al., 2018).

Illness and disabilities affect the quality of life (QOL) and assessment of QOL of aged can help suggest interventions that can influence the planning, delivery and evaluation of health and medical services (Renwick et al., 1996). Also, improved QOL is a desired outcome of interventions. Similarly, from a health promotion perspective, it helps to identify interventions that promote health and prevent illness among the aged.

Health-related quality of life in the aged is influenced by many factors such as subjective well-being, an individual's self-concept and socioeconomic factors. However, these factors differ markedly between men and women which has been

linked with the lower socioeconomic status of old aged women or a higher rate of widowhood in comparison to same-aged men (Kirchengast & Haslinger, 2008). In this study, the HRQOL was higher among women aged less than 70 years than among same-aged men, whilst women aged more 70 years and above have lower HRQOL than same-aged men (Kirchengast & Haslinger, 2008).

Older people who were married had better HRQOL than single older people. Among older people without health-related issues, psychosocial issues and mental health problems HROL was better (Gupta, Mohan, Tiwari, Singh, & Singh, 2014). In addition, the study reported that factors such as financial dependency, socioeconomic status and health-related issues predicted 53.7% of the variability in the prediction of HRQOL of the older people (Gupta et al., 2014). The conclusions obtained in the study are transferable to the Ghanaian population.

Borglin et al. (2005) contend that health complaint of pain predicted low HRQOL and mobility impairment, urinary incontinence and breathlessness during activities predicted low physical HRQOL whilst low mental HRQOL were predicted by fatigue, being nervous or worried, sleeping problems and urinary incontinence. Moreover, women had significantly lower HRQOL and reported a higher degree of health complaints than men did (Borglin et al., 2005). Women have longer lifespan than their male counterpart and as they live longer they tend to have lower HRQOL

The relationship between the use of health care services and HRQOL among elderly people has been studied from several perspectives (Dai et al., 2015; Gallegos-Carrillo et al., 2008; Zhou, Ru, & Hearst, 2014). Some of the research, for example, is focused on HRQOL as a predictor of health care utilization among elderly Chinese (Lam,

Fong, Lauder, & Lam, 2002). In other words, it has been questioned whether low HRQOL levels are associated with high service usage rates, and results have consistently revealed a positive association among numerous populations (Matsumura et al., 2000; Miilunpalo, Vuori, Oja, Pasanen, & Urponen, 1997).

Gallegos-Carrillos et al. (2008) assert that older adults who use the medical unit for preventive services are associated with a better perception of HRQOL, whilst the use of curative services is less associated with a better HRQOL (Gallegos-Carrillo et al., 2008). This is expected because older adults who visit the health facility for preventive services have chronic conditions and would need to continue with their medications to prevent any complications. However, other studies have found a negative correlation between the use of health care services and HRQOL levels in aged people.

Studies showing this relationship concern mainly patients with specific chronic conditions, where the HRQOL association has been determined with regard to the use of a specific health care service; for example, patients with chronic obstructive pulmonary disease (COPD). It is evident that higher use of emergency health care services and hospitalization correspond with poorer HRQOL levels ((Alemi et al., 2017; Gallegos-Carrillo et al., 2008; Miilunpalo et al., 1997).

2.10. Summary of Literature review

The chapter reviewed relevant literature on the availability of health care services, utilization of health care, health seeking behaviour and the health-related quality of life among older adults. It also assessed the relevant theories related to the issues, the

ageing policy as well as determinants of health care utilization, health-seeking behaviour and health-related quality of life. Studies on utilization of health care services have been undertaken in high and low-income countries using the phase two of the Andersen model and most have related utilization with only satisfaction with service, but hardly with health-related quality of life. The dearth of knowledge on linkages between utilization, population characteristics, health-seeking behaviour and health-related quality of life existed. This gap is what this study seeks to close using Andersen phase four model that helps to establish such linkages.

CHAPTER THREE

3.0. METHODS

This chapter describes the study design, study setting, study population, sample size determination, sampling, methods data collection, fieldwork, quality control, data processing, data analysis. It also covers the ethical issues and study limitations.

3.1. Study Design

The study employed a cross-sectional study design with a mixed method (quantitative and qualitative) data collection technique. Cross-sectional 'collects data at one point and draws conclusion about changes within a population by comparing characteristics of those strata' (Fain, 1999). The quantitative approach involved a survey of older adults aged 60 years and above to collect data on population characteristics, use of health care services, health care seeking behaviour and health-related quality of life, by means of a questionnaire. The quantitative approach is underpinned by the belief that human phenomenon can be studied objectively.

The qualitative approach was exploratory in nature and employed key informant interviews to ascertain the availability of health services for older adults and the extent of implementation of policy interventions at the facilities. This approach was utilized because little information is available on the topic and was done by means of an interview guide.

3.2. Study Area

The study was carried out in Greater Accra, one of the ten administrative regions of Ghana. It has a population of 4,010,054, making it the most populous region in the country and with urban and rural populations of 3,630,955 and 379,099 respectively

(GSS, 2010). Administratively, Greater Accra has 2 metropolitan areas (Accra Metropolitan District, Tema Metropolitan District); 8 municipal areas (Ga South Municipal District, Adenta Municipal District Ashaiman Municipal District, Ga East Municipal District, Ga West Municipal District, La Dade Kotopon Municipal District, La Nkwantanang Madina Municipal District , Ledzokuku-Krowor Municipal District) and 6 districts (Ada East District, Ada West District, Ga Central District, Kpone Katamanso District, Ningo Prampram District, Shai Osudoku District).

The Accra Metropolitan area and the Shai Osudoku district were purposively selected for this study to give a good mix of urban and rural characteristics and for the following reasons: The Accra Metropolitan area because it has the highest population in the region (42%), it is mostly urban, characterized by heterogeneity in terms of ethnicity, culture and language and has the highest number of health infrastructure, with approximately 20 government-owned health facilities including two tertiary hospitals and more than 800 private health facilities. In addition, majority of the elderly in the urban greater Accra may be more exposed to these health facilities (GSS, 2014).

The Shai Osudoku district because it is the largest district in Greater Accra, occupying a total land area of about 968.361 square km and having 77% of its population residing in rural communities (GSS, 2014). The district was carved out of the Dangbe West district in June 2012 based on LI 2137 and has Dodowa as its capital. The population of Accra Metropolitan Area and Shai Osudoku Districts are 1,665,086 and 51,913 respectively (Ghana Population and Housing Census, 2010).

The catchment areas within a 5km radius of the all the polyclinics in the Accra Metropolitan area were selected for the study. The polyclinics included: Kaneshie Polyclinic, Mamprobi Polyclinic, Mammobi Polyclinic, Adabraka polyclinic and Ussher Polyclinic (Figure 2). The catchment areas within a 5km radius of the Dodowa Government Hospital in the Shai Osudoku district were also included in the study (Figure 3).

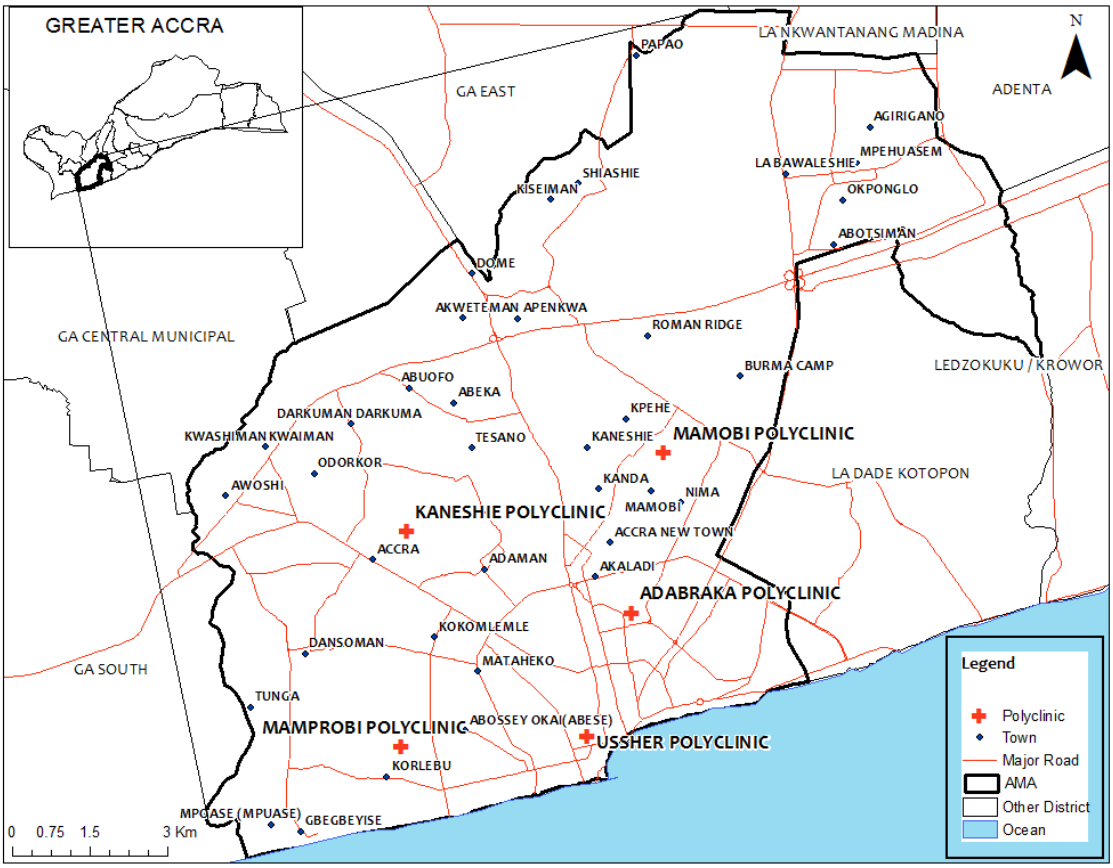

Figure 4: Map of Accra showing selected health facilities used for the study

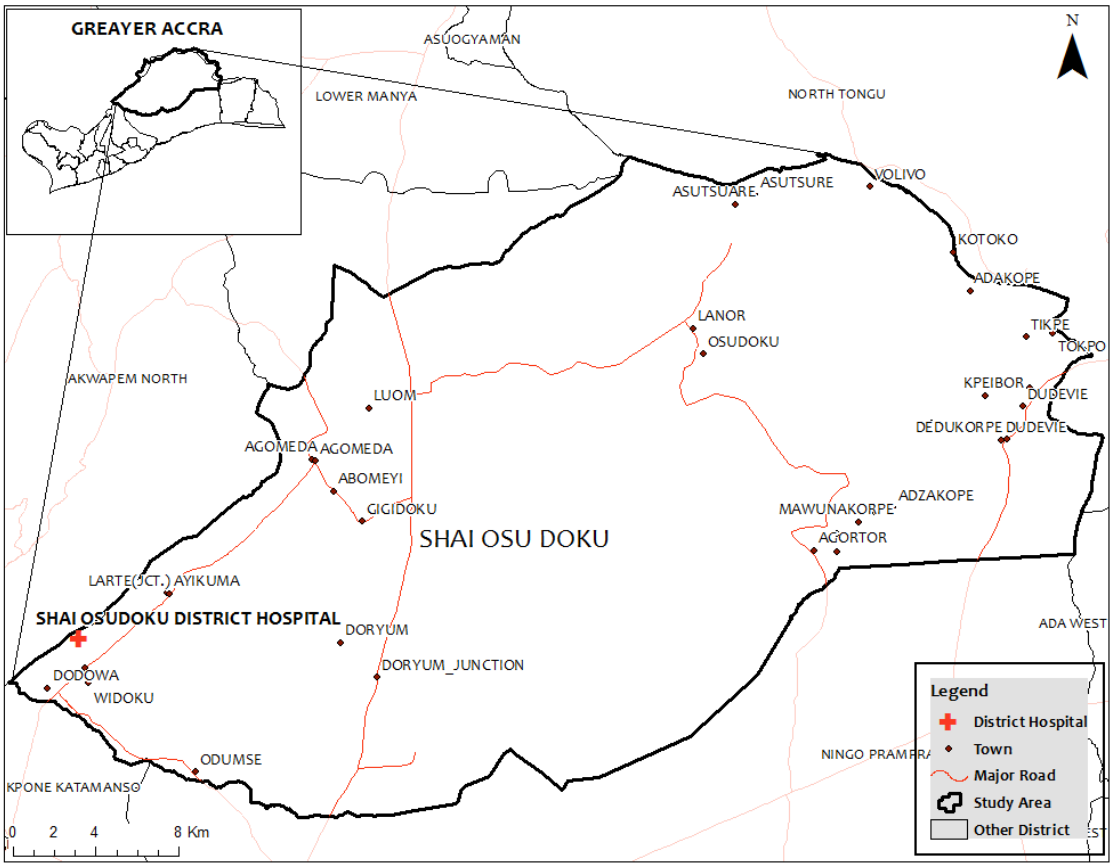

Figure 5: Map of Shai Osudoku district showing the district hospital selected

3.3. Target Population

The target population were older adults aged 60 years and above residing in the Greater Accra region.

3.3.1. Study Population

The study population were all individuals aged 60 years and above, residing in households located 5km radius of all the five polyclinics in the Accra Metropolitan area and the Dodowa government hospital in the Shai Osudoku district, all in the Greater Accra region.

3.3.2. Inclusion criterion

Any consenting adult aged 60 years and above residing in households within 5km radius of the five polyclinics in Accra Metropolitan area and the Shai Osudoku district hospital in the Shai Osudoku district. In addition, the older person had lived more than two years in the community and fluent in any local dialect.

For the qualitative (key informant) aspect, these were general nurses and community health nurses at the point service provision were included

3.3.3. Exclusion criterion

Adults aged 60 years and above living in the selected households with any physical disabilities such as paralysis, severe communication problems, hearing loss and cognitive impairment were excluded from the study.

Non health professional were excluded

3.4. Variables

3.4.1. Independent Variables

a. Based on Anderson's behavioural model, predisposing, enabling, and need factors included:

- Predisposing factors - age (years), gender (male or female), ethnicity, educational level (no education, primary school, middle school, secondary and tertiary), Family size and marital status (married, single, separated or divorced, and widowed), occupation, employment status (unemployed, retired, and employed)

- Enabling factors - regular monthly income (pension scheme, LEAP), benefit from government, health insurance coverage (insured or not insured), regular source of medical care and social support.
- Need factors- perceived current and past year general health status prior to the study and diagnosed with a chronic illness.

b. The Health seeking behaviour variable was measured as where health care is sought from, type of health care, reasons for use and non-use of health care services, management of health problems.
c. Health care service utilization was measured as the use of health care services which included physician care contact, hospital outpatient or inpatient services within the year.

3.4.2. Dependent variable

The outcome (dependent variable) in this study was the Health-Related Quality of life. In addition, Health care service utilization and Health seeking behaviour were also measured as outcome variables to determine factors that influence the use of health care facility. Health care service utilization was measured as the use of health care facility once or more times within the year under review.

The Health-related quality of life was measured as perceived general health status (using the Health-Related Quality of life index) in which an older person had lived a functional, comfortable and pain-free life within the year. Of interest in this study was the influence of health care services utilization on the health-related quality of life of the older adult.

3.5. Sampling

3.5.1. Sample size determination

According to the 2010 Ghana Population and Housing Census, the population in Greater Accra region was about 4,010,054, of which the elderly constituted 6.5% (Ghana Population and Housing Census, 2010) and represented about 260,654. The population of the elderly using the current available annual growth rate (1.86%) was then estimated to be 310,393.

The healthcare utilization by the older adults (60+ years) in an urban area was estimated to be 79% in the Peltzer et al. study (Peltzer K., Williams J.S., (Awoke et al., 2017)., 2014). This current study was carried out in both urban and rural settings. The assumption is that since the utilization rates in rural settings were lower (Oladipo, 2014) the average utilization rates were assumed to be lower at a rate of 75%.

The minimum sample size after applying the finite population correction factor was estimated using the formula (Iyoke, Onah & Onwasigwe C.N., 2006; Hecke, 2012);

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

Where n=minimum sample size required,

N= finite population and

$$n_0 = \frac{Z^2 * p * (1-p)}{e^2}$$

Where Z= confidence level, p= healthcare utilization and e= sampling error

With a confidence level of 95% i.e. Z=1.96, e=4%, p=75% and N=310,393 the minimum sample size was 449 elderly persons. Making a provision for 10% contingencies, a minimum sample size of 500 was estimated for this study.

3.5.2. Sampling procedure

3.5.2.1. Selection of households and respondents

As stated earlier, households within a 5km radius of the five polyclinics in the Accra Metropolitan area and the Shai Osudoku district hospital, Dodowa were targeted for the study. All distances were measured using a Global Positioning System (GPS) standardised method for household selection following pre-approved WHO methods (Arhinful, 2011). According to the 2010 Population and Housing Census, the ratio of the older persons in urban and rural areas was 13:1. Based on this, 462 and 38 elderly persons were estimated to be selected from the urban Accra Metropolitan area and the rural Osudoku district respectively, making up the total sample size of 500.

With an assumption that one older person 60 years or older would be selected from each household, 93 households that were located within 5km radius of each of the five polyclinics (Kaneshie, Maamobi, Ussher, Mamprobi and Adabraka) within the Accra metropolitan area were randomly selected to make up the total of 462 households, while 38 households were randomly selected from households located within 5km radius of the Dodowa Government Hospital. The list of households within the catchment areas of each reference health facility was obtained from the Ghana Statistical Service and entered into a Microsoft Access Computer Programme. Codes were assigned to the households and a command issued to the programme to select randomly the required numbers and households that participated in the study. The selection of households was done using a systematic random sampling procedure.

They were selected from households that were within 5 km radius of the 6 selected health facilities.

The total sample size of 500 was distributed as follows: Accra metro 462, SOD 38. This was based on findings from the 2010 population and housing census which showed that the ratio of older adults in urban to rural was 13:1. These 38 from SOD and 462 from Accra metro were selected using a systematic random sampling procedure. They were selected from households that were within 5 km radius of the 6 selected health facilities. The 462 was divided equally among the catchment areas of the selected 5 health facilities from Accra metro each area was 93. The list of HHs lying within 5km radius of selected HF were obtained from GSS. These HHs were serially numbered based on the total number.

To obtain the sampling interval the total number of HHs obtained from GSS was divided by the expected number of respondents to be selected. Eg. SOD 300/38=8. So from this every 8^{th} house was included in the selection. The first HH was selected using the Random start method in which one of the HHs within the sampling interval was randomly selected eg 3th HH, so every 8^{th} HH were subsequently selected (3th 11^{th} 19^{th} etc)

A household was defined as consisting of person or group of related or unrelated persons who live together in the same housing unit, share same housekeeping and cooking arrangements and acknowledge one adult as its head (Sato, 2012). From each selected household, one older person aged 60 years and above was selected randomly through balloting, especially, for households that had two or more elderly persons that qualified per inclusion criteria. If any of the households that were randomly selected

by the computer programme did not have an elderly person, the next adjacent household that had an elderly person was selected.

3.5.2.2. Selection of participants for key informant interviews

Health care service providers at the facility level were purposely selected as key informants. This technique was chosen because it focused on gathering information from persons who had first-hand information and could provide needed data in the field of study. Two participants each from the six health facilities selected were recruited. These included curative (general nurse) and a preventive (community health nurse) health care provider respectively. The selected curative health care providers were nurses in the outpatient departments where most of the older persons visited as the first point of contact for health care needs. Similarly, the preventive health care providers selected were community health nurses who rendered care to vulnerable populations (including the older persons) in the communities. Altogether, eleven health care providers participated in the study after institutional permission was granted by the Regional Health Directorate. The health care providers were identified by their departmental heads and their contact information given to the Principal Investigator. These persons were then contacted. The aims of the study were explained to the participants after they had read through the participant's information sheets. Health providers who were willing to be interviewed were asked to choose a convenient time and place for the interview.

3.6. Data Collection - Methods and Tools

3.6.1. Quantitative Tool

A structured questionnaire developed based on Andersen's model, literature review and objectives (Appendix C) of the study was used for data collection among the older adults 60 years and above in the selected communities. Face-to-face interview technique was employed for data collection from respondents in the survey.

The structured questionnaire consisted of four sections (Appendix B):

1. Sections A: Focused on the socio-demographic characteristics of the older adult such as their age, sex, educational level, marital status, residential status, number of children (Predisposing factors).
2. Section B: Focused on the employment status, monthly income, source of income to the household, health insurance (enabling factors) and living with a chronic disease, general health status (perceived need) that might facilitate the utilization of health care services by the elderly.
3. Section C: Focused on the factors that influence the health-seeking behaviour of the respondents, these included where health is sought from, distance from home to health facility, reasons for using a health facility
4. Section D: Focused on the Health-Related Quality of Life (HRQOL) of the older adult. The HRQOL was assessed using the Medical Outcome Study 36-item – Short-Form Health Survey (SF-36) tool which was adapted and adopted for the study. The psychometric properties of this scale have been examined in a number of studies and are suitable for use among community-dwelling adults age 65 years and above (Gandek, Sinclair, Kosinski, & Ware Jr, 2004). This questionnaire consist of 36 items that assessed eight generic health item scales: physical

functioning (PF); limitations in role activities due to physical health problems (RP); bodily pain (BP); social functioning (SF); general mental health that included psychological stress (MH); limitations in role activities due to emotional problems (RE); vitality, energy, or fatigue (VT); and general health perception (GH). The PF, RP, and BP scales reflect the physical elements of health; the SF, RE, and MH represent psychological aspects; and VT and GH indicate the subjective perception of health. The instrument has a transformed score ranging from 0 to 100, where higher values denote better functioning and fewer limitations.

3.6.2. Qualitative

An interview guide was used to explore health care services and policy implementation interventions for the older adults in the health facilities. This was achieved through key informant interviews at the facilities (Appendix D).

3.7. Fieldwork

Fieldwork was carried out from December 2016 to April 2017 in all the selected households in the catchment areas of the six health facilities selected for the study. For the questionnaire administration, two weeks were assigned for data collection in each of the selected areas. Data collection started in Maamobi, followed by Adabraka, Ussher, Mamprobi, Kaneshie polyclinics and ending at Shai Osudoku hospital in Dodowa, respectively.

Survey: A total of 500 questionnaires were administered at the end of the data collection period giving a response rate of 100%. The high response rate was observed because;

1. The survey was community-based where all the respondents lived.
2. A well-planned community entry was utilized to gain access into the community with the assistance of assemblymen and community elders.
3. The aims, objectives and outcomes of the study were thoroughly explained to the respondents, thus making them interested in participating in the study.
4. The Research Assistants made the administration of the questionnaires interesting and attractive and easy to complete because they understood the issues and could communicate effectively.
5. Respect and gratitude were shown by the research assistants to the respondents and this motivated them to respond and complete the survey.

Qualitative: The interviews with key informants at the facility level were done through face-to-face individual interviews with the use of semi-structured interview guides in English. The participants were made to read the information sheet and the objective of the study was explained to them. Each interview was preceded by the creation of rapport with the participant to enable discussions to proceed in a relaxed, conversational atmosphere. The interview explored health care providers' view and insight on the availability of health care services and policies for older adults in the facility. Interviews were carried out in English and audiotaped. Before each interview, the audio recorder was tested for its effectiveness. The data collection site depended on the participant's choice within the facility.

The place and time of the interview were mutually agreed upon by the participants and the Principal Investigator. Interviews lasted between 45 and 60 minutes. Participants were interviewed until the data reached saturation where additional information from participants did not add any new information. All interviews were collected and transcribed verbatim based on the meanings from the interview. Techniques of summarizing during the interview to ensure comprehensiveness and comprehension of data were utilized.

3.8. Quality Control /Assurance

3.8.1. Training of field staff

The field staff recruited to administer the questionnaires included four field research assistants and two supervisors (graduate interns with experience in field activities). Training of the field workers was done in English and the local languages(Ga and Akan) as required, to ensure that concepts and questionnaires were understood. The Research Assistants were trained on the aims and objectives of the study, skills on how to establish rapport with prospective respondents, the consent process and assurance of respondent confidentiality. In addition, all interviewers and supervisors were trained on questionnaire content and administration, techniques on eliciting information without introducing bias as well as strategies in establishing good rapport and maintaining neutrality, which was essential for obtaining complete and quality data.

3.8.2. Pretesting of questionnaire

(Easterby-Smith, Thorpe, & Lowe, 2002) recommend that tests for validity and reliability should be carried out at the pilot stage of an investigation before the main phase of data collection. Based on this, a pilot study was conducted at the Abokobi

district among older adults aged 60 years and above after permission had been sought from the relevant authorities.

The validity of the instrument was assessed for adequacy, appropriateness, inclusiveness and relevance to the concept under study. To ensure reliability, all supervisors and Principal Investigator re-interviewed 10% of pilot study participants selected randomly to check for completeness. Very few modifications were effected following the pre-testing. The area that was improved slightly was mainly section C of the questionnaire (Health seeking behaviour of respondents). Duration of administration of each questionnaire was determined to be 45 minutes on average.

3.9. Data Processing

3.9.1. Survey Data

This involved coding, editing, data entry and monitoring of the data processing procedure. At the end of each interview, field assistants and/or supervisors checked the questionnaires for completeness and consistency before leaving the participants. Each of the selected health facility catchment areas and households was assigned peculiar codes to allow for easy identification and tracking of errors and inconsistencies were detected. For data entry, a coding manual was developed in order to ensure consistency. Data was entered manually from the completed questionnaire by the Principal Investigator and supervisors into two separate databases on two different computers. Both databases were then compared to check if the information from the respondents had been accurately recorded. All inconsistencies were reviewed and corrected using the completed questionnaires. Data was initially entered using Epi-info and later transported into Stata (version 11) for data analysis.

3.9.2. Qualitative

The recorded data were downloaded onto the researcher's laptop and transcribed verbatim after every interview session. An audio file of all interviews was kept so that the transcripts were cleaned by checking the information on the transcript against the original audio file for accuracy. Each participant was assigned a unique number in relation to the selected health facility. After transcription, each participant's data was coded and kept in a separate file with a password. Once transcription was complete for each interview, the researcher read through while listening to the recording and corrected any spelling or other errors, anonymized the transcripts so that the participants could not be identified from anything that was said (J. Sutton & Austin, 2015).

3.9.2.1. Rigour

According to Guba (1981), to ensure rigour in qualitative research, the researcher must ensure credibility, auditability and fittingness criteria in the data collection procedure(Guba, 1981). Credibility refers to accuracy, validity and soundness of data. The researcher had a prolonged engagement with the key informants by spending enough time with participants to check for discrepancies in responses. The researcher used verbatim quoting to illustrate findings. Peer debriefing and member checking were utilized to ensure the accuracy of responses by asking the participants to review the themes and narratives to determine whether the researcher accurately described the participant's experiences. To ensure auditability, the researcher allowed another researcher to follow the conclusions of the investigator. Fittingness is the degree to which study findings are applicable outside the study situation and the degree to which results are meaningful to individuals not involved in the research. Purposive

sampling was utilized, and participants were interviewed until saturation. Detail accounts of the data collection procedure, time and context in which data were collected were described.

3.10. Data Analysis/ Statistical Methods

3.10.1. Quantitative

Stata version 11 was used for the statistical analysis. The frequencies of all the variables were computed to ensure data accuracy and cleaning. Descriptive statistics such as frequency, mean, standard deviation and percentages were used to describe the population characteristics based on the Andersen's conceptual framework which includes; predisposing, enabling and need characteristics. Chi-square test (non-parametric test) was used to test the association between demographic variables and the utilization of health care services, population characteristics and health-seeking behaviour. Binary logistic regression analyses were used to establish associations between population characteristics and the following: utilization of health care services, health seeking behaviours and the health related quality of life of the older adults. Data analyses were conducted at a significance level of (alpha 0.05) and power of 95% confidence.

The health related quality of life were analysed using two main components including the physical health component Summary (PCS), Mental Health Component Summary (MCS) and the overall(composite) HRQOL. The physical health component summary were measured using four out of the eight scales namely: physical functioning (PF); limitations in role activities due to physical health problems (RP); bodily pain (BP) and general health perception (GH), whilst the Mental Health Component Summary

was measured using the other four of the eight scales namely; social functioning (SF); general mental health that includes psychological stress (MH); limitations in role activities due to emotional problems (RE) and vitality, energy, or fatigue (VT) (Table 2).

The overall or composite HRQOL was measured based on the eight scales. The instrument has a transformed score ranging from 0 to 100, where higher values denoted better functioning and fewer limitations. All scales and the component scores were positively scored so that higher scores represent good health-related quality-of-life (Gandek, Sinclair, Kosinski and Ware, 2004). Any score greater than 50 denoted high physical or mental health otherwise health related quality of life was denoted poor (Table 1). The Cronbach's alpha on all scales of the SF-36 exceeds alpha of 0.8, except for social functioning [SF] ($\alpha = 0.76$) (Jenkinson, Coulter, & Wright, 1993). This is similar to the present study as all the scales of SF-36 were higher as presented in Appendix G. The present study found a Cronbach's alpha value of 0.95 for the SF-36 tool for the HRQOL.

Table 1: Analysis of Health Related Quality of Life Tool (SF-36)

Scale	Number of items	After recording as per section D of the questionnaire, average the following items	Average score/100
Physical Functioning **(PF)**	10	3, 4, 5,6,7,8,9,10,11,12	Total of PF/10
Role Limitations due to Physical Health**(RP)**	4	13, 14, 15, 16,	Total of RP/4
Role Limitations due to Emotional Problems**(RE)**	3	17. 18, 19	Total of RE/3
Energy /Fatigue**(VT)**	4	23, 27, 29, 31	Total of VT/4
Emotional Well-being **(MH)**	5	24, 25, 26, 28, 30	Total of MH/5
Social functioning **(SF)**	2	20,32	Total of SF/2
Bodily Pain **(BP)**	2	21, 22	Total of BP/2
General Health **(GH)**	5	1, 33, 34, 35, 36	Total of GH/5

Source: www.chiro.org/LINKS/OUTCOME/How_to_score_the_SF-36.

Table 2: Physical and Mental Health Summary Components

1. Physical Health Summary Component	
Physical Functioning	PF
Role Physical	RP
Bodily Pain	BP
General Health	GH
2. Mental Health Summary Component	
Vitality	VT
Social Functioning	SF
Role Emotional	RE
Mental Health	MH

Source: www.chiro.org/LINKS/OUTCOME

3.10.2. Qualitative data analysis

The analysis of the data took place in two stages and involved the RA. The two RA transcribed the taped interviews independently of each other. The transcription text was read through several times to obtain a sense of the whole. Following the transcriptions, the thematic content analysis was undertaken as the second stage of the data analysis. These were used to analyse data gathered and was done by identifying and distinguishing the main themes and sub-themes as deduced from the information given by the participants. Thematic analysis searches for themes that arise as being important to the description of a phenomenon (Daly, Kellehear, & Gliksman, 1997). It involves identifying patterns in data and developing themes that serve as categories for analysis (Boyatzis, R.E., 1998; Vaismoradi, Turunen, & Bondas, n.d.).

3.11. Ethical Considerations

Ethical clearance and approval were obtained from the Institutional Review Board (IRB) at the Noguchi Memorial Institute of Medical Research, University of Ghana (Appendix A). In addition, permission letters to the selected institutions to conduct the study in Ghana Health Service facilities were obtained from Greater Accra Regional Health Directorate after a copy of the proposal and IRB letter was assessed (Appendix E, D, F).

The purpose of the study was explained to each participant prior to the commencement of data collection. All identifiable data provided by the participants were kept under lock and handled only by the Principal Investigator. Information about participants in the interview was not to be disclosed to others to ensure confidentiality. Participants were assured that names, addresses and identifying

information of participants would not be collected. Participants were identified by code numbers like 001, 002 and 003 to the last number 504. This was done to ease retrieval of questionnaires and data analysis and not for identification. The completed questionnaires were kept in a locked metal cabinet and will be accessible only to the researcher and supervisors. Furthermore, participants were informed that the completed questionnaire would be kept for five years and data destroyed after five years, in accordance with the University of Ghana policy.

Consent form: Participants were given explanation of the aim of the research before they were interviewed. Written informed consent was obtained from the participants as well. Two consent forms were signed by each participant so that a copy would remain with the participant (Appendix B). Participants who did not want to take part in the research were exempted, and those who wished to decline at any point during the interview were also not coerced to continue. All participants were provided with information sheets about the study so that they were adequately informed.

3.12. Limitations of the study

The study had some limitations. Firstly, selection of households nearest to the respective health facilities in the urban and rural areas introduced some selection bias in that the households nearest to the health facility may have more access to health services. This may have affected internal validity. Secondly, biased responses were one major concern, where a person is more likely to respond when they have a characteristic or set of characteristics. Bias will occur when the character in question is in some way related to the probability of having the outcome.

CHAPTER FOUR

4.0. RESULTS

4.1. Introduction

This chapter presents the results of the study. The availability of health care services for older adults would be presented first followed by the population characteristics of the survey participants, utilization of health care services, health care seeking behaviour and health-related quality of life. The chapter would end by discussing the relationship between population characteristics, utilization of health care services, health-seeking behaviour and health-related quality of life.

4.2. Results of Qualitative Study

4.2.1. Availability of Health Care Services for Older Adults

Increasing demand for health care services for the elderly has resulted from population ageing worldwide. This demographic shift to older adults has a significant impact on health, society, economics, and epidemiology (De Luca d'Alessandro, Bonacci & Giraldi, 2011; United Nations, 2009). Therefore, healthcare services especially at the primary level need to be readily available, accessible and adapted to the needs of the elderly (Woo, Mak, & Yeung, 2013).

Availability of healthcare and its subsequent utilization by older people may be influenced by a complex set of factors ranging from health-seeking behaviours, attitudes, social, demographic, economic and cultural characteristics of individuals that make them vulnerable to ill-health (WHO, 2006). These factors and how they interact, influence how well people grow to advanced ages, cope with ill-health or remain active participants in activities of their communities (WHO, 2008).

The critical role availability of healthcare services for older people plays and the need for them to be accessible and adapted to the needs of older individuals has been acknowledged by World Health Organization to be important (WHO, 2004). An important goal for health service systems worldwide is to ensure equal access to health care according to needs regardless of age, gender, ethnic background and capacity to pay (Zhou et al., 2015).

The study explored the availability of services for older adults at six selected health institutions (Mamobi polyclinic, Adabraka polyclinic, Ussher polyclinic, Mamprobi polyclinic, Kaneshie polyclinic and Shai Osudoku district hospital). In establishing the availability of health services for the older adults, curative and preventive services were explored. In each selected health facility, two service providers (Key informants) were interviewed, one of which provided responses on curative services and the other on preventive services. For the curative services, issues explored included: how older adults accessed services at the facilities; any special services provided; and knowledge of any health care policies for older adults. For preventive services, care provided to the older adults, and knowledge of health care policies for older adults living in the community was explored among the service providers.

4.2.1.1. Background of Respondents

In all, eleven key informants (all female) were interviewed at the six health facilities. Apart from one of the facilities (Mamobi polyclinic) where only one person who had the capacity responded to all the questions both curative and preventive, two persons (general and community health nurses) from each of the other five health facilities responded to questions on curative and preventive issues separately. Six of the respondents were general nurses of a nursing officer or higher rank, whilst the other

five were senior community health nurses; all of who had worked for average periods of six to fifteen years (see Table 3).

Table 3: Background characteristics of key informants

Participant Number	Sex	Rank	Work Experience (Years)	Department	Facility
1	Female	PNO	15	General nursing/Public Health	Mamobi Polyclinic
2	Female	NO	6	General nursing (OPD)	Adabraka Polyclinic
3	Female	SSPHN	12	Public Health unit	Adabraka Polyclinic
4	Female	NO	8	General nursing (OPD)	Ussher
5	Female	SSCHN	6	Public Health unit	Ussher
6	Female	SNO	14	General nursing (OPD)	Mamprobi
7	Female	NO	8	Public Health unit	Mamprobi
8	Female	NO	10	General nursing (OPD)	Kaneshie Polyclinic
9	Female	NO	11	Public Health unit	Kaneshie Polyclinic
10	Female	PNO	15	General nursing (OPD)	Dodowa Hospital
11	Female	SSCHN	6	Public Health unit	Dodowa Hospital

Source: Field data 2017

4.2.1.2. Availability of Curative Health Services for Older Adults

Four themes emerged from the interviews on the availability of curative health services for older adults. These were: accessibility of services; availability of special services for older adults; affordability of health services by the older adults; and knowledge of policy for care of older adults.

4.2.1.2.1. Accessibility of Services

Many older adults who were sick, accessed care from the outpatient clinics run by the polyclinics because the services were conveniently located and available 24 hours a day, seven days a week. They were generally free to access health care anytime they fell sick. Respondents from the selected health facilities reported:

'They are free to come any time they want because we provide 24-hour services. They can come anytime and there is always a Doctor to see them' (P1)
'The elderly is free to access health care any time and at the outpatient department they are given prompt attention' (P3)
'They are free to come anytime they want' (P7).

4.2.1.2.2. Availability of Special Services for Older Adults

Special health care services such as cancer care, eye care, dental care, cardiology, psychiatric care and rehabilitation care were the services generally targeted at older adults. In all the six selected health facilities, no special health care services targeting older adults existed. However, there were some chronic care clinics for diabetes and hypertension that did not necessarily target older adults but which many older adults attended. Older people were given priorities at the Out-patient Department (OPD) and during emergencies to reduce waiting time and to make them comfortable. Some of the facilities (Ussher and Shai Osudoku) utilized special cards that were given to the older adults to identify them and to ensure that they were attended to promptly. The participants had these to say:

'There is nothing special for the older adults if they don't have insurancethey pay. Actually, there is nothing special here for their care.' ***(P6)***

'The services are the general clinical care that is available for all. There is no doctor assigned to older people….' ***(P2)***

'There are hypertension and diabetes clinics on Thursdays and Tuesdays. At the outpatient department, older adults above 60 years are given priorities to be seen early. The units have coloured cards that are given to them depending on the state of their illness. Red for emergency, yellow for priority, and green to be in queue or join the other patients to see the doctor' ***(P4)***

'Not really, not really because most of the elderly people come for the Hypertension and Diabetes clinics and at the clinic, they do not attend to emergency except in cases where the elderly have high BP or their blood sugar is high then they are immediately seen and triaged for management…' ***(P1)***

Although there are no special services targeting the older adults, personal interventions were provided by the nurses at the OPD to ensure that the older adult was given prompt attention. The nurses had these to say:

> *'Yes, at the Out-patient department older people above the age of 70 years do not join the queue, they are seen early so that they do not wait too long at the Out-patient department, but at the consulting rooms they join the queue to be seen by the doctors or medical assistant'* ***(P2)***
> *'No, for now, there is nothing like that, separating the elderly at the OUTPATIENT DEPARTMENT but if they come and the nurse realized that the person needs help then the nurse in charge comes to help. I once observed an elderly who needed an assistant to use the urinal but because he did not know how to access help, he soiled herself and then from there he was not comfortable to be in the queue, so he started walking away and the nurse discovered it and helped him out. Otherwise, the service is normal and regular for all of them'* ***(P1)***
> *'The elderly is not given any special attention at the records section. At the records, they join the queue like any other patients seeking health care but after picking their cards they are given prompt care to enable them to see the doctor. Most often they are accompanied by their relatives'* ***(P8)***
> *'There is no special intervention separating the older adults at the records section they all wait to pick their folders after which we do the sorting at the outpatient department'* ***(P 4)***

4.2.1.2.3. Affordability of Health Services by the Older Adults

There were various means by which older adults paid for health services. These included the NHIS, direct cash payments and sometimes exemptions. Those who were registered under the NHIS were able to access services with their NHIS cards although not all the services were covered under the scheme. The participants had these to say:

> *'Most of them use the NHIS to access health care services. The NHIS covers only 12 cedis of their services. The service is available though most often the older adults cannot pay so they are given the prescriptions to buy from a pharmacy.* ***(P2)***
> *'The older adults use the NHIS card to pay for health care services'* ***(P4)***

> *'Most of the elderly that access this facility use their NHIS card and are often given the prescription to purchase their medicine' (P2)*

'Most of them are insured and hence come with their NHIS card to access health care'..... and are often given the prescription to purchase their medicine'. ***(P2)***

'Those with the NHIS card come and those without it also do come except that they pay and sometimes paying also becomes a problem. Most of the medicines are not available to them, they buy from outside the facility, and the drugs that are not available they buy from outside the facility. Some of the drugs are free for those on NHIS'. **(P6)**
'Most of them are insured with the NHIS however often we get older adults who cannot pay for the medicines' **(P6)**

Those not registered under the NHIS scheme had to make direct payments for services they accessed. A greater proportion of them were unable to pay and so were sometimes declared as paupers or exempted after assessment by the health facility.

'The services are available though most often the older adults cannot pay so they are given the prescriptions to buy from pharmacy'. ***(P2)***

'Some of them who do not have when they come on admission the family tend to dump them. So, there is a social welfare system for them. Money does not come from social welfare, but the hospital declares them paupers and they buy their food, diapers and medication' **(P1)**
'Often, we get older adults who cannot pay for the medicines, sometimes we assist and pay for them from our own resources, those without insurance too sometimes can go. There is nothing in the facility to help them' ***(P6)***

4.2.1.2.4. Policy Framework for Care of the Older Adults

Older adults were entitled to curative, preventive and rehabilitative care to extend their healthy and active years. However, the service providers at the point of delivery in all the selected health facilities had no knowledge of any policy for the care of older adults. Some of the participants made mention of the NHIS exemption policy on persons aged 70 years and Project-Five Alive, a policy that sought to reduce morbidity and mortality in under-fives in Ghana, which sometimes gave priority to children under-fives and pregnant women that accessed health care. The participants had these to say:

'It has been there sometime back there was a policy that people above 70 years should not pay for the services received but I do not know what happened to that policy because it is not happening again except those with NHIS and those who are not insured do pay (P1)

'There was a 'Project Five Alive' a policy that made sure that children under five are given much attention in order to be seen early by the medical doctor. This policy was geared towards pregnant women and children under-fives and currently attention is being given to adolescent. There is nothing for the elderly to the best of my knowledge' (P1).

'No, there is no policy for the care of the older adults' (P6)

'No apart from the Ghana Health Service (GHS) 'Project-Five Alive' policy which tend to give priority to under-fives and also the exemption on the NHIS, I do not know of any policy' (P4)

'I do not know of any policy for the care of the elderly except the exemption of elderly adults aged 70 years and above and this applies to people with the NHIS card' (P2)
'There is no policy for the care of the elderly and also there is no special doctor for the care of the elderly' (P8)

Health care services within the various communities were accessible and affordable for those insured with NHIS however, there was no special consideration for the older adults utilizing the service. Health care professionals at the various outpatient departments had devised their own innovative ways to reduce waiting time for older adults above the age of 70 years were not allowed to join the queue during vital signs assessment. Although there was no policy for older persons at the institutional level, Shai Osu Doku district hospital had devised a chronic care card for all older persons that utilize the chronic clinic which include routine physical assessments and health complaints. In addition, older persons above the age of 65 years are triaged at the OPD to prioritise their care. Similar interventions such as assisting the older adults to be seen early by the physician were implemented at outpatients when the attendance is heavy to reduce waiting time for the older adults. All the health professional interviewed were of the view that apart from what they were taught in school as part

of their training, there should be continuous professional development in geriatrics to improve the care they render to older persons at the facility. They also expressed their concern that the 'Project Five Alive' which was implemented by GHS, targeted under-fives and older persons were left unprotected.

4.2.1.3. Availability of Preventive Health Services for Older Adults

Apart from the curative health services that were required to be provided, preventive or community-based health care management systems were also required to be instituted within the health system to take care of older persons. In this section, two main issues were explored. These were services rendered to older persons in the communities and knowledge of health service policy for the care of older persons living in the community.

4.2.1.3.1. Services Rendered to Older Persons in the Community

The findings revealed that there was no structured community-based health care for older persons in the health service. However, some preventive health care services for older persons were implemented as part of the overall community outreach services provided by the community/public health units at the district and community levels.

As part of the care delivered to members in the community during community outreach services, health professionals most often followed up on cases that had been referred to them, carried out an assessment of health status of the older persons, gave education and counselling, and provided self-care and personal hygiene .

4.2.1.3.2. Follow-up on referred cases

For older persons who were admitted and discharged, there was an internal referral from the ward to the public health unit. Participants 7 and 9 intimated as follows:

> *Sometimes when an aged is admitted and is discharged the patient is referred to us for follow up so that we continue with the care in the community. We follow up and report back to the institution.* ***(P7)***

> *There are cases referred from the recovery ward to the public health unit and we do follow up but sometimes they give wrong addresses which make it difficult to trace.* ***(P9)***

4.2.1.3.3. Assessment of Older Persons in the Community

The main assessments that were carried out included blood pressure and health status of the older adult:

> *'In the community, we assess the health status of the older client, check their blood pressure (BP), most of them have BP and they are not aware or are not taking their medication'* **(P5)**
> *We also do check their blood pressure and if the person has high blood pressure, we do refer them to the hospital'* ***(P3)***

But for some of the community health nurses, they lacked the necessary equipment to assess the vital signs of the older adults in the community. This is what one had to say:

> *During the home visit, we only advise sick elderly client to seek for health care since we are not equipped (do not have items to check the vital signs) to give a care'* ***(P9).***

4.2.1.3.4. Education and Counselling

Education and counselling on how to take care of the older adults in the community were given to the older persons or the relatives. The nurses asserted that:

> *'During home visit we normally advise and counsel them on how to be healthy'* **(P7)**
> *'Health talk on diet and personal hygiene is sometimes given'* **(P9)**

> *Sometimes too I have a feeling that the aged wants to share their health concern with us or confide in us and pour out their problems. Sometimes after talking to them, they feel relaxed and relieved.* **(P7)**

4.2.1.3.5. Provision of Self-Care

Many of the community health nurses assisted in maintaining the personal hygiene and feeding of older persons who could not feed themselves:

> *We have the routine and special cases and when we go we manage as such. The special cases are the aged with problems (diabetes and hypertension) in the community and pregnant women and children under five. We take them as special people by checking on the medication whether they are being taken accordingly and also if there is anything the person cannot do we assist such as nail care, massaging and feeding.* **(P7)**

4.2.1.3.6. Knowledge of Health Service Policy for the Care of Older Persons Living in the Community

Like the curative health providers, the community health nurses also had no knowledge of the existence of health policy for care of the older persons in the community. In response to the policy issue the participants stated as follows:

> *'No, there is no policy on the care of the older adults*' **(P3)**
>
> *'I do not know of any policy on the care of the older persons in the community we only do our routines'* ***(P9)***

The provision of preventive health services to older adults in the communities is one of the roles of community health nurses. As they are trained to care for children under five, provide antenatal care, maternity, school health, occupational health care of handicapped and elderly in the community. Currently, the preventive care rendered to older adults is inadequate owing to several health system barriers. The community health nurses render care to older adults with health needs, follow up on cases referred to them, educate and counsel informal caregivers of older adults during home visits. However, as part of their community service, they were not well equipped to render specialised care to older adults with health needs.

4.3. Results of Quantitative Survey

4.3.1. Population Characteristics of Respondents

This section presents the population characteristics of older adults in the Greater Accra. In all 500 older adults participated in the survey, with a response rate of 100 percent. They were described under the following: predisposing or background characteristics, enabling and need factors consistent with Anderson's model of health services utilization.

4.3.1.1. Predisposing (Background) Characteristics

The background characteristics of interest include Age, sex, residential status, ethnicity, religion, educational status, marital status and family size. As Table 4 depicts, a greater proportion of the respondents (42%) were aged between 60 to 64 years with the least (5%) aged between 80 to 85 years. Older females were more (58%) than the older males (42%). Across all age groups, the proportions of females were more than the males (Figure 4). Nine percent lived alone whilst 34 percent and 57 percent lived with family members and their spouses respectively. As expected, the Ga-Dangbe ethnic group were in the majority (51%), followed by Akans (24%), Ewes (14%), Mole-Dagbanis (9%) and the remainder (1%) made up of Guans and Hausas. Majority of the respondents were Christians (84%) and Muslims (11%) whilst the remainder belonged to either the Traditional religion (2%) or no religion (3%).

About a fifth of the respondents had either attained primary (19%) or no education (21%) respectively. Middle School level of education was the highest attained by greater proportion (43%), whilst only 17 percent of them had attained secondary or higher educational level. All the respondents were either married, cohabiting, had never married or had ever married. As Table 1 shows, 48 percent of them were married traditionally or by ordinance, whilst 26% were widowed. Close to a tenth of

them had never been married, whilst 17 percent were divorced or separated. Majority of them had had children (99%) with family sizes ranging from one to over six. The mean family size of the respondents was 4± 1.5.

Table 4: Background Characteristics of respondents

Characteristics	Frequency	Percentage (%)
Age (years)		
60-64	209	41.7
65-69	142	28.3
70-74	89	17.8
75-79	30	6.0
80-84	26	5.2
85 and above	5	1.0
Sex		
Female	289	57.7
Male	212	42.3
Residential status		
Living alone	42	8.6
Living with a family member	286	57.1
Living with spouse	12	34.3
Ethnicity		
Akan	122	24.6
Ga-Dangbe	253	50.5
Ewe	70	14.0
Mole-dagbani	44	8.8
Guan	6	1.2
Sisala	1	0.2
Hausa	5	1.0
Religion		
Christian	422	84.2
Muslim	57	11.4
Traditional	9	1.8
No Religion	13	2.6
Marital status		
Single	43	8.6
Married	238	47.7
Divorced/separated	87	17.4
Cohabitation	3	0.6
Widow/Widower	128	25.7
Have children		
Yes	491	98.6
No	7	1.4

Table 4 Continued

Family size		
One	21	4.2
Two	64	12.8
Three	115	23.1
Four	99	19.8
Five	87	17.4
Six or more	113	22.7
Level of Education		
No education	106	21.4
Primary	92	18.6
Middle School	213	43.0
Secondary	49	9.9
Tertiary	36	7.3
Total	501	100.0

*Total=499 (Difference from an overall total of 501 is because of missing values)
Source: Fieldwork 2017

4.3.1.2. Enabling and Need Characteristics

Table 5 depicts the enabling and need characteristics of the respondents. The enabling characteristics show the employment status, work paid, the source of income, pension scheme, monthly income, benefit from government, regular medical insurance and health insurance coverage of the respondents. Majority of the respondents (43.3%) were self-employed, 26.2% were retirees on government subvention, and 16.4% of them were unemployed, with 10.6% of the respondents employed formally.

More than half of the respondents (65.8%) said they received a regular monthly salary for work done whilst that of the remainder (34.2%), were irregular. Monthly income ranges of GHC 100-300 and GHC 400- 600 were received by 46.3% and 42.4% of the respondents respectively. Nearly 81% of them were the sources of income for their families.

Table 5: Enabling and Need Characteristics of respondents

Enabling variables	Frequency (N=500)	Percentage (%)
Employment status		
Employed	53	10.6
Unemployed	82	16.4
Self-employed	217	43.3
Retired	131	26.2
Casual labourer	1	0.2
Domestic employed	1	0.2
Small-scale business	16	3.2
Work paid*		
Yes	283	65.8
No	147	34.2
Sources of Income*		
Self	297	80.5
Husband	47	12.7
Wife	1	0.3
Others in household	24	6.5
Pension Scheme*		
Yes	63	12.7
No	435	87.4
Monthly income*		
GHC 100-300	216	46.3
GHC 400-600	198	42.4
GHC 700- 900	43	9.2
GHC 1000 and above	10	2.1
Benefit from government*		
Yes	163	33.0
No	331	67.0
Regular Medical Insurance		
Yes	430	86.5
No	67	13.5
Type of Insurance*		
NHIS	428	96.0
Universal	1	0.2
Mutual insurance	5	1.1
Others	12	2.7
Need variables		
Diagnosed with Chronic disease		
Yes	267	53.5
No	232	46.5

Table 5 continued

Perceived current health status		
Poor	45	9
Fair	140	28
Good	288	57.6
Excellent	27	5.4
Health status past 1year		
Poor	54	10.8
Fair	151	30.2
Good	283	56.6
Excellent	12	2.4
Total	500	100

*Total=500 (Difference from an overall total of 501 is because of missing values)
Source: Fieldwork 2017

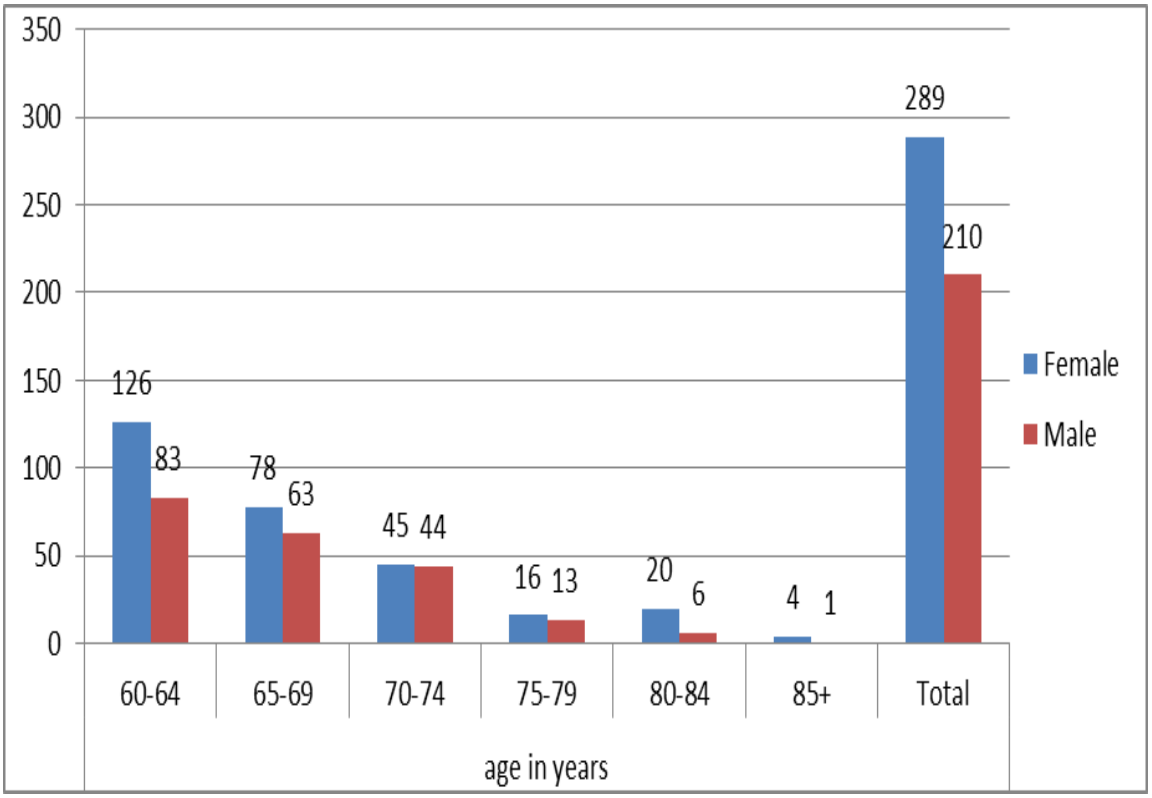

Figure 6: Age and Sex Distribution of Respondents
Source: field data 2017

Regular pension schemes were accessed by 12.7% of the older adults whilst 87% were without any pension benefit. Most of the older persons were covered by some form of health insurance with most insured with the NHIS. More than half of the respondents respectively had chronic illnesses (53.5%), whilst majority perceived their present health status as good (57.6%).

4.3.2. Utilization of Health Care Services among Older Adults

In this study, utilization of health services was measured as the number of visits to the health facility for a check-up (health care) in the past year or 12 months prior to the survey (Table 6). This included physician contact for medical review, acute emergencies and other outpatient services that the respondent sought within a year prior to the study.

Table 6: Health service utilization in the past 12 months

Number of visits	Frequency	Percentage
None	172	35.0
1 to 3	174	35.5
4 or more	145	29.5
Total	491	100

Source: Field Data 2017

In the past 12 months, 65% of the respondents had visited the hospital at least once or more times. Thirty-six percent had visited the hospital for health care one to three times, whilst nearly 30% indicated they had visited the hospital four or more times. Thirty-five percent of them never visited any health facility (Table 6).

4.3.2.1. Population Characteristics and Health Service Utilization

Table 7 shows the bivariate analysis of predisposing factors and utilization of health services. Predisposing factors that were associated with health service use were; age,

sex, residential status, ethnicity, marital status and level of education of the respondents. Among the respondents who did not seek any health care within the past year, a greater percentage were in the age group 60-64 years (56%), were male (55%), had attained middle school education (47%), lived with spouse (50%) only or married (56%). On the other hand, among those who sought health care at least once within a year, a greater proportion were over 60-64 years (35%) were female (65%), had middle school education (41%), lived with family (67%) or were married (43%). Majority of them were Ga-Dangbes (51%). There was no association between religion, family size and whether the respondent had any children.

Table 7: Population Characteristics and Utilization of Health Care Services

Characteristics	Utilization of Health care services			X^2	P value
	No visit	1 or More	Total		
Predisposing					
Age (Years)				25.9	0.000
60-64	96(56.1)	112(35.2)	208(42.5)		
65-69	44(25.7)	92(28.9)	136(27.8)		
70-74	21(12.3)	67(21.1)	88(18)		
75-79	7(4.1)	21(6.6)	28(5.7)		
80-84	3(1.8)	21(6.6)	24(4.9)		
85+	0(0)	5(1.6)	5(1.0)		
Sex				17.4	0.000
Female	77(45.0)	206(64.6)	283(57.8)		
Male	94(55)	113(35.4)	207(42.2)		
Residential status				35.5	0.000
Living alone	18(10.5)	24(7.5)	42(8.6)		
Living with family	68(39.5)	213(67)	281(57.4)		
Living with spouse	86(50)	81(25.5)	167(34.1)		
Ethnicity				12.91	0.044
Akan	49(28.6)	68(21.3)	117(23.9)		
Ga-Dangbe	85(49.7)	162(50.8)	247(50.4)		
Ewe	17(9.9)	53(16.6)	70(14.3)		
Mole-dagbani	13(7.6)	31(9.7)	44(9)		
Guan	2(1.2)	4(135)	6(1.2)		
Sisala	1(0.6)	0(0)	1(0.2)		
Hausa	4(2.3)	1(0.31)	5(1.02)		
Religion				4.35	0.226
Christianity	143(83.6)	268(84)	411(83.9)		
Muslim	24(14)	33(10.3)	57(11.6)		
Traditional	1(0.6)	8(2.5)	9(1.8)		
Non –Traditional	3(1.8)	10(3.1)	13(2.7)		
Marital status				25.34	0.000
Single	11(6.4)	32(10.1)	43(8.8)		
Married	96(56.1)	137(43.2)	233(47.8)		
Divorced/separated	39(22.8)	47(14.8)	86(17.6)		
Cohabitation	2(1.2)	1(0.3)	3(0.6)		
Widow/widower	23(13.5)	100(31.5)	123(25.2)		
Have children				1.32	0.25
Yes	169(99.41)	312(98.11)	481(98.57)		
No	1(0.59)	6(1.89)	7(1.43)		

Table 7 continued

Family size				9.23	0.099
One	8(4.68)	13(4.1)	21(4.3)		
Two	19(11.11)	43(13.56)	62(12.7)		
Three	36(21.05)	76(23.97)	112(22.95)		
Four	35(20.47)	63(19.87)	98(20.08)		
Five	41(23.98)	44(13.88)	85(17.42)		
Six or more	32(18.71)	78(24.61)	110(22.54)		
Education				15.61	0.004
None	20(11.76)	84(26.67)	104(21.44)		
Primary	38(22.35)	51(16.19)	89(18.35)		
Middle	80(47.06)	129(40.95)	209(43.09)		
Secondary	20(11.76)	28(8.89)	48(9.9)		
Tertiary	12(7.06)	23(7.3)	35(9.9)		
Enabling					
Employment				22.24	0.001
Employed	23(13.45)	30(9.4)	53(10.82)		
Unemployed	17(9.94)	63(19.75)	80(16.33)		
Self employed	86(50.29)	128(40.13)	214(43.67)		
Retired	34(19.88)	92(28.84)	126(25.71)		
Casual labourer	1(0.58)	0(0)	1(0.2)		
Domestic employed	1(0.58)	0(0)	1(0.2)		
Small-scale business	9(5.26)	6(1.88)	15(3.06)		
Source of income				5.89	0.015
Self	119(88.81)	189(83.26)	308(85.32)		
Husband	6(4.48)	22(9.69)	28(7.76)		
Wife	1(0.75)	0(0)	1(0.28)		
Others in household	8(5.97)	16(7.05)	24(6.65)		
Pension scheme				5.4304	0.020
Yes	13(7.6)	47(14.87)	60(12.32)		
No	158(92.4)	269(85.13)	427(87.68)		
Monthly income				4.19	0.241
GHC 100-300	84(50.6)	128(43.84)	212(46.29)		
GHC 400-600	62(37.35)	131(44.86)	193(42.14)		
GHC 700- 900	18(10.84)	25(8.56)	43(9.39)		
GHC 1000 and above	2(1.2)	8(2.74)	10(2.18)		
Benefit from Government				42.51	0.000
Yes	24(14.2)	137(43.49)	161(33.26)		
No	145(85.8)	178(56.51)	323(66.74)		

Table 7 Continued

Regular Medical Insurance				28.7	0.000
Yes	128(74.85)	291(92.38)	419(86.21)		
No	43(25.15)	24(7.62)	67(13.79)		
Government subvention				7.64	0.022
NHIS	126(94.03)	290(98.31)	416(96.97)		
LEAP	0(0)	1(0.34)	1(0.23)		
Other	8(5.97)	4(1.36)	12(2.8)		
NEED					
Diagnosed with chronic disease				110.66	0.000
Yes	38(22.22)	228(71.92)	266(54.51)		
No	133(77.78)	89(28.08)	222(45.49)		
Rate current health status				21.22	0.000
Poor	9(5.23)	36(11.36)	45(9.20)		
Fair	34(19.77)	103(32.49)	137(28.02)		
Good	120(69.77)	160(50.47)	280(57.26)		
Excellent	9(5.23)	18(5.68)	27(5.52)		
Rate past year health status				21.22	0.000
Poor	10(5.85)	44(13.84)	54(11.04)		
Fair	38(22.22)	110(34.59)	148(30.27)		
Good	116(67.84)	159(50)	275(56.24)		
Excellent	7(4.09)	5(1.57)	12(2.45)		
Total	171	318	489		

NB: All totals not equal to 501 are due to missing values

4.3.2.2. Enabling and Need Characteristics and Utilization of Health Services

Table 7 also shows the bivariate analysis of enabling and need characteristics and health care services utilization of respondents. Among the enabling factors, there was an association between employment status, the source of regular income, benefits from the government, regular medical insurance, government subvention and utilization of health services. Similarly, among the need factors, there was an association between having been diagnosed with chronic disease and current health status ratings and utilization of health services.

Older adults who did not visit the health facility to seek health care in the year preceding the survey, a greater proportion were self-employed (50%), were sources of income to the household themselves (89%), were not on any pension scheme nor enjoyed benefit from government (86%). Furthermore, 94% of them were likely to have NHIS, were not diagnosed with any chronic illness (78%) and rated their current (70%) and past year (68%) status as good respectively.

Among those who utilized health care services at least once within the past year, a greater proportion were also self-employed (40%), were sources of income to the family themselves (83%), were not on any pension scheme nor received any benefit from government (56%) but were on regular medical insurance (92%). Similarly, greater proportions of them were covered by NHIS, were diagnosed with a chronic illness (72%) and rated their current (51%) and past (50%) year health status as good.

4.3.3. Determinants of Health Services Utilization among Older adults

In order to determine the factors that significantly influenced utilization of health services by older adults, binary logistic regression analysis was carried out using two models (Table 8). Model I was a bivariate logistic regression analysis of health care utilization and all the predisposing, enabling and need characteristics that had an association with health care utilization in Table 7. Model II was a multivariate logistic regression analysis of health service utilization and all the characteristics that had a significant association with health service utilization in Model I. Health service utilization (outcome variable) was denoted “1” if respondents sought health care one or more times within the 12 months preceding the survey and “0” if respondents did not seek any health care within the specified period.

In the bivariate logistic regression analysis, the factors that were significantly associated with health care utilization included age, sex, residential status, marital status, education, employment status, pension scheme, benefits from the government, regular medical insurance, government subvention, diagnosed with chronic disease and rating of health status. As age increased, the odds of utilizing health services at least once within the year also increased. Older adults aged 65-69 years and 70 -84 years were 1.79 times and 2.72 to 6 times more likely respectively to utilize health services at least once within the year compared to those aged 60 - 64 years (Table 8).

Table 8: Logistic Regression of Factors Associated with Utilization of Health Services

Characteristics	MODEL I(Bivariate)			MODEL II(Multivariate)		
	OR	[95% CI	P value	AOR	CI	P value
Age(years)						
60- 64(ref)	1			1		
65-69	1.79	1.14-2.81	**0.011**	2.86	1.06 -7.71	**0.038**
70-74	2.73	1.56- 4.79	0.000	3.01	0.95 - 9.51	0.060
75 – 79	2.57	1.05- 6.31	0.039	7.87	0.47- 132.73	0.152
80 -84	6	1.74-20.73	0.005	1.65	0.09 - 30.63	0.738
Sex						
Female (Ref)	1			1		
Male	0.45	0.31-0.66	**0.000**	0.49	0.19 - 1.28	0.147
Residential status						
Living alone (Ref)	1			1		
Living with family	2.35	1.20 - 4.59	0.012	0.2	0.03 - 1.22	0.08
Living with spouse	0.71	0.36 - 1.40	0.318	0.05	0.01- 0.43	**0.006**
Ethnicity						
Akan (Ref)	1			1		
Ga-Dangbe	1.37	0.87 - 2.16	0.170	1.41	0.57 - 3.49	0.46
Ewe	2.25	1.16 - 4.34	**0.016**	1	0.26 - 3.91	0.996
Mole –Dagbani	1.72	0.82 - 3.62	0.150	0.91	0.24 - 3.50	0.892
Guan	1.44	0.25 - 8.18	0.680			
Hausa	0.18	0.02 - 1.66	0.130			
Marital status						
Single (Ref)	1			1		
Married	0.49	0.24- 1.02	0.057	0.55	0.08 -3.80	0.547
Divorced/separated	0.41	0.19 - 0.93	**0.032**	0.06	0.01 -0.44	**0.005**
Cohabitation	0.17	0.01 =2.09	0.167	(empty)		
Widow/widower	1.49	0.66 - 3.40	0.338	0.7	0.08 - 6.53	0.754
Education						
None (Ref)	1					
Primary	0.32	0.17- 0.61	**0.001**	0.40	0.09 -1.88	0.245
Middle	0.38	0.22 -0.67	**0.001**	0.17	0.09 - 0.88	**0.012**
Secondary	0.33	0.16 -0.71	**0.004**	0.19	0.04 - 0.99	**0.049**
Tertiary	0.46	0.19 - 1.07	0.071	0.11	0.01 - 0.83	**0.032**
Employment stat						
Employed	0.35	0.16 -0.75	0.007	0.04	0.00 -0.53	**0.015**
Unemployed (Ref)	1			24.63	1	
Self-employed	0.20	022- 0.73	**0.003**	0.04	0.00 -0.45	**0.010**
Retired	0.73	0.38- 1.42	0.033	0.14	0.01-1.87	0.137
Small- scale business	0.18	0.06-0.58	0.004	0.85	0.00 -1.01	0.051

Table 8 continued

Sources of income						
Self (Ref)	1					
Husband	2.31	0.91- 5.86	0.078	14.47	2.17 - 96.47	**0.006**
Others in household	1.26	0.52 -3.03	0.607	0.51	0.08 - 3.27	0.477
Pension scheme						
Yes (Ref)	1					
No	0.47	0.25 - 0.90	**0.022**	1.09	0.27 - 4.38	0.908
Benefit from government						
Yes (Ref)	1					
No	0.22	0.13- 0.35	**0.000**	0.908	0.03 - 0.27	**0.000**
Regular medical insurance						
Yes (Ref)	1					
No	0.25	0.14 - 0.42	**0.000**	0.23	0.00 - 219.98	0.674
Government subventions						
NHIS(Ref)	1					
Other	0.22	0.06 -0.73	**0.014**	0.84	0.00 -759.92	0.959
Diagnosed with chronic						
Yes (Ref)	1					
No	0.11	0.07 -0.17	**0.000**	0.07	0.02- 0.17	**0.000**
Rate current health status						
Poor (Ref)	1					
Fair	0.76	0.33 -1.73	0.51	1.49	0.09- 24.18	0.779
Good	0.33	0.15 -0.72	**0.005**	1.87	0.10 - 33.72	0.67
Excellent	0.5	0.17 -1.48	0.21	11.78	0.30 - 459.30	0.187
Rate past year Health						
Poor (Ref)	1					
Fair	0.66	0.30 -1.43	0.292	0.34	0.03 -3.70	0.376
Good	0.31	0.15 -0.64	**0.002**	0.4	0.04 - 4.21	0.442
Excellent	0.16	0.04 -0.62	**0.008**	0.02	0.00 -0.52	**0.020**

Source: Field data 2017

Males had significantly lower odds than females to utilize health services at least once within the year (OR 0.45, 95% CI 0.31 - 0.66). Older adults who lived with their families were 2.4 times more likely than those who lived alone to utilize health services at least once within the year (OR 2.35, 95% CI 1.20- 4.59). Also, respondents who were Ewes (OR 2.25, 95%CI 1.16-4.34) had higher odds of utilizing health care compared to Akans. Furthermore, respondents who were divorced / separated (OR 0.41 95%CI 19 - 93), had at least primary education (OR 0.82 95 %CI 0.69 -0.96), were employed (OR 0.35, 95%C10.16- 0.75) in the formal sector, were self-employed (OR 0.40,95% CI 0.22-0.73), retired but engaged in some income generating activities (OR 0.73, 95% C1 0.38-1.42), were engaged in small scale business (OR 0.18 95% CI 0.06-0.58) were not on any pension scheme (OR 0.47, 95% CI 25-.90),were not receiving any benefit from government (OR 0.22, 95%CI 0.13-0.35), were not on any regular medical insurance (OR 0.25, 95%C1 0.14-0.42), were on other government subventions apart from NHIS (OR 0.22, 95% CI 0.06-0.73) and had not been diagnosed with chronic illness (OR 0.11, 95%C1.0.07-0.17) and rated their current(OR 0.33, 95%C1.0.15-0.72) and past (OR 0.16, 95%C10.04- 0.62) health status as good and excellent respectively, had significantly lower odds of utilizing health services one or more times within the year. Older women whose sources of income were their husbands were significantly more likely to utilize health care services within the past year at least one or more times compared to if the source of income was themselves (AOR 14.47, 95% CI 2.17-96.47).

In the multivariate logistic regression analysis (Model II), factors that were found to determine older adult's utilization of health services included age, residential status, marital status, education, employment, the source of income, receiving benefits from

the government, being diagnosed with some chronic illness and rating of past year health status. Older adults aged 65-69 years were 2.9 times more likely than those aged 60-64 years to utilize health care services at least once within the past year. Respondents who lived with their spouses (AOR 0.05, 95% CI 0.01 -0.43), were divorced/separated (AOR 0.06, 95% CI 0.01-0.44), had at least middle school education(AOR 0.17 95% CI 0.092-0.88), were employed in the formal (OR 0.04 95%CI 0.00-0.53), were self-employed (OR 0.04 95%CI 0.0.00-0.45), received no benefit from government (AOR 0.91, 95% C1 0.03-0.27), were not diagnosed with any chronic illness (AOR 0.07, 95% C1 0..02-0.17) and rated their past health as excellent(OR 0.02, 95% C1 0.002-0.52) had significantly lower odds of utilizing health services at least once in the past year.

4.3.4. Health Seeking Behaviour (HSB) of Older Adults

Health-seeking behaviour (HSB) in this study is referred to as an intention or action taken by the older person to maintain, attain or regain good health and to prevent illness (Bhat & Kumar, 2017). In this study, the intended and actual health-seeking behaviours of older adults were ascertained.

Table 9: Intended and Actual Health seeking behaviour older adults

Characteristic	Frequency	Percentage
Intended source of health care		
Self-treatment	11	2.2
Chemical/pharmacy shop	14	2.8
Government hospital	335	66.9
Private hospital	109	21.8
Traditional healer	28	5.6
Other	4	0.8
Ill in the last 3months		
Yes	173	34.7
No	325	65.3
Ill in the past 3months and sought treatment		
Yes	169	98.3
No	3	1.7
Ill in the past 3months- health problem suffered		
Malaria	55	31.4
Diarrhoea	8	4.6
Common cold	11	6.3
Hypertension	98	56
Diabetes	2	1.1
Arthritis	1	0.6
Actual source of Health care		
Self-treatment	11	6.4
Chemical/pharmacy shop	25	14.5
Government hospital	99	57.7
Private hospital	33	19.2
Traditional healer	4	2.3
Total	172	100

Source: Field data 2017

4.3.4.1. Intended Health Seeking Behaviour among Older Adults

Respondents were asked where they intended to seek treatment if they ever fell sick; nearly 67% of them intended to seek treatment from government hospital, 22% from private institutions, 6% from traditional healers whilst 5% of them intended to seek treatment from either Chemical/Pharmacy shops (2.8%) or self-medicate (2.2%) respectively. Very few of them (0.8%) had no intention to seek treatment (Table 9).

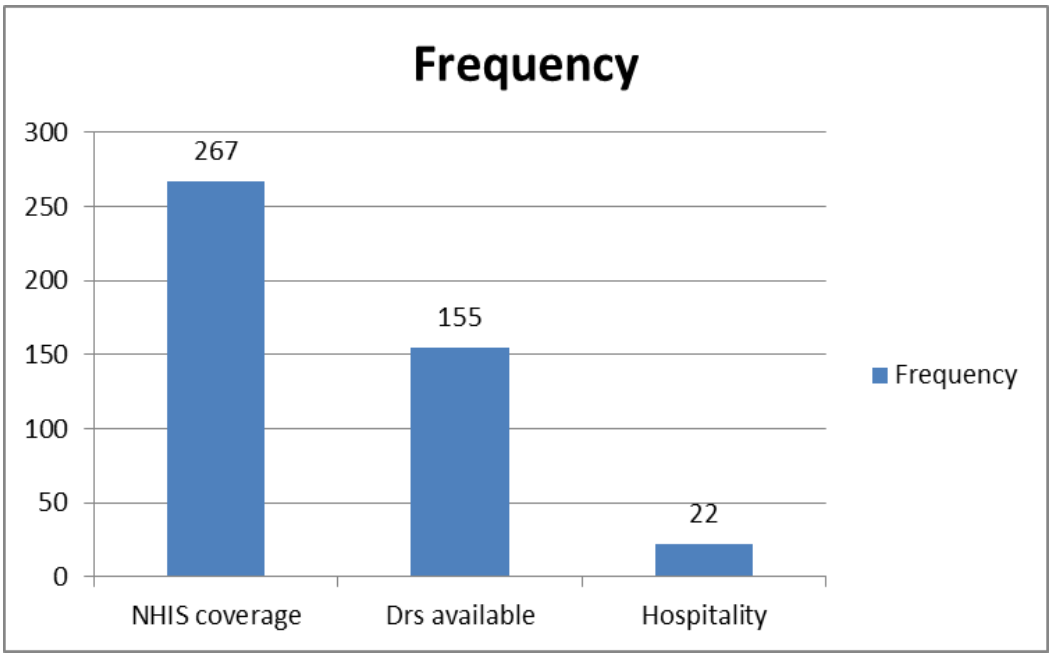

Figure 7: Reasons for use of Government Hospital
NB: Responses were multiple (NHIS- National Health Insurance; Drs-Doctors)
Source: field data 2017

The reasons given by those who intended to visit the hospital (Government or private) are shown in Figure 5. The majority (61%) of the respondents indicated they preferred the hospitals because the services were covered under NHIS. The remainder indicated the availability of doctors and hospitality of the staff as reasons for choosing to seek health care from the hospital. Reasons given by older adults who did not intend to use the health facility are shown in Figure 6. A greater (28%) reported poor quality of services provided by hospitals as the reason for not attending. 24% of them preferred to use the chemical shop as their preferred source of health care. Furthermore, some of the respondents indicated lack of specialist (18%), overcrowding/long waiting times (15%), use of traditional medicine practitioners (9 %) and inability to pay bills as other reasons for not using the hospital.

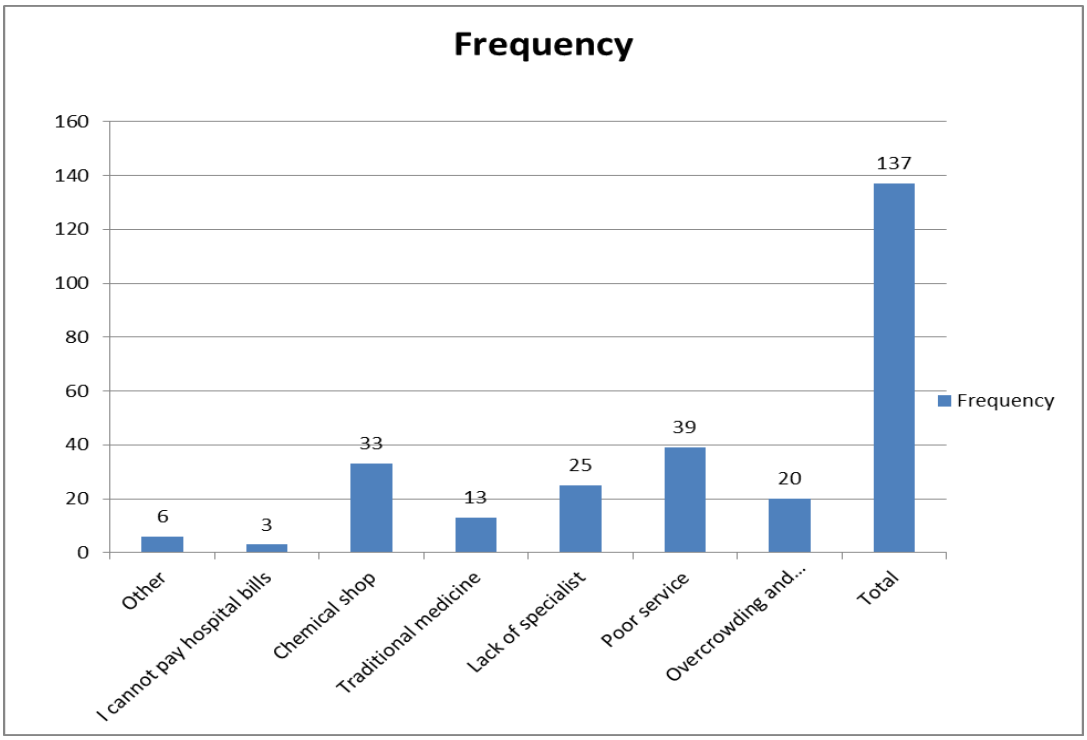

Figure 8: Reasons for non-use of hospital

NB: Responses were multiple
Source: field data 2017

As Table 10 depicts, among those who intended to seek treatment from government health facilities, a greater proportion of them were: aged 60-64 years (43%), females (59%), Ga-Dangbe (50%), Christians (84%) and married (52%). In the same vein, majority lived with family (52%), had children (98%) with family size of 3 or more (20% or more), had attained Middle school education (44%), were self-employed (42%), were sources of family income themselves (82%), were not on any pension scheme (87%) and did not enjoy any government benefit (71%). Furthermore, higher proportions of them had registered with the NHIS (97%) or had some form of medical insurance (91%) and had been diagnosed with a chronic disease (55%). These respondents also rated their health status currently (55%) and in the past one year (57%) as good respectively. A greater proportion of those who intended to seek treatment from private health facilities had similar characteristics as those who intended to do so from government health facilities.

For those who intended to seek treatment from traditionalist, a greater proportion were males (57%) instead of females but had similar characteristics as those who intended to seek treatment from the government and private health facilities. Also, the characteristics of those who intended to seek treatment from chemical/pharmacy shops mirrored those who intended to seek treatment from the government and private health facilities except that a greater proportion of them were males (78%) and had not been diagnosed with any chronic diseases (86%). Older adults who had the intention to self-medicate if they ever fell sick were more likely to be males (64%), divorced or separated (36%), and enjoyed government benefit (63%) and had not been diagnosed of any chronic illness (54%). Otherwise, all other characteristics amongst a greater proportion of them were similar to those who intended to seek help from government health facilities.

Some characteristics were found to have associations with intended health seeking behaviours. These were sex ($p < 0.013$), residential status ($p < 0.001$), ethnicity ($p < 0.003$), education ($p < 0.049$), employment status ($p < 0.025$), source of family income ($p < 0.011$), benefit from government ($p < 0.001$) and regular medical insurance ($p < 0.001$) (Table 10).

4.3.4.2. Actual Health Seeking Behaviour among Older Adults

Of the 501 respondents, 173(35%) of them had been ill 3months prior to the study. The diseases that they suffered from included Hypertension (56%), Malaria (31%), Common cold (6. 3%), Diabetes (1.1%) and arthritis (0.6%). Of the 172 who fell sick within the past 3 months, 169 (98.3%) sought some form of treatment whilst the remainder (1.7%) did not. Among those who sought some form of treatment the

source was as follows: government health facilities (57.6%), private Health facilities (19.2%), Chemical/Pharmacy Shops (14.5%), Self-medication (6.4%) and Traditionalist (2.3%) (Table 9).

As shown in Table 11, there was no association between actual health-seeking behaviour and age, residential status, family size, having children, education, pension scheme, and source of income, government subvention and current and past year health status. However, there was an association between actual health-seeking behaviour and sex ($p<0.017$), ethnicity ($p<0.001$), marital status ($p<0.002$), employment status ($p<0.001$), benefit from government ($p<0.029$), regular medical insurance ($p<0.012$) and having been diagnosed with the chronic disease ($p<0.000$).

A greater proportion of those who sought health care from hospitals (government and private) were females, lived with families, were Ga-Dangbe, had middle school education, were self-employed, did not enjoy any benefit from government and had no regular medical insurance (Table 11).

Among those who self-medicated most of them were males, Ga-Danbges, married, self-employed, and enjoyed government benefit. Also, among those who sought help from traditional healers' majority were males, Ga-Danbges, divorced/separated, self-employed, and did not enjoy any government benefit. Those who sought help from Pharmacy or chemical shops were more likely to be male, Akan, married, self-employed and did not enjoy any benefit from government (Table 11).

Table 10: Population characteristics and Intended Health seeking behaviour of older adults

Characteristics	Choice of treatment							X^2	P
	Self-treatment (n=11)	Pharmacy (n=14)	Government Hospital (n=335)	Private hospital (n=109)	Traditional (n=28)	Other (n=4)	Total (N=501)		
Age (years)								30.6	0.202
60-64	3(27.3)	3(21.4)	145(43.4)	38(35.2)	18(64.3)	1(25.0)	208(41.7)		
65-69	5(45.5)	6(42.9)	82(24.5)	39(36.1)	7(25)	2(50)	141(28.3)		
70-74	2(18.2)	5(35.7)	65(19.5)	17(15.7)	0(0)	0(0)	89(17.8)		
75-79	0(0)	0(0)	22(6.6)	5(4.6)	2(7.1)	1(25)	30(6.1)		
80-84	1(9.1)	0(0)	16(4.8)	8(7.4)	1(3.6)	0(0)	26(5.2)		
85 +	0(0)	0(0)	4(1.2)	1(0.9)	0(0)	0(0)	5(1)		
Sex								14.5	**0.013**
Female	4(36.4)	3(21.43)	197(58.8)	69(63.9)	12(42.9)	3(75)	288(57.6)		
Male	7(63.6)	11(78.57)	138(41.2)	39(36.1)	16(57.1)	1(25)	212(42.4)		
Residential status								40.1	**0.000**
Living alone	3(27.3)	3(21.4)	24(7.19)	9(8.3)	4(14.3)	0(0)	43(8.6)		
Living with family	7(63.6)	10(71.4)	173(51.8)	74(67.9)	21(75)	0(0)	285(57)		
Living with spouse	1(9.1)	1(7.1)	137(41.0)	26(23.9)	3(10.7)	4(100)	172(34.4)		

Table 10 continued

Ethnicity								56.2	0.003
Akan	2(18.2)	7(50)	77(23.1)	27(24.8)	8(28.6)	1(25)	122(24.4)		
Ga-Dangbe	6(54.5)	7(50)	168(50.3)	58(53.2)	13(46.4)	1(25)	253(50.6)		
Ewe	1(9.1)	0(0)	49(14.7)	14(12.8)	5(17.9)	0(0)	69(13.8)		
Mole-dagbani	2(18.2)	0(0)	31(9.3)	9(8.3)	2(7.1)	0(0)	44(8.8)		
Guan	0(0)	0(0)	4(1.2)	1(0.9)	0(0)	1(25)	6(1.2)		
Sisala	0(0)	0(0)	1(0.3)	0(0)	0(0)	0(0)	1(0.2)		
Hausa	0(0)	0(0)	4(1.2)	0(0)	0(0)	1(25)	5(1)		
Religion								18.725	0.225
Christianity	8(72.7)	13(92.9)	280(83.8)	93(83.8)	25(89.3)	2(50)	421(84.2)		
Muslim	2(18.2)	0(0)	41(18.2)	10(9.2)	2(7.1)	2(7.1)	57(11.4)		
Traditional	1(9.1)	1(7.1)	6(1.8)	1(0.9)	0(0)	0(0)	9(1.8)		
Non traditional	0(0)	0(0)	7(2.1)	5(4.6)	1(3.6)	0(0)	13(2.6)		
Marital status								31.1	0.053
Single	1(9.1)	2(15.4)	28(8.4)	7(6.4)	5(17.9)	0(0)	43(8.6)		
Married	3(27.27)	4(30.8)	169(50.8)	48(44.0)	12(42.7)	2(50)	238(47.8)		
Divorced/separated	4(36.4)	4(30.8)	54(16.2)	19(17.4)	6(21.4)	0(0)	87(17.5)		
Cohabitation	0(0)	1(7.7)	0(0)	2(1.8)	0(0)	0(0)	3(0.6)		
Widow/widower	3(27.3)	2(15.4)	82(24.6)	33(30.3)	5(17.7)	2(50)	127(25.5)		
Have Children								1.4	0.925
Yes	11(100)	14(100)	325(98.2)	108(99.1)	28(100)	4(100)	490(98.6)		
No	0(0)	0(0)	6(1.81)	1(0.92)	0(0)	0(0)	7(1.41)		

Table 10 continued

Family size								29.1	0.264
One	1(9.1)	0(0)	13(3.9)	5(4.6)	2(7.1)	0(0)	21(4.2)		
Two	1(9.1)	3(21.3)	34(10.2)	20(18.5)	6(21.4)	0(0)	64(12.9)		
Three	3(27.3)	6(42.7)	77(23.1)	22(20.4)	6(21.4)	0(0)	114(22.9)		
Four	2(18.2)	0(0)	67(20.1)	20(18.5)	8(28.5)	2(50)	99(19.9)		
Five	1(9.1)	1(7.1)	69(20.7)	14(13)	2(7.1)	0(0)	87(17.5)		
6Six+	3(27.3)	4(28.6)	73(21.9)	27(25)	4(14.3)	2(50)	113(22.7)		
								31.5	0.049
Education									
None	3(27.27)	4(28.57)	66(20)	30(27.5)	0(0)	3(75)	106(21.4)		
Primary	2(18.18)	2(14.290	63(19.09)	16(14.7)	9(33.3)	0(0)	92(18.59)		
Middle	5(45.45)	8(57.14)	145(43.94)	41(37.6)	13(48.2)	0(0)	212(42.8)		
Secondary	1(9.09)	0(0)	35(10.61)	11(10.1)	1(3.7)	1(25)	49(9.9)		
Tertiary	0(0)	0(0)	21(6.36)	11(10.1)	4(14.8)	0(0)	36(7.3)		
Employment status								49.9	**0.025**
Employed	4(36.4)	3(23.1)	31(9.3)	10(9.17)	5(17.9)	0(0)	53(10.6)		
Unemployed	2(18.2)	4(30.1)	54(16.1)	17(15.6)	4(14.3)	1(25)	82(16.4)		
Self employed	5(45.5)	4(30.8)	139(41.5)	56(51.4)	12(42.9)	1(25)	217(43.4)		
Retired	0(0)	1(7.7)	99(29.5)	25(23)	4(14.3)	2(50)	131(26.2)		
Casual labourer	0(0)	0(0)	0(0)	0(0)	1(3.6)	0(0)	1(0.2)		
Domestic employed	0(0)	0(0)	1(0.3)	0(0)	0(0)	0(0)	1(0.2)		
Small-scale business	0(0)	1(7.69)	11(3.3)	1(0.9)	2(7.1)	0(0)	15(3)		
Source of Income								56.2	0.003
Self	7(77.8)	9(90)	205(86.1)	75(88.3)	2(66.7)	316(85.9)			
Husband	2(22.2)	1(10)	15(6.3)	6(7.1)	3(13.0)	0(0)			
Wife	0(0)	0(0)	18(7.6)	3(3.5)	1(33.3)	24(6.5)			
Others in household									

Table 10 continued

Pension scheme								0.88	0.686
Yes	0(0)	1(7.1)	43(12.9)	16(14.8)	3(11.1)	0(0)	63(12.7)	.	
No	11(100)	13(92.9)	290(87.1)	92(85.2)	24(88.9)	4(100)	434(87.3)		
Benefit from government								25.51	**0.000**
Yes	7(63.6)	6(46.2)	95(28.6)	51(48.1)	4(14.8)	0(0)	163(33.1)		
No	4(36.4)	7(53.85)	237(71.4)	55(51.9)	23(85.2)	4(100)	330(66.9)		
Government subvention								17.53	0.063
NHIS	7(87.5)	7(77.78)	297(97.4)	89(98.9)	22(95.7)	3(100)	425(97)		
LEAP	0(0)	0(0)	1(0.3)	0(0)	0(0)	0(0)	1(0.2)		
Other	1(12.5)	2(22.22)	7(2.3)	1(1.1)	1(4.4)	0(0)	12(2.7)		
Regular medical insurance								25.45	**0.000**
Yes	7(63.6)	8(57.14)	302(91)	88(81.5)	21(77.8)	3(75)	429(86.5)		
No	4(36.4)	6(42.86)	30(9)	20(18.5)	6(22.2)	1(25.0)	67(13.5)		
Diagnosed with chronic								9.76	0.083
Yes	5(45.5)	2(14.29)	182(54.5)	61(57.0)	14(50)	2(50)	266(53.4)		
No	6(54.6)	129(85.71)	152(45.5)	46(43)	14(50)	2(50)	232(46.6)		
Rate current health status								17.307	0.301
Poor	0(0)	0(0)	30(9)	14(13)	1(3.7)	0(0)	45(9)		
Fair	4(36.4)	1(7.1)	103(30.8)	22(20.4)	7(25.9)	2(50)	139(27.9)		
Good	6(54.5)	13(92.9)	184(54.9)	65(60.2)	18(66.7)	2(50)	288(57.7)		
Excellent	1(9.1)	0(0)	18(5.4)	7(6.5)	1(3.7)	0(0)	27(5.4)		
Rate past year Health status								11.640	0.706
Poor	0(0)	2(14.3)	39(11.7)	13(12.4)	0(0)	0(0)	54(10.8)		
Fair	4(36.4)	3(21.3)	104(31.1)	32(29.6)	6(21.4)	2(50)	151(30.3)		
Good	7(63.6)	9(64.3)	181(54.2)	62(57.4)	21(75)	2(50)	282(56.5)		
Excellent	0(0)	0(0)	10(3)	1(0.9)	`1(3.6)	0(0)	12(2.4)		

Source: Field data 2017

Table 11: Population Characteristics and Actual Health Seeking Behaviour of Older Adults

Population characteristics	Self-treatment	Chemical/ Pharmacy	Government hospital.	Private hospital	Traditional healer	Other	X^2	P-value
Age (years)							18.67	0.543
60-64	3(27.3)	12(48)	37(37.4)	8(24.2)	2(50)	62(36.1)		
65-69	5(45.5)	10(40)	24(24.3)	8(24.2)	2(50)	49(28.5)		
70-74	2(18.2)	2(8)	25(25.3)	8(24.2)	0(0)	37(21.5)		
75-79	0(0)	1(4)	7(7.1)	5(15.2)	0(0)	13(7.6)		
80-84	1(9.1)	0(0)	5(5.1)	3(9.1)	0(0)	9(5.2)		
85+	0(0)	0(0)	1(1.1)	1(3)	0(0)	2(1.2)		
Total	11	25	99	33	4	172		
Sex							12.12	**0.017**
Female	5(45.5)	11(44)	72(72.7)	25(78.1)	2(50)	115(67.3)		
Male	6(54.5)	14(56)	27(27.3)	7(21.8)	2(50)	56(32.8)		
Total	11	25	99	32	4	171		
Residential status	100						9.99	0.266
Living alone	1(9.1)	1(4)	3(3)	2(6.06)	1(25)	8(4.7)		
Living with family	9(81.8)	14(56)	70(70.7)	25(75.76)	2(50)	120(69.8)		
Living with spouse	1(9.1)	10(40)	26(26.3)	6(18.18)	1(25)	44(25)		
Total	11	25	99	33	4	172		
Ethnicity							58.5	**0.000**
Akan	2(18.2)	9(36)	20(20.2)	11(33.3)	1(25)	43(25)		
Ga-Dangbe	6(54.6)	7(28)	48(48.5)	15(45.4)	2(50)	78(45.4)		
Ewe	0(0)	3(12)	19(19.2)	4(12.1)	0(0)	26(15.1)		
Mole-dagbani	3(27.3)	5(20)	10(10.1)	3(9.09)	0(0)	21(12.2)		
Guan	0(0)	0(0)	0(0)	0(0)	1(25)	1(0.6)		
Sisala	0(0)	0(0)	1(1.01)	0(0)	0(0)	1(0.7)		

Table 11 Continued

Hausa	0(0)	1(4)	1(1.01)	0(0)	0(0)	2(1.2)		
Total	11	25	99	33	4	172		
Marital status							37.01	**0.002**
Single	1(9.09)	0(0)	5(5.1)	3(9.09)	0(0)	9(5.3)		
Married	5(45.45)	15(60)	45(45.9)	7(21.21)	1(25)	73(42.7)		
Divorced/separated	2(18.18)	4(16)	18(18.4)	6(18.18)	2(50)	32(18.7\)		
Cohabitation	0(0)	0(0)	1(1)	0(0)	1(25)	2(1.2)		
Widow/widower	39(27.27)	6(24)	29(29.6)	17(51.52)	0(0)	55(32.1)		
Total	11	25	98	33	4	171		
Children								
Yes	11(100)	25(100)	99(100)	33(100)	4(100)	172(100)		
Family size								
One	0(0)	1(4)	2(2)	3(9.1)	0(0)	6(3.5)	24.96	0.203
Two	0(0)	2(8)	12(12.1)	2(6.1)	1(25)	17(9.9)		
Three	3(27.27)	5(20)	17(17.2)	7(21.2)	1(25)	33(19.2)		
Four	2(18.18)	3(12)	24(24.2)	9(27.3)	0(0)	38(22.1)		
Five	2(18.18)	9(36)	17(17.2)	0(0)	0(0)	28(16.3)		
Six or more	4(36.36)	5(20)	27(27.3)	12(36.4)	2(50)	50(29.1)		
Total	11	25	99	33	4	172		
Education								
None	3(27.27)	3(12)	29(29.6)	11(33.3)	0(0)	46(26.9)	19.11	0.263
Primary	2(18.18)	5(20)	17(17.4)	6(18.2)	1(25)	31(18.1)		
Middle	3(27.27)	12(48)	44(44.9)	12(36.4)	2(50)	73(42.7)		
Secondary	2(18.18)	5(20)	5(5.1)	3(9.1)	0(0)	15(8.8)		
Tertiary	1(9.09)	0(0)	3(3.1)	1(3)	1(25)	6(3.5)		
Total	11	25	98	33	4	171		

Table 11 continued

Employment							61.4	0,000
Employed	3(27.3)	4(16)	6(6.1)	0(0)	0(0)	13(7.6)		
Unemployed	3(27.3)	3(12)	23(23.2)	9(27.27)	0(0)	38(22.1)		
Self employed	5(45.5)	12(48)	41(41.4)	14(42.4)	2(50)	74(43)		
Retired	0(0)	6(24)	26(26.3)	10(30.3)	1(25)	43(25)		
Casual labourer	0(0)	0(0)	0(0)	0(0)	1(25)	1(0.6)		
Small-scale business	0(0)	0(0)	3(3.03	0(0)	0(0)	3(1.7)		
Total	11	25	99	33	4	172		
Source of income							13.02	0.111
Self	5(62.5)	17(89.5)	53(82.8)	18(85.7)	2(66.7)	95(82.6)		
Husband	3(37.5)	1(5.3)	4(6.3)	1(4.8)	1(33.3)	10(8.7)		
Others in household	0(0)	1(5.3)	7(10.9)	2(9.5)	0(0)	10(8.7)		
Total	8	19	64	21	3	115		
Pension scheme							7.41	0.116
Yes	0(0)	0(0)	14(14.1)	6(18.8)	0(0)	20(11.7)		
No	11(100)	25(100)	85(85.9)	26(81.3)	4(100)	151(88.3)		
Total	11	25	99	32	4	171		
Benefit from government							10.8	**0.029**
Yes	9(81.8)	6(25)	46(46.9)	14(42.4)	1(25)	76(44.7)		
No	2(18.2)	18(75)	52(53.1)	19(57.6)	3(75)	94(55.3)		
Total	11	24	98	33	4	170		
Regular medical insurance							12.81	**0.012**
Yes	9(81.8)	20(80)	93(94.9)	28(87.5)	2(50)	152(89.4)		
No	2(18.2)	5(20)	5(5.1)	4(12.5)	2(50)	18(10.6)		
Total	11	25	98	32	4	170		

Table 11 continued

Government subvention							5.3	0.258
NHIS	9(90)	19(95)	93(98.94)	27(100)	2(100)	150(98)		
Other	1(10)	1(5)	1(1.06)	0(0)	0(0)	3(1.96)		
Total	10	20	94	27	2	153		
Diagnosed with chronic illness							24.6	**0.000**
Yes	2(18.2)	9(36)	69(70.4)	26(81.3)	2(50)	108(63.5)		
No	9(81.8)	16(64)	29(29.59)	6(18.75)	2(50)	62(36.47)		
Total	11	25	98	32	4	170		
Rate current health status							18.9	0.092
Poor	0(0)	2(8)	15(15.2)	5(15.6)	0(0)	22(12.9)		
Fair	4(36.4)	5(20)	44(44.4)	10(31.3)	3(75)	66(38.6)		
Good	6(54.6)	18(72)	35(35.4)	17(53.1)	1(25)	77(45)		
Excellent	1(9.1)	0(0)	5(5.1)	0(0)	0(0)	6(3.5)		
Total	11	25	99	32	4	171		
Rate past year Health status							18.3	0.106
Poor	0(0)	1(4)	19(19.4)	5(15.6)	0(0)	25(14.7)		
Fair	8(72.7)	9(36)	38(38.8)	14(43.7)	4(100)	73(42.9)		
Good	3(27.3)	15(60)	38(38.8)	13(40.6)	0(0)	69(40.6)		
Excellent	0(0)	0(0)	3(3.)	0(0)	0(0)	3(1.8)		
Total	11	25	98	32	4	170		

Source: Field data 2017

Table 12 is a multivariate logistic regression analysis of health seeking behaviour and population characteristics that were found to have association with health seeking behaviour in the bivariate analysis in Table 10. Employment status was the only factor that determined older adults' choice of health facility if they fell ill. If older adults were retired but involved in some income generating activities, they were 4.5 times more likely than if they were employed in the formal sector to seek health care from a health facility (AOR 4.54, 95% CI 1.37-15.09).

Table 12: Population Characteristics and Health Seeking Behaviour

Population Characteristics	OR(Adjusted)	95% CI	P value
Sex			
Female (Ref)	1		
Male	0.61	0.28-1.35	0.223
Residential Status			
Living alone(Ref)	1		
Living with family	0.82	0.26-2.58	0.739
Living with spouse	2.28	0.61-8.47	0.219
Ethnicity			
Akan (Ref)	1		
Ga-Dangbe	1.14	0.47-2.74	0.773
Ewe	0.91	0.28-2.89	0.872
Mole –Dagbani	0.83	0.22-3.11	0.788
Hausa	0.31	0.02-4.47	0.39
Education			
None (Ref)	1		
Primary	0.47	0.14-1.56	0.221
Middle	0.65	0.22-1.89	0.430
Secondary	0.89	0.19-4.18	0.888
Tertiary	0.55	0.10-2.99	0.487

Table 12 continued

Employment status			
Employed (Ref)	1		
Unemployed	1.95	0.57-6.57	0.283
Self –employed	2.33	0.84-6.47	0.103
Retired	4.54	1.37-15.09	0.013
Small scale business	1.43	0.24-8.51	0.694
Regular Medical insurance			
Yes (ref)	1		
No	0.45	0.18-1.10	0.081
Benefit from government			
Yes (Ref)	1		
No	0.80	0.33-1.89	0.609

Source: Field data 2017

4.3.5. Health-related Quality of Life

4.3.5.1. Physical and Mental Components of Health-related Quality of Life

One primary objective of this study was to describe the HRQOL of the older adults living within the community. Assessment of the HRQOL was based on two main components (physical and mental) score measured on eight scales. This section presents the two aggregate scores namely Physical Component Score (PCS) and Mental Component Score (MCS) of the health-related quality of life**.** The overall or composite HRQOL of the older adults is presented in the next section.

The PCS is an aggregate score consisting of four scales including: physical functioning (PF), role limitations due to physical problem (RP), bodily pain (BP) and general health (GH). The MCS is also an aggregate score consisting of four scales namely: vitality (VT), social functioning (SF), role limitations due to emotional

problems (RE) and mental health (MH). Any PCS or MCS score less than 50 denotes poor physical or mental health related quality of life respectively. Any aggregate score above 50 denotes good physical or mental health related quality of life respectively.

Table 13 : Table of Physical and Mental Component Scores

PCS	**Frequency**	**Percent**
PCS<50	263	53.9
PCS>50	225	46.1
Total	488	100
MCS		
MCS<50	155	34.4
MCS>50	295	65.6
Total	450	100

	MCS n (%)	X^2 =153.52 P= 0.000	
PCS n(%)	MCS<50	MCS>50	Total n(%)
PCS<50	146(94.8)	97(33.3)	243(54.6)
PCS>50	8(5.2)	194(66.7)	202(45.4)
Total	154	291	445

Source: Field data

The mean PCS and MCS scores were 43.75±21.81 and 56.56±17.97 respectively. As Table 13 shows, a greater proportion of the respondents had PCS scores less than 50 (54%) and MCS scores greater than 50(66%). Among respondents with MCS scores less than 50, 94% of them had PCS score less than 50, whilst 5% had PCS scores greater than 50 (p=0.000). Also, among those with MCS score greater than 50, 67% of them had PCS scores greater than 50 whilst 33% had PCS scores less than 50 (p=0.000) (Table 13).

The mean values for the PCS and MCS scores for predisposing, enabling and need characteristics are presented Table 14. The same table also shows corresponding F and P values of ANOVA test. There were statistically significant differences in mean

PCS and MCS scores for the following groups; age, sex, religion, ethnicity, marital status, employment status, enjoyment of government benefit and being diagnosed with chronic disease. However, statistically significant differences in mean PCS were observed for education and family size (Table 14).

As age increased, significantly lower mean PCS scores were observed. The mean PCS scores for the various age groups were as follows: 50.73± 20.15 (60-64 years), 45.00±20.95 (65-69 years), 38.67 ±22.38 (70-74 years), 27.91±17.46 (75-79 years), 22.13±12.28 (80-84 years) and 23.68±10.05 (84+years).

Males generally had higher mean PCS scores than females (48.04±21.27 versus 40.54±21.71). Among the various ethnic groups, the Sisalas (67.00) had the highest mean PCS value, followed by the Hausas (59.08±24.73), Guans (54.65±12.45) and Mole-Dagbani (51.27±19.04). The Ga-Dangbe had the lowest mean PCS scores of 40.82±22.18. Among the various religious groups Muslims had the highest mean PCS (48.66±21.02), followed by Christians (43.93±21.80), the traditionalist had the lowest mean PCS (28.72±13.91). Older adults who were married had the highest mean PCS score (49.71±20.69) whilst those who were widowed had the least (31.69±19.51). Older adults who had four children had the highest mean PCS (47.40±21.28) whilst those with six or more children had the lowest mean PCS (37.96±21.9). Respondents with secondary education had the highest mean PCS (51.57±20.93) whilst those with no education had the lowest (40.48±21.39). Respondents who were into domestic employment had the highest mean PCS (65.75) followed by those who were into small scale business (59.18±20.93), employed in formal sector (54.24±18.93) and self-employed (50.03±19.29). Those who were unemployed had the lowest mean PCS (29.64±19.18). Respondents who did not enjoy any benefit from government had

higher mean PCS (46.14±21.51) than those who enjoy benefit (38.91±21.60). Older adults who had not been diagnosed with chronic disease had highest mean PCS (56.10±17.02) than those who had been diagnosed (33.14±19.92).

For MCS mean scores generally increased as age increased. Individuals aged 60-64 had the highest mean MCS (62.55±15.40). Those aged 75-79 had the lowest MCS (36.66±13.44). The mean MCS for males (59.41±17.82) was higher than females (54.38±17.81). Among the various ethnic groups, the Sisalas had the highest mean MCS (77.75) followed the Guans, Mole Dagbanis and Hausas. The Ewes had the lowest MCS (54.49±18.39). Also among the various religious groups, the traditionalist had the highest mean MCS (64.34±12.31) followed by Muslim (62.29±15.78) and Christians (55.80±18.11). The non-traditional religions (49.15±20.91) had the lowest mean MCS. Respondents who were married (60.05±17.07) had the highest mean MCS whist those who were widowed (48.71± 17.58) had the lowest. Respondents who were in to domestic employment had the highest MCS (63.25) whist those who were unemployed (49.34±17.07) and retired (46.03± 18.64) had the lowest mean MCS. Respondents who enjoyed (59.46±16.7) benefit from government had higher mean MCS than those who did not (54.85±18.43). Older adults who had not been diagnosed with chronic disease had highest mean MCS (65.90±12.86) than those who had been diagnosed (48.66±17.97).

Following the ANOVA test, dependent group t-test was carried out to determine the sources of the differences in mean PCS and MCS among the predisposing, enabling and need characteristics (Appendix H). The test revealed significant differences in mean PCS scores for those aged 60-64 years and the following age groups: 70-74 ($p<0.001$), 75-79($p<0.001$), 80-84 ($p<0.050$). Also, significant differences were

observed between mean PCS scores of age group 65- 69 and the following, 75-79 years($p<0.001$) and 80 – 84 years($p<0.001$), and between 70-74 years and 80-84 years ($p<0.004$).

Some significant differences were observed between groups within religion, marital status, education, employment status and government benefit. For religion, significant differences were observed in mean PCS scores between non-traditional and Muslim ($p<0.018$). For marital status, differences observed in mean PCS scores were between widow and single ($p=0.000$), widow and married ($p<0.000$), widow and divorced ($p=0.000$) and divorced and married ($p<0.045$). In terms of education, differences were observed in the mean PCS scores between groups with no education and those with secondary education ($p<0.035$). Similarly, differences were observed in the mean PCS scores between the following employment groups: unemployed and employed ($p<0.001$), self-employed and unemployed ($p<0.001$), retired and employed ($p<0.00$), small scale business and unemployed ($p<0.001$) and small-scale business and self-employed ($p<0.001$) (Appendix H).

For MCS, significant differences between age groups were observed as follows: 60-64 years and 70-74 years ($p<0.001$), 60 -64 and 74 -79($p<0.001$), 60- 64 and 80 -84 ($p< 0.001$), 65-69 years and 75 -79 years ($p<0.001$), 65-69 and 80-84 years ($p<0.001$). Differences between Mole-Dagbani and Ga-Dangbe ethnic groups ($p<0.028$) accounted for the observed differences in mean MCS scores for ethnicity. Similarly, there were observed differences in mean MCS scores for marital status. This observation was accounted for by significant differences between widowed and married groups ($p<0.002$) and between widowed and divorced groups ($p<0.000$).

Table 14: Mean Values of PCS and MCS scores and Population Characteristics

Characteristics	PCS		F (P value)	MCS		F(P value)
Age (years)	**Mean**	**SD**	16.3 **(0.000)**	**Mean**	**SD**	17.3**(0.000)**
60-64	50.7	20.2		62.6	15.4	
65-69	45.0	21.0		57.4	17.3	
70-74	38.7	22.3		53.1	18.8	
75-79	27.9	17.5		36.7	13.4	
80-84	22.1	12.3		42.1	14.8	
85 and above	23.7	10.1		44.9	15.1	
Sex			14.5 **(0.002)**			8.8 **(0.032**)
Female	40.5	21.7		54.4	17.8	
Male	48.0	21.3		59.4	17.8	
Residential status			2.5(0.087)			0.77(0.464)
Living alone	44.5	23.4		59.9	17.5	
Living with family	41.9	21.5		56.2	17.9	
Living with spouse	46.6	21.9		56.1	18.3	
Ethnicity			2.78**(0.001)**			2.81**(0.011)**
Akan	46.3	21.1		57.0	17.8	
Ga-Dangbe	40.8	22.2		54.9	18.2	
Ewe	42.8	21.9		54.5	18.4	
Mole-dagbani	51.3	19.0		64.5	13.8	
Guan	54.7	12.5		71.4	11.1	
Sisala	67.0	.		77.8	.	
Hausa	59.1	24.7		63.3	21.7	
Religion			4.49(**0.004)**			3.2 (0.022)
Christianity	43.9	21.8		55.8	18.1	
Moslem	48.7	21.0		62.3	15.8	
Traditional	28.7	13.9		64.6	12.3	
Non tradition	28.8	21.1		49.2	20.9	
Marital Status			16.7 **(0.000)**			8.38 **(0.000)**
Single	49.4	21.9		57.3	19.2	
Married	49.7	20.7		60.1	17.1	
Divorced/separated	42.3	20.2		58.1	17.1	
Cohabitation	33.9	34.7		52.7	19.8	
Widow/widower	31.7	19.5		48.7	17.6	
Children			3.79(0.052)	2.01(0.150)		
Yes	43.9	21.8		56.8	18.0	
No	26.5	15.0		46.3	14.0	
Family size			2.48(**0.031**)			0.18(0.969)
One	44.8	24.5		57.1	20.2	
Two	42.7	22.4		56.7	18.4	
Three	45.9	20.5		56.6	17.0	

Table 14 continued

Four	47.4	21.3		57.5	17.4	
Five	45.2	21.8		57.4	18.3	
Six or more	38.0	21.9		55.3	18.5	
Education			2.88**(0.023)**			2.0 (0.092)
None	40.5	21.4		59.2	16.5	
Primary	46.9	19.5		55.6	17.6	
Middle	42.2	22.4		54.7	18.6	
Secondary	51.6	20.9		61.5	17.8	
Tertiary	43.7	24.3		58.4	17.8	
Employment			17.7 **(0.000)**			22.6**(0.000**)
Employed	54.2	18.9		65.3	13.6	
Unemployed	29.6	19.1		49.3	17.1	
Self employed	50.0	19.3		63.2	14.5	
Retired	35.7	21.4		46.1	18.6	
Casual labour	43.6					
Domestic	65.6			63.3		
Small-scale	59.2	20.9		60.3	19.4	
Source of income			2.40(0.068)			1.18(0.318)
Self	47.7	20.6		59.6	17.1	
Husband	41.5	22.2		61.2	17.1	
Wife	73.0	.		52.5	.	
others in house	38.9	23.9		52.4	17.2	
Benefit from government			12.1**(0.005)**			6.7**(0.010)**
Yes	38.9	21.6		59.5	16.7	
No	46.1	21.5		54.9	18.4	
Regular medical insurance			2.11(0.148)			3.16(0.076)
Yes	43.2	21.9		56.0	18.0	
No	47.4	21.3		60.4	17.3	
Government subvention			0.74(0.477)			0.19(0.829)
NHIS	43.4	21.9		56.0	18.1	
LEAP	18.0	.		66.0		
Other	45.9	23.7		57.5	19.2	
Diagnosed with chronic disease			182.6 **(0.00)**			131.5 **(0.00)**
Yes	33.1	19.9		48.7	18.0	
No	56.1	17.0		65.9	12.9	

Source: Field data 2017

Table 15: Population Characteristics, Utilization of Health Care Services, Health Seeking Behaviour and Health Related Quality of Life

	Physical Component of HRQOL (PCS)						Mental Component of HRQOL (MCS)					
Characteristics	**Model I**			**Model II**			**Model III**			**Model IV**		
	OR	**95% CI**	**P value**	**AOR**	**95% CI**	**P value**	**Odds Ratio**	**[95% Conf.**	**P value**	**AOR**	**95% CI**	**P value**
Age(years)												
60 -64(Ref)	1											
65 – 69	0.59	0.38 - 0.92	**0.019**	0.60	0.29 - 1.23	0.165	0.51	0.30 - 0.85	**0.009**	0.36	0.16-0.84	**0.018**
70 -74	0.39	0.23 - 0.65	**0.000**	1.20	0.47 -3.03	0.703	0.38	0.21 - 0.67	**0.001**	0.76	0.27-2.08	0.589
75 -79	0.14	0.05 - 0.39	**0.000**	0.38	0.05-2.69	0.33	0.05	0.02 - 0.15	**0.000**	0.09	0.01-0.66	**0.018**
80 -84							0.16	0.06 - 0.38	**0.000**	0.24	0.04-1.40	0.113
85 and above							0.17	0.03 - 1.07	**0.060**	0.81	0.04-15.30	0.887
Sex												
Female	1.00											
Male	1.93	1.34 -2.77	**0.000**	1.13	0.56-2.27	0.737	1.64	1.10 - 2.45	**0.015**	1.71	0.78-3.73	0.177
Residential status												
Living alone	1.00											
Living with family	0.73	0.38 - 1.39	0.336				0.53	0.24 - 1.15	0.109			
Living with spouse	1.09	0.55 - 2.14	0.808				0.52	0.23 - 1.17	0.112			
Ethnicity												
Akan	1.00											
Ga-Dangbe	0.69	0.45-1.07	0.101				1.00	0.62 - 1.62	0.984	1.52	0.66-3.52	0.325
Ewe	0.82	0.45-1.50	0.529				0.99	0.52 - 1.89	0.969	0.94	0.30-2.96	0.921
Mole-dagbani	1.97	0.96-4.04	0.066				2.55	1.07 - 6.04	0.034	1.13	0.29-4.44	0.858
Guan	0.68	0.11-4.20	0.676				(empty)			(empty)		
Sisala	(empty)						(empty)			(empty)		

Table 15 continued

Hausa	4.07	0.44- 37.47	0.216				1.75	0.18 - 17 37	0.634	3.24	0.00-9711.78	0.773
Religion												
Christianity	1.00											
Islam	1.75	0.99 -3.11	0.055	1.25	0.51-3.07	0.622	1.80	0.93 - 3.48	0.08			
Traditional	(empty)			(empty)			4.57	0.57 - 36.90	0.154			
Non-Traditional	0.35	0.10 - 1.29	0.116	0.40	0.03-4.67	0.464	1.14	0.28 -4.64	0.853			
Marital status												
Single	1.00											
Married	0.93	0.48 - 1.82	0.838				1.28	0.59 -2.79	0.533			
Divorced/Separated	0.54	0.25 - 1.14	0.105				1.01	0.42 - 2.40	0.975			
Cohabitation	0.34	0.03 - 4.05	0.394				0.96	0.08 - 11.72	0.972			
Widow/widower	0.18	0.08 - 0.38	**0.000**				0.48	0.21 - 1.07	0.073			
Family size												
One	1.00											
Two	0.74	0.27 - 2.01	0.559				0.97	0.32 - 2.98	0.964			
Three	1.16	0.46 - 2.95	0.754				1.00	0.35 - 2.86	0.993			
Four	1.23	0.47 - 3.16	0.675				0.83	0.29 - 2.41	0.737			
Five	1.00	0.39 - 2.60	0.996				0.99	0.34 - 2.91	0.991			
Six and above	0.66	0.26 - 1.69	0.385				0.70	0.25 - 1.98	0.5			
Education												
None (Ref)	1.00			1								
Primary	1.18	0.67 - 2.08	0.570	0.46	0.17-1.19	0.109	0.53	0.27 - 1.03	0.06	0.31	0.10-0.97	**0.044**
Middle	0.99	0.62 - 1.60	0.972	0.54	0.24-1.21	0.134	0.39	0.22 - 0.69	**0.001**	0.42	0.17-1.06	0.066
Secondary	1.97	0.98 - 3.95	0.057	1.09	0.32-3.74	0.886	1.21	0.49 - 3.00	0.687	2.32	0.38-14.11	0.363
Tertiary	1.02	0.47 - 2.22	0.965	0.19	0.04-0.92	**0.039**	0.52	0.22 - 1.22	0.134	0.11	0.02-0.59	**0.010**

Table 15 continued

Employment												
Employed	1.00											
Unemployed	0.14	0.06 - 0.31	**0.000**	0.18	0.04-0.85	**0.03**	0.16	0.06 - 0.42	**0.000**	0.13	0.02-0.69	**0.017**
Self-Employed	0.64	0.33 - 1.23	0.182	0.29	0.10-0.86	**0.026**	0.57	0.23 - 1.43	0.229	0.25	0.06-1.00	**0.050**
Retiree	0.19	0.09 - 0.38	**0.000**	0.20	0.06-0.69	**0.01**	0.08	0.03 - 0.20	**0.000**	0.06	0.01-0.24	**0.000**
Domestic employed	(empty)			(empty)			(empty)			(empty)		
	(empty)			0.78	0.09-6.67	0.824	0.61	0.11 - 3.54	0.585	0.91	0.05-15.34	0.946
Small-scale business	1.73	0.42 - 7.05	0.448									
Work paid												
Yes	1.00											
No	0.58	0.38 - 0.87	**0.009**	0.94	0.43-2.07	0.886	0.53	0.34 - 0.82	**0.005**	1.89	0.76-4.72	0.172
Source of income												
Self	1.00											
Husband	0.72	0.33 - 1.58	0.41				1.59	0.57 - 4. 39	0.374			
Wife	(empty)						(empty)					
Others in the household	0.58	0.24 - 1.37	0.212				0.52	0.20 -1.37	0.186			
Pension												
Yes	1.00											
No	1.04	0.60- 1.79	0.885				2.00	1.13 - 3.54	**0.017**			
Monthly income												
100 – 300	1.00											
400 – 600	1.23	0.83 - 1.82	0.306	1.35	0.66-2.76	0.412	1.58	1.03 - 2.43	0.037	1.58	0.73-3.41	0.243
700 – 900	3.92	1.87 - 8.22	**0.000**	4.16	1.14-15.22	**0.031**	3.89	1.56 - 9.69	**0.004**	2.00	0.52-7.66	0.314

Table 15 continued

1000 and above	5.56	1.15- 26.84	**0.033**	3.45	0.46-26.11	0.231	(empty)			(empty)		
Benefit from government												
Yes	1.00											
No	1.61	1.10 - 2.37	**0.015**	3.84	1.72-8.57	**0.001**	0.59	0.38 -0.90	0.015	0.62	0.26-1.48	0.283
Rate current health status												
Poor	1.00											
Fair	12.29	1.62- 92.96	**0.015**	4.13	0.27-62.72	0.31	3.03	1.34-6.87	**0.008**	0.90	0.25-3.28	0.870
Good	65.47	8.89-482.3	**0.000**	12.80	0.80-205.76	0.07	13.69	6.16- 30.42	**0.000**	3.35	0.84-13.47	0.088
Rate past year health												
Poor	1.00											
Fair	6.36	1.88-21.52	**0.003**	1.71	0.21-13.84	0.62	3.10	1.51 - 6.33	**0.002**	2.68	0.79-9.15	0.115
Good	28.06	8.54- 92.21	**0.000**	2.38	0.29-19.69	0.42	12.36	6.11 - 24.99	**0.000**	4.23	1.12-16.06	**0.034**
Chronic disease												
Yes	1.00											
No	7.06	4.73- 10.54	**0.000**	3.51	1.77-6.95	**0.000**	6.13	3.86 - 9.37	**0.000**	2.05	0.90-4.66	0.085
Utilization HCS												
None	1.00											
One or more	0.18	0.12 -0.28	**0.000**	0.36	0.18-0.74	**0.006**	0.32	0.19 - 0.50	**0.000**	0.37	0.15-0.88	0**.024**
Health seeking												
No hospital attendance	1											
Hospital attendance	0.85	0.44 - 1.61	0.615				0.59	0.27 - 1.2	0.177			

Source: Field data 2017

Furthermore, significant differences between retired and employed groups (p=0.000) and retired and self-employed groups (p=0.000) accounted for the differences in mean MCS scores for employment status (Appendix H).

To establish the relationship between population characteristics, utilization of health care services, health seeking behaviour and health related quality of life of older adults, four models were used as depict in Table 15. Model I and III are the bivariate logistic regression of population characteristics, utilization and health seeking behaviour with physical and mental health component of health-related quality of life respectively. All factors in models I and III that had significant associations with PCS and MCS of HRQOL were put in models II and IV respectively to determine the predictors of HRQOL (physical and mental component).

In models I and III the factors that were found to have association with both physical and mental components of HRQOL were age, sex, religion, education, employment status, paid work, monthly income, government benefit, rating of health status (both current and past year), diagnosed with chronic disease and utilization. In addition, religion and benefit from government were associated with the physical component whilst ethnicity was associated with the mental component (Table 15).

In model II the predictors of the physical component of health-related quality of life were education, employment status, benefit from government, monthly income, diagnosed with chronic illness and utilization of health care services. The odds of having a good physical component of health-related quality of life was 81% lower for older adults with tertiary education compared to those without formal education. The odds having a good physical component of health-related quality of life were 82%,

70% and 80% lower respectively for older adults who were unemployed, self-employed and retired but engaged in some income activities compared to those were formally employed (AOR 0.18, 95% CI 0.04-0.85; AOR 0.29, 95%CI 0.10-0.86; AOR 0.2,95% CI 0.06-0.69). For those who did not receive any benefit from government were nearly 4 times more likely to have a good physical component of HRQOL compared to those who receive benefit [AOR 3.84, 95%CI 1.72-8.57]. Individuals who earned an average of GH 700-900 cedis per month from all sources were 4 times more likely to have a good physical component of HRQOL compared to those who earned less (GH 100- 300 cedis) [AOR 4.16, 95%CI 1.14 -15.22]. Compared to those who had been diagnosed with chronic illness, older adults who had not been diagnosed with any chronic illness were 3.5 times more likely to have good physical component of HRQOL (AOR 3.5, 95%CI 1.77-6.95). The odds of having a good physical component HRQOL was 64% lower for older adults who used health care services one or more times during the year compared to those who never used health care services (AOR 0.36, 95%CI 0.18 – 0.74).

In model IV the predictors of mental component of HRQOL were age, education, employment, rating of past year health status and utilization of health care services. The odds of having good mental component of HRQOL were 64% and 91% lower respectively for those aged 65-69 years (AOR 0.36, 95% CI 0.16-0.84) and 75-79 years (AOR 0.09, 95%CI 0.01-0.66) compared to those aged 60- 64 years Older adults with primary (AOR 0.31,95%CI 0.10) and tertiary (AOR 0.11, 95%CI 0.02 - 0.59) education had 69% and 89% lower odds of having good mental HRQOL compared to those without formal education. Compared to those employed in the formal sector, older adults who were unemployed (AOR 0.13,95%CI0.02-0.69), self-

employed (AOR0.25, 95%CI 0.06-1.00) or retired (AOR0.06, 95%CI0.01-0.24) but engaged in some income generating activities had significantly lower odds of having good mental component of HRQOL. Respondents who rated their health status in the past year as good (AOR 4.23 95% CI 1.12-16.06) were 4.2 times more likely to have good mental component compared to those who rated as poor. Finally, if older adults used health care services once or more times in the past year, they were 63% lower odds to have good mental component of HRQOL (AOR 0.37 95%CI 0.15-0.88).

4.3.5.2. Overall Health Related Quality of Life of Older Adults

This section presents the overall or composite Health related quality of life score among older adults in Greater Accra as shown in Table 16. The total mean score for HRQOL was 57.52. Relative to the total mean score, the HRQOL scores for role physical (RP), general health (GH), vitality (VT) and mental health (MH) were lower while the means scores for physical functioning (PF), bodily pain (BP), social functioning (SF) and role emotional (RE) were higher.

Table 16: Health Related Quality of life of older adults

Scale	Mean	SD
Physical function (PF)	63.2	28.0
Role Physical (RP)	52.4	46.0
Bodily Pain (BP)	64.6	33.7
General Health (GH)	56.0	22.1
Vitality (VT)	46.6	10.8
Social Functioning (SF)	72.0	30.1
Role Emotional (RE)	60.7	44.3
Mental Health (MH)	47.4	9.0
HRQOL(Total)	57.5	21.6

Source: Field Data 2017

Binary logistic regression was carried out to determine the predictors of HRQOL in older adults. The overall score of HRQOL was used as the dependent variable and population characteristics, health care services utilization and health seeking behaviour as the independent variables. As shown in Table 17, the bivariate analysis (model I) revealed that items that were significantly associated with the total HRQOL score were age, sex, marital status, employment status, paid work, regular monthly income, rating of current and past year health status, being diagnosed with a chronic disease and utilization of health care services. In model II, marital status, employment status, rating of current health status, diagnosed with chronic disease and utilization were significantly associated with total score of HRQOL after adjusting for the significant variables in model I.

Table 17: Population Characteristics, Utilization of Health Care Services, Health Seeking Behaviour and Total HRQOL Score

HRQOL	**Model I**			**Model II**		
	OR	**[95% CI**	**P>z**	**OR**	**[95% CI**	**P>z**
Age (years)						
60 -64						
65 – 69	0.66	0.40 -1.09	0.104	0.68	0.29-1.55	0.356
70 -74	0.44	0.26- 0.77	**0.004**	0.74	0.27-2.01	0.553
75 -79	0.08	0.03- 0.22	**0.000**	0.28	0.04-1.71	0.167
80 -84	0.08	0.03- 0.24	**0.000**	0.57	0.09-3.74	0.557
Sex						
Female(Ref)	1					
Male	1.89	1.26-2.81	**0.002**	1.76	0.81-3.83	0.153
Residential status						
Living alone						
Living with family	0.87	0.43-1.76	0.700			
Living with spouse	1.11	0.53-2.31	0.783			
Ethnicity						
Akan						
Ga-Dangbe	0.75	0.47-1.22	0.253			
Ewe	0.87	0.45-1.69	0.689			
Mole-dagbani	1.75	0.77-3.95	0.180			

Table 17 continued						
Guan						
Sisala	(empty)					
Hausa	1.59	0.16-15.82	0.693			
Religion						
Christianity						
Islam	1.67	0.88-3.19	0.118			
Traditional	0.75	0.20-2.84	0.673			
Non-Traditional	0.48	0.13-1.82	0.281			
Marital status						
Single						
Married	1.46	0.67-3.20	0.342	0.43	0.10-1.90	0.266
Divorced/Separated	0.79	0.34- 1.86	0.592	0.15	0.03-0.69	**0.016**
Cohabitation	0.96	0.08-11.72	0.972			
Widow/widower	0.31	0.14-0.70	**0.005**	0.22	0.05-0.97	**0.045**
Have Children						
Yes						
No	0.29	0.05 - 1.58	0.152			
Family size						
One						
Two	1.11	0.37-3.27	0.857			
Three	1.34	0.48-3.74	0.574			
Four	1.09	0.38-3.06	0.872			
Five	1.07	0.38-3.00	0.904			
Six and above	0.66	0.24-1.80	0.414			
Level of Education						
None	1.40	0.74-2.67	0.302			
Primary	0.79	0.47-1.31	0.357			
Middle	2.11	0.90-4.94	0.084			
Secondary	0.89	0.39-2.00	0.772			
Tertiary						
Employment status						
Employed						
Unemployed	0.12	0.05-0.29	**0.000**	0.22	0.05-1.01	0.052
Self-Employed	0.72	0.31-1.64	0.430	1.10	0.34-3.57	0.869
Retiree	0.15	0.06-0.34	**0.000**	0.27	0.08-0.94	**0.039**
Small-scale business	0.52	0.11-2.40	0.402	0.24	0.02-1.94	0.179
Work paid						
Yes						
No	0.49	0.32-0.77	**0.002**	1.94	0.84-4.51	0.121

Table 17 continued

Source of income						
Self						
Husband	0.93	0.45-1.93	0.855			
Wife	(empty)					
Others in the household	0.52	0.20-1.36	0.183			
Pension						
Yes						
No	1.38	0.78-2.44	0.274			
Regular monthly income (GHC)						
100 – 300						
400 – 600	1.42	0.93-2.17	0.105	1.25	0.56-2.78	0.578
700 – 900	4.21	1.69-10.50	**0.002**	2.02	0.49-8.38	0.335
Regular medical insurance						
Yes						
No	1.357508	0.75 - 2.45	0.313			
Benefit from government						
Yes						
No	1.20	0.80-1.80	0.368			
Government subversion						
NHIS						
LEAP	(empty)					
Other	1.06	0.30-3.67	0.932			
Rate current health status						
Poor						
Fair	8.56	2.50-29.25	**0.001**	3.63	0.58-22.68	0.169
Good	49.21	14.61-65.72	**0.000**	13.55	2.07-88.78	**0.007**
Rate past year health status						
Poor						
Fair	6.10	2.56-14.51	**0.000**	3.35	0.76-14.82	0.111
Good	24.28	10.32-57.09	**0.000**	3.91	0.85-17.91	0.08
Excellent	62.86	6.93-570.09	**0.000**			
Diagnosed with chronic						
Yes						
No	8.13	5.06-13.05	**0.000**	3.34	1.54-7.23	**0.002**
Utilization HCS						
None						
Once or more	0.23	0.14-0.37	**0.000**	0.30	0.13-0.69	**0.005**
HSB						
No hospital						
Hospital	0.89	0.43-1.84	0.76			

Source: Field Data 2017

The odds of having good HRQOL were 85% and 78% lower respectively for older adults who were divorce or separated (AOR 0.15, 95%CI 0.03 -0.69) and widow or widower (AOR 0.22,95%CI 0.05-0.97) as compared to those who were single. Compared to those who were employed in the formal sector, older adults who were retired (AOR 0.27, 95% CI 0.08-0.94) had 73% lower odds of having good mental HRQOL. Older adults who rated their current health status good (AOR 13.55, 95%CI 2.07 -88.78) were nearly 14times are more likely to have good HRQOL as compared to those who rated their health status poor. Older adults who had not been diagnosed with any chronic disease (AOR 3.34, 95%CI 1.54-7.23) were 3 times more likely to have good HRQOL compared to those had been diagnosed with chronic disease. Individuals who utilized health care services (AOR 0.30, 95%CI 0.13 -0.69) at least once within the year were 70% less likely to have good HRQOL compared to those did not use any health facility (Table 17).

4.4. Summary of findings

The findings of the study revealed that there were no dedicated and integrated services for older adults. The services available for the older adults were fragmented however the chronic care service is not directed towards the needs of older person. There was lack of knowledge on policy of the care of older adults.

Among the 501 older adults dwelling in the communities, majority were females, self-employed and retired with less than twenty percent on regular pension scheme. More than half of them were living with a chronic disease and perceived their health status as good. Some population characteristics influenced health care service utilization and there was strong significant relationship between health related quality of life and health care utilization.

CHAPTER FIVE

5.0. DISCUSSION

The objective of this study was to assess the availability of health care services for older adults and factors influencing health care utilization, health seeking behaviour and its relationship with the health-related quality of life of older adults in the Greater Accra region, Ghana. The study utilized Andersen's model of health service use. The discussion is organized along the objectives of the study as follows:

a. Availability of curative and preventive health care services for older adults
b. Population characteristics (predisposing, enabling and need)
c. Utilization of Health care service among older adults
d. Health seeking behaviour among older adults
e. Health Related Quality of life
f. Health related quality of life of older adults and its relationship with Health service use and health seeking behaviour

5.1. Availability of Curative and Preventive Health Care Services

In this study, availability of health care services for older adults was explored among health care providers within the primary health care setting. Availability of health care service refers to a sufficient quantity of functioning public health and health care facilities, goods and services as well as programmes (Baer, Bhushan, Taleb, Vasquez, & Thomas, 2016. CESCR, 2001). In the context of ageing, WHO proposes availability of services that are old-people-centred and integrated. This model ensures that older people receive the quality services they need and are protected from health threats without financial hardships. In addition, the model ensures orientation of the health system around intrinsic capacity, sustainability and appropriately trained health

workforce (WHO, 2017). In many cultural contexts in developing countries, health services are often designed to manage acute conditions or symptoms and tend to manage health issues in disconnected and fragmented ways that lack coordination across care providers, settings and time (WHO, 2017).

This study revealed that in all the health facilities that were assessed, there were no dedicated and integrated services for older adults. The services that were observed were fragmented with some chronic care clinics for hypertension, diabetes, cancer care, eye care, dental care, cardiology, psychiatry and rehabilitation. Although these services were fragmented, they were accessible mostly on outpatient basis, conveniently located and available 24 hours a day, and seven days a week. This is consistent with a study by Woo et al (2012) and Droti (2014) among older adults in Hong Kong and Uganda respectively, which revealed that older people who had chronic diseases but were functionally independent received care in outpatient clinics run by hospital authorities and used the accident and emergency department as walk-in primary care service because they were conveniently located, accessible, open 24 hours a day and free if the patient could not afford to pay (Droti, 2014; Woo et al., 2013).

Evidence shows that affordability influences access to health care services (Bentley, 2003; Frumence, Nyamhanga, & Anaeli, 2017; Jang et al., 2005). This study revealed that various ways by which older persons accessed health care were mainly through NHIS and out-of-pocket payments. Furthermore, those without health insurance who could not afford out-of-pocket payments were declared paupers by the health institutions. Another study in Ghana by Wielen, Channon, & Falkingham (2018)

showed that enrolment in the NHIS was linked to improved utilisation of care, with greater use of both outpatient and inpatient care, indicating that social health insurance is a tool to improve access to healthcare among an ageing population (Wielen, Channon, & Falkingham, 2018). Some studies have revealed the existence of varying mechanisms older persons use to access health care. In Tanzania, older persons aged 60 years and above received free health services under a national exemption policy (Frumence et al., 2017). Also in Namibia, older adults accessed health care under the social pension scheme and exemption policy on consultation (Van Rooy, Mufune, & Amadhila, 2015).

Long waiting times have been linked to inefficiencies in healthcare delivery, prolonged patient suffering and dissatisfaction among the populace, especially older adults (Hansson, Tolf, Øvretveit, Carlsson, & Brommels, 2012; Kreindler, 2010; Siciliani, Moran, & Borowitz, 2014). It was revealed that in most of the health facilities visited, the health care providers had devised their own ways of giving priority attention to older persons that utilized the facility in order to reduce waiting time. In Tanzania, healthcare facilities had introduced a mechanism in which older people were given special priority over other groups of patients such as not queuing, to reduce waiting periods (Frumence et al., 2017).

The National ageing policy and its implementation plan were launched in 2010 and 2011 respectively. The focus of this policy and plan was on using community health workers (CHWs) to perform assessments of older people's household health needs, providing the CHWs with training on healthy ageing issues and protocols on ageing and health, strengthening the links between community and primary health care, and

defining performance targets and monitor achievements within the overall programme (Araujo de Carvalho et al., 2015). In this study, the service providers at the point of delivery of care in all the selected health facilities had no knowledge on the existing policy on ageing and had had no training on healthy ageing issues and protocols on ageing and health.

Although some services such as: follow up on referred cases, assessment of older persons within the community, education and counselling of informal caregivers of older adults and provision of personal hygiene were offered in the community, the link between community and primary health care was weak. At present, health care for older persons is not seen as priority area in most African countries but it will become a pressing issue. Despite this, some countries like Tunisia, Egypt and Lebanon have made significant strides in geriatric care and gerontology (Dotchin, Akinyemi, Gray, & Walker, 2013; WHO, 2016).

5.2. Background characteristics of respondents

Majority of the respondents were concentrated in the 60-64year group and corroborated by the findings in the National Population and Housing Census (2010) and Nanatoma & Adoma (2015). Among the 500 respondents 58% of them were females whilst 42 % were males. This mirrors that of a study in Ghana in which 58% of the respondents were females and 42% were males (Nantomah & Adoma, 2015). Also, the observation made in the National Population and Housing Report on the elderly in Ghana in which the female were 56% and males 44% (GSS, 2013). This observation may be explained by the fact that the ageing population in Ghana is a female dominated one because the life expectancy of women is greater than that of

men. This phenomenon is interesting because the female population although has been characterised by lower socioeconomic status and an increasing burden of social reproduction a higher proportion of them still survived to advanced ages (Nana Araba Apt, 2002).

Majority of the respondents (78.6%) had had some formal education and contrasted the observation in the population and housing census in which majority (60.4%) had no formal education (GSS, 2013). This could be explained by the fact that the respondents' in urban areas were better exposed to educational opportunities than rural counterparts. Higher proportion of the respondents were Christians followed by Muslim, traditionalist and no religion, this is consistent with the observation in PHCs that more than 90% of the elderly adhere to a religion. Religious bodies generally are informal source of social protection for the older adults and their families because they provide some form of social services for their members.

Majority of the older adults were married followed by those who were widowed. The proportion of men who were married exceeded that of females. In contrast, the proportion of females who were widowed exceeded that of males. This is a common observation in the Ghanaian setting among the older adults (Apt, 2002; Nantomah & Adoma, 2015). This observation can be explained by the fact that men would usually prefer to remain married even after divorced or when widowed, so that they could have household chores and other domestic work performed for them. Women may however remarry for other reasons.

The observation in this study was that majority of the respondents lived with a family member or lived with a spouse. Those who lived alone were very few (8.6%). This is

a characteristic of developing countries including Ghana where the household is extended in structure compared to those of developed countries where the household structure is typically neutral.

Majority of the respondents (43.3%) were self-employed, 26.2% were retirees on government subvention, and 16.4% of them were unemployed, with 10.6% of the respondents employed formally. This confirmed the findings of Population and Housing census where majority of the older adults were self-employed (GSS, 2013). This observation can be explained that most of the older adults who were mostly in urban areas were economically active and engaged in small scale businesses.

More than half of the respondents (65.8%) said they received regular monthly salary for work done whilst that of the remainder (34.2%), were irregular. Monthly income ranges of GHC 100-300 and GHC 400- 600 were received by 46.3% and 42.4%of the respondents respectively. This finding is similar to a study in Nigeria by Chukwudi and others, who reported that older adults on pension earned an equivalent of GH150.00 or more monthly (Chukwudi et al., 2015). Nearly 81% of them were the sources of income to their family. According to Biritwum and others, households where older men were heads and main sources of income, were among the wealthiest (Biritwum et al., 2013).

Regular pension schemes were accessed by 13% of the older adults whilst 87% were without any pension benefit. Most of the older persons were covered by some form of health insurance with most insured with the NHIS. The fact that majority of the respondents were covered under the health insurance would go a long way to improve access to health care.

More than half of the respondents respectively had chronic illnesses (53.5%). This result was consistent with previous studies reporting that most of the older adults were living with chronic illnesses (Alkhawaldeh et al., 2014; Ayernor, 2012; Dai et al., 2015; Kim & Lee, 2016; Kwankye, 2013).

In this study, a greater proportion of older adults perceived their present health status as good (56.7%). This is consistent with a study in northern part of Ghana, where majority of older adults rated their health status as good (Exavery, Klipstein-Grobusch, & Debpuur, 2010).

5.3. Utilization of Health care service among older adults

This study set out to assess the pattern of health care utilization and the predisposing, enabling and need factors that influenced utilization. The pattern of health care utilization was such that majority (65%) of the older adults had utilized health care once or more times in the past year prior to the study. Some other studies have reported high utilization rate among older adults. A study in Bareilly district in Indian, reported utilization rate of 65% (Nipun, Prakash, Kumar, & Danish, 2015) whilst that in Jordan reported a rate of 75% utilization (Alkhawaldeh et al., 2014). This contrasts a study in the Kassena-Nankena District in the northern part of Ghana where health care utilization among older adults was extremely low (32%) (Exavery et al., 2010).

Among the predisposing characteristics those that strongly influenced older adults utilization of health care services included, age, residential status, marital status and education. Individuals 65 years and older were more likely to use health care compared to those 60-64 years. This was consistent with studies in China where health utilization also increased with increasing age peaking at the age group 80 years and beyond (Dou et al., 2015; Li et al., 2016, p.). In contrast, a study in Ethiopia

revealed that utilization of health care decreased as age increased (Amente & Kebede, 2016). In some other studies no relationship was established between age and health care utilization (Fernández-Olano et al., 2006). The observation in Ghana is not surprising in that as age increased there was increasing likelihood of older adults living with multi-morbidities. As age increased in Ghana older persons were more likely to present with multi-morbidities of chronic illnesses (Kwankye, 2013; Nimako, Baiden, Sackey, & Binka, 2013), with the most common combinations of conditions being hypertension and diabetes, hypertension and musculoskeletal conditions and hypertension and other cardiovascular conditions (Nimako et al., 2013).

Older adults who lived with their spouses were 95% less likely to utilize health care services as compared to those who lived alone. Studies in Indian and Nigeria made a similar observation (Agrawal & Arokiasamy, 2009; Chukwudi et al., 2015). The explanation may be that those living alone were at relatively higher risk of having poor nutrition, risk of falls, poorer self-reported health and functional ability (Kharicha et al., 2007). These individuals may have poorer mental and psychological health status as a result of loneliness (GSS, 2013). Older adults who were divorced or separated were 94% less likely to utilize health care service compared to those who were single. Studies from other settings had results that were entirely different from what was observed in this study. A study in Netherlands observed higher utilization of health care services among widowed and divorced and lower utilization by single older adults compared to those married (Goldman, Korenman, & Weinstein, 1995) .

Several studies have found an association between education and health service utilization. Studies in Jordan, Spain and Thailand have reported an association between low educational status with greater health service utilization (Alkhawaldeh et

al., 2014; Fernández-Olano et al., 2006). One study however, found no association between educational level and health service utilization (Dou et al., 2015). This study reported similar findings. Older adults with middle or secondary school education were 99% less likely to utilize health care compared to those without any formal education. Evidence exists that persons of lower socioeconomic status including those with lower education, experience a greater degree of morbidity and mortality. This notwithstanding, evidence still shows that the frequency of preventive and clinic visit does not reflect their circumstances, especially when they are young. This disparity in utilization of health care service can result in a disproportionate amount of utilization when they are older (Morreale, 1998) in contrast to the findings of this study.

The enabling factors that were found to be significantly associated with health care utilization were employment status, source of income, and receiving benefit from government. The employment status of the older adults had implications for their income status, well-being and utilization of health services. A study reported that permanently employed individuals visited a physician often compared to those who were unemployed (Virtanen, Kivimäki, Vahtera, & Koskenvuo, 2006). The finding in this study contrasts this observation. Respondents who were employed formally or self-employed were 99% less likely to use health care services at least once within the year compared to those who were unemployed. This finding could be explained by the fact that those who were unemployed had greater self-reported levels of psychological distress, anxiety or depressive symptoms and current health problems compared to those who were formally/self-employed (Fonta et al., 2017; Jin, Shah, & Svoboda, 1995). These were likely to make them seek health care more often. It needs to be stressed however that the frequent visits to the health care facility for checks by the unemployed were facilitated by government benefits and NHIS. Older adults who

received no government benefit such as LEAP and NHIS were 99% less likely to utilize health care services. Studies in rural Ghana and China reported similar findings (Wang, Li, Chen, & Si, 2018; Wielen et al., 2018).

The need factors that were significantly associated with utilization of health care were being diagnosed with chronic illness and rating of past year health status. Respondents who had not been diagnosed with any chronic illness were significantly less likely to utilize health care compared to those who had been diagnosed with some chronic illness. Previous studies have shown that health care utilization is high among older adults diagnosed with chronic or multimorbid conditions (Bodenheimer, Wagner, & Grumbach, 2002; Chukwudi et al., 2015; Lorig et al., 2001). This is to be expected because elderly people living with chronic illnesses such as diabetes, hypertension, kidney disease, cardiovascular diseases, mental and psychological illnesses and arthritis would have to report often to hospital for health checks and treatment because most of them require continuous treatment, may be difficult to manage at home or by the informal health systems, and usually interfere with activities of daily living. The changing cultural context in Ghana due to rapid urbanization and collapse of the extended family support system (Aboderin, 2004; Mba, 2010), requires that older adults living with chronic illnesses still maintain frequent contact with the formal health system.

Respondents who reported excellent health status for the past year were significantly less likely to utilize health care compared to those who rated it as poor. This may be explained by the fact that those who rated their health status as poor were more likely to be living with chronic illnesses and were more likely to visit health care facilities frequently for follow up to obtain their prescribed medications (Alkhawaldeh et al., 2014).

5.4. Health Seeking Behaviour

Among all the respondents, majority of them (nearly 90%) intended to seek treatment from hospitals (government and private) if they ever fell sick. The remainder preferred to use traditional medicine practitioners, chemical shop or self-medicate. Also, among those who fell sick within the three months prior to the study nearly 80% used the hospital, whilst the remainder used chemical shops or self-medicated. These findings are consistent with a study carried out by Sato (2012) where patterns of health seeking appear to favour modern source of health care including private and government hospitals(83%) as first choice, followed by traditional care or self-care (Sato, 2012). It was also consistent with a study in South Africa where majority (80%) of the respondents preferred public clinics to traditional herbal medicine practitioners (Aboyade, Beauclair, Mbamalu, Puoane, & Hughes, 2016).

The study also revealed that, whilst majority of females preferred the use of hospitals, majority of males preferred pharmacy/chemical shop, self-treatment and traditional medicine practitioners. This observation is consistent with a study by Thompson (2016) where majority of females preferred the use of primary health care more often than men and contrast studies by Suominen-Taipale (2006) and Kishore et al (2015) where fewer females sought hospital care than males (Kishore et al., 2015; Suominen-Taipale, Martelin, Koskinen, Holmen, & Johnsen, 2006; Thompson et al., 2016).

Majority of older adults who had been diagnosed with chronic disease preferred to use the hospitals whilst those who had not preferred to use chemical shop or self-medicate. Among those who sought other means of health care, apart from hospital care the main reason given was poor service. In one study by Barua (2017), lack of

money was cited as the main reason for not seeking care at the hospital (Barua, Borah, Deka, & Kakati, 2017). In this study employment status was the only predictor of health seeking behaviour whilst in a study by Sato, income was the main predictor (Sato, 2012)

5.5. Health-related Quality of life

The study set out to determine the HRQOL among older adults, and the relationship between population characteristics, utilization of health care services, health seeking behaviour and health related quality of life. The mean overall HRQOL was good (57.52±21.60). The physical component of the HRQOL was however poorer than the mental component (43.75±21.81 versus 56.56±17.97). Studies in Iran and China (Aghamolaei, Tavafian, & Zare, 2010; Dai et al., 2015; Tajvar, Arab, & Montazeri, 2008; Tajvar et al., 2008) revealed higher mean PCS and MCS compared to that observed in this study. However, in all these studies, the mean MCS was higher than the mean PCS, consistent with what was observed in this study. The differences in mean PCS and MCS observed between the other studies and this may be explained by the fact that standards of living are higher in those countries compared to Ghana (Ram, 2016). In addition, the geriatric health systems in those countries are far advanced and more responsive to the physical and mental health needs of the older adults than is observed in Ghana. Furthermore, the relatively higher mean MCS than PCS across the different cultural settings is to be expected, in that, older adults are accorded respect and are placed in higher positions among the family members and relatives. This promotes good social relationship between young and old members.

Generally, as age increased, mean PCS and MCS decreased. Similar observations were reported in previous studies (Aghamolaei et al., 2010; Tajvar et al., 2008). This observation is expected because advancement in age is associated with the following: cognitive impairment, depression, multiple morbidity, increased and decreased body mass index, lower extremity functional limitation, low frequency of social contacts, low level of physical activity, poor self-perceived health and vision impairment (Sibbritt, Byles, & Regan, 2007; Stuck, Siu, Wieland, Rubenstein, & Adams, 1993).

Both physical and mental components of health-related quality of life of males was observed to be higher than females. This observation is consistent with previous studies (Aghamolaei et al., 2010; Kirchengast & Haslinger, 2008; Zunzunegui, Alvarado, Béland, & Vissandjee, 2009). The gender disparities observed in the HRQOL may be explained by the fact that across the life course, women face an array of barriers to achieving their full potential, from restrictive sociocultural practices to discriminatory laws. Other factors contributing to the observed disparity are women's lower SES, lifestyle of physical inactivity, poor nutritional practices, less access to information, education and employment, poor social support, chronic stress and stressful life such as childbearing (African Development Bank, 2015; Prus & Gee, 2003; Tajvar et al., 2008) .

Older adults who were married had the highest mean PCS and MCS, whilst those who were widowed had the lowest. Previous studies (Dai et al., 2015; Perkins et al., 2016; Tajvar et al., 2008; Wilcox et al., 2003; Zhou & Hearst, 2016) reported similar findings. This observation is not surprising, in that the death of a spouse is considered one of the most stressful life events that older adults experience. Many mechanisms

have been proposed to explain the observation (Wilcox et al., 2003). Widowhood disturbs one's normal routine including one's participation in health behaviour, increases stress levels and is associated with higher levels of depression, all of which interfere with activities of daily living. Widowhood is also associated with increase in physical events such as cardiovascular and cerebrovascular accidents. Social isolation and neglect are also experienced. On the other hand, previous studies have suggested that marriage is protective than widowhood (Anugwom, 2011; Cacioppo, Hughes, Waite, Hawkley, & Thisted, 2006; Wilcox et al., 2003; Zhou & Hearst, 2016).

The predictors of Physical component of health-related quality of life were education, employment status, benefit from government, monthly income, diagnosed with chronic illness and utilization of health care services; whilst the predictors of mental component of health related quality of life were: age, education, employment status, rating of past year health status and utilization of health care services. Marital status, employment status, rating of current health status, diagnosed with chronic disease and utilization of health care predicted the overall HRQOL. Based on the above observations, the strongest predictors of HRQOL were education, employment status, diagnosed with chronic disease and utilization of health care services, because they predicted at least two of the three measures of HRQOL (PCS, MCS and overall HRQOL).

Older adults with some education (primary up to tertiary) were less likely to have good physical and mental health related quality of life compared to those without any formal education. This contrasts findings of studies by Tajvar et al (2008) and Zhou & Hearst, (2016). This observation can be explained by the fact that respondents in this

study also had lower odds of utilizing preventive health care services if they had some education. This observation was not expected because educational level has been shown to have greater influence on mental health in younger age groups and physical functioning in older people. Evidence also suggests that those who achieve a higher level of education are more likely to engage in healthy behaviour and adopt healthy habits. Some authors have further revealed that those with more education have higher rates of health care utilization especially preventive service (Higgins C, Lavin Teresa, & Meltcafe Owen, 2008; Regidor et al., 1999; van Oort, van Lenthe, & Mackenbach, 2004).

Employment status of the older adults strongly influences their income status and their health related well-being (GSS, 2013). Compared to those who were employed in the formal sector, older adults who were unemployed, self-employed or retired had lower odds of good health related quality of life. This observation can be explained by the fact that in Ghana, the older adults who are unemployed, retired and self-employed earn nothing to relatively lower wages compared to those employed formally in the public and private sector that receive higher salaries and usually have social security earnings (GSS, 2013). The relatively higher earnings of those employed formally impact positively on their HRQOL. The findings is consistent with that of Tajvar and colleagues (Tajvar et al., 2008).

The increasing ageing population and the associated poor lifestyle is giving rise partly to the rising incidence of chronic illnesses among older adults. Chronic conditions are known to have profound effect on health and HRQOL especially among older adults (St Sauver et al., 2015; Thorpe, Allen, & Joski, 2015; Ward & Schiller, 2013). In this study, older adults who had not been diagnosed with any chronic disease were more

likely to have good overall HRQOL compared to those diagnosed with chronic disease. Several studies have also found an association between presence of chronic diseases and poor HRQOL (Barile, 2013; Camelo, Giatti, & Barreto, 2016; Heyworth, Hazell, Linehan, & Frank, 2009; Lima et al., 2009; Preto et al., 2016; Singh et al., 2017).

This study suggests a negative association between health care service utilization pattern and good HRQOL. Older adults who use utilize health care service one or more times within the past year were less likely to have good HRQOL. The association between health care service utilization and HRQOL have been studied from several perspectives with varying results. Negative associations occur between the frequent use of curative health care and HRQOL. Similarly, positive associations occur between HRQOL and use of preventive health service (Gallegos-Carrillo et al., 2008). The negative association between health care utilization and HRQOL can be explained by the fact that majority (53%) of the respondents had been diagnosed with chronic diseases like hypertension, diabetes, arthritis, and eye problems which requires frequent visit to the hospital for check-up .

5.6. Strengths of the Study

This study has comprehensively used the Andersen's behavioural model of phase four to link environment, population characteristics, health behaviour and outcome.

The SF 36 tool that was used is one of the most reliable tools in studies of this nature and the Cronbach's alpha of 0.93 gives the tool a strong internal consistency reliability and hence reliability of the data collected.

The use of qualitative technique in elucidating information about availability provided reliable insights and has helped to develop ideas about potential quantitative study on availability.

The community-based nature of the study and the probability sampling employed reduced significantly selection bias.

5.7. Limitations of the Study

The use of a cross sectional study only helped to establish associations but not causal relationship between the variables and health related quality of life.

The use of government owned facilities only denied the study of valuable information from quasi government and private institution on the availability of health care services for the older adults.

Qualitative technique was used to obtain information only on availability whilst quantitative technique was used to obtain information utilization of health care service, health seeking behaviour and health related quality of life. There were no triangulation and so the advantages of triangulation were lost in the study.

CHAPTER SIX

6.0. CONCLUSIONS AND RECOMMENDATIONS

6.1. Introduction

The study examined the availability and utilization of health care services and the health-related quality of life among older adults in the Greater Accra region. Specifically, the study sought to: explore availability of health care services for the older adults; determine utilization of health care services by older adults; assess the health seeking behaviours of the older adults; determine the health related quality of life of the older adults; and determine the relationship between health care services utilization and health related quality of life of the older adults. Three hypotheses were also explored that the: population characteristics have a significant relationship with the health-related quality of life of older adults; utilization of health care services has a significant relationship with the health-related quality of life of older adults; and health seeking behaviour of older adult has a significant relationship with the health related quality of life of the aged.

The community-based study assessed older adults' aged 60 years and above, living in selected communities within the Accra Metropolis and Shai Osudoku district respectively on use of health care services, health seeking behaviour and the health related quality of life. A total of five hundred and one respondents participated in the survey. Availability of heath care services for older adults was explored among eleven health care providers as key informants at the health facility level. Andersen's phase four model of health care service utilization was the guiding framework for the study. This chapter presents the main findings, conclusions, policy implications, recommendations and contributions to knowledge.

6.2. Summary of Findings

Availability of health care services targeting the health needs of older adults in the context of age-friendly facility were absent in all the health facilities that were assessed. There were no dedicated and integrated services for older adults. However, some services available for older adults were observed to be fragmented and included chronic clinics for hypertension, diabetes, cancer care, eye care, dental care, cardiology, psychiatry and rehabilitation. Although these services were fragmented, they were accessible mostly on outpatient basis, were conveniently located and available 24 hours a day and seven days a week. Majority of the older adults who accessed health care services mainly used NHIS or out-of- pocket payment. Those who could not afford payment were declared as paupers by the health institution. Health care providers at the point of care had devised mechanisms to reduce waiting times for older adults above 70 years by giving them priority attention. Other services such as: follow up on referred cases; assessment of older persons within the community; education and counselling of informal caregivers of frail older adults; and provision of personal hygiene were offered in the community. Furthermore, the link between community and primary health care was observed to be weak. The health care providers expressed the need for further knowledge and competency on the care of older adults to enable them meets their health needs.

Population characteristics of the respondents in the survey revealed that majority of the respondents were females, within the 60-64-year group, had had some formal education, were Christians with more males married than females. Their living arrangements were such that majority were living with family members or spouses and had had children. Majority of older adults in this study were self-employed or

retired, with less than twenty percent of them on a pension benefit. Majority who were on regular monthly income of less than GH 300.00 were the sources of income to their household and were insured with the NHIS. More than half of the older persons were living with chronic illnesses, whilst many perceived their current health status as good.

The use of healthcare services among the older adults was significantly associated with the population characteristics (predisposing, enabling and need variables) identified in the behavioural model of health service use. Among the predisposing factors, age, education and marital status had significant relationship with health care utilization. As age increased, the likelihood of utilizing health care service increased. Older adults aged 65 and above mostly utilized health care services more than those younger than 65 years. Paradoxically older adults who had no formal education utilized the health care service more than those with formal education (primary, secondary and tertiary), while those who were single and widowed utilised health care services more than those married. The enabling factors that significantly influenced health care utilization were employment status, source of income and receiving benefits from government. Older adults who were unemployed were more likely to utilize healthcare service at least once or more within the year compared to those who were self-employed or employed with the formal sector; while those older adults whose husbands were the sources of income to the household and received some form of benefit from the government were more likely to use the health care services. Living with chronic disease and rating of health status were the need factors that significantly influenced health care utilization. Older adults who had been diagnosed and living with a chronic disease or perceived their health status as poor health in the

past year were more likely to use health care services compared to those who were not diagnosed with a chronic condition and perceived their health status as good.

Among the older adults, majority preferred to seek healthcare from hospital when they fell sick, while the remainder preferred traditional medicine, pharmacy/chemical shop or self-medication. Female older adults preferred the use of hospital whilst males preferred pharmacy/chemical shop, self-treatment and traditional medicine. Similarly, older adults who had been diagnosed with chronic illness preferred to use hospitals whilst those who had not been diagnosed preferred chemical shop, self-medicate and traditional medicine practitioners. Older adults who preferred to seek health care from hospitals gave reasons such as acceptance of NHIS as a means of payment, availability of medical doctors to attend to them and hospitality of health care providers. Reason given for non-use of the health care among the older adults was poor service quality. A major enabling factor that was significantly associated with health seeking behaviour was employment status of the older adults. Those who were retired were more likely than those employed in the formal sector to seek health care from the health facilities.

The results of the study showed that the overall Health related quality of life of older adults was good. However, the physical component of the health-related quality of life of older adults was poorer than the mental components of health-related quality of life. The mean physical and mental component scores decreased as one aged. Male older adults and those married had higher mean physical and mental health related quality of life than females and those widowed respectively. Consistent with the hypothesis, population characteristics were significantly associated with HRQOL.

Population characteristics that were significantly associated with physical component of health related quality of life were educational level, employment status, benefit from the government, monthly income, utilization of health care services and diagnosed with chronic illness while the predictors of the mental component were age, educational level, employment status, rating of past year health status and utilization of health care services.. Predictors of overall HRQOL were marital status, employment status, rating of current health status, diagnosed with chronic illness and utilization of health care services. Predominant factors influencing HRQOL were utilization of health care services, diagnosed with chronic illness, educational level and employment status. Older adults who had some education (primary to tertiary) were more likely to have poor physical and mental health related quality of life, while those who had not been diagnosed with chronic illness were more likely to have good HRQOL. Similarly, those who were retired or unemployed were more likely to have poor health related quality of life compared to those employed formally. Consistent with the hypothesis, utilization of health care services among older adults was negatively associated with good HRQOL. Individuals who utilized health care the most were more likely to have poor HRQOL because they were likely to be living with chronic illnesses. In contrast with the hypothesis, health seeking behaviour was not significantly associated with HRQOL.

6.3. Conclusion

There were no dedicated and integrated services for older adults in Greater Accra. Some services for older adults were available to take care of those with chronic illnesses like hypertension and diabetes. These were, however, fragmented. Also, some preventive services like personal care, screening for hypertension and diabetes were offered occasionally to older adults in the community.

Health utilization among older adults was quite high. The older you were the more likely you were to utilize health care services because of the relatively higher probability of living with a chronic illness. Factors that predicted health care utilization included: Predisposing - age, residential status, marital status, education; Enabling- employment, source of income, receiving benefits from government; Need- diagnosed with a chronic disease, and rating of past year health status.

A greater proportion of older adults sought health care from hospitals (government and private). Females preferred to seek health care at hospitals whilst males preferred Pharmacy or chemical shops or self-medicate. Employment status strongly predicted health seeking behaviour. Retirees were more likely to seek health care from hospitals compared to those formally employed.

The overall health related quality of life of older adults was good. However, the mental component was good whilst the physical component was poor. Employment status, education, diagnosed with chronic illness and utilization of health care services strongly predicted health related quality of life. Consistent with the hypotheses, population characteristics and utilization of health care service had a significant relationship with health-related quality of life, however health seeking behaviour had no significant relationship with health related quality of life in contrast with the hypotheses.

6.4. Recommendations for Policy

MOH/GHS

- Older persons are entitled to have full access to preventive, curative and rehabilitative health care services to ensure optimal health related quality of life. To ensure availability of these the Ministry of Health /Ghana Health Service (MOH/GHS) should develop dedicated national policy and implementation framework for older adults because of their vulnerability and the increasing life expectancy.
- To ensure comprehensive care for the older adults, MOH/GHS should ensure the provision of older-people friendly integrated services including triaging at all levels of the health system, as proposed by WHO.
- To review the training needs of health care providers concerning care of older persons and develop a comprehensive training programme for the country. The training programme must include primary prevention, screening and treatment programmes for the older people. Community health workers should be specially targeted for training to deliver geriatric care in the communities.
- Standard guidelines and protocols for managing diseases of older adults needs to be develop and disseminated widely among health workers at all levels.

Ministry for Gender, Children and Social Protection

- Develop a comprehensive national strategy that will ensure community sensitization, advocacy, information and education on the health of older persons targeting the older persons themselves, the general public, informal care givers, community leaders and volunteers, civil society

organizations(CSO) and non-governmental organization (NGO), religious organizations.

- Establish social networks for community-based support of older people with active participation of District Assemblies, both as recipients and providers of care. This should go a long way to also improve health seeking behaviour and health service utilization among older males.
- The findings show that those who were formally employed had better health related quality of life than those who were unemployed or retired. An advocacy drive needs to be started to change the policy on age of retirement from 60 years to 65 years or more depending on how critical the needs are if health related quality of life of older adults needs to be maintained at optimal levels.
- Needs to target girls and women for improvement in education, empowerment, nutrition and health, since their health related quality of life of older women was poorer than their male counterparts

6.5. Recommendations for Further Research

- Contrary to the existing evidence of a direct relationship between education and health care utilization, and education and health related quality of life, respondents in this study with some education had low utilization of health care services and poor health related quality of life compared to those who had no formal education. Further research is recommended for post graduate students or any research institution to find out the reasons behind this indirect relationship between health care utilization, health related quality of life and education.

- Women in this study were observed to have poorer health related quality of life compared to their male counterpart. Further exploration would be required to better understand the situation.

6.6. Contribution to Knowledge

First, the fact that this study was situated in phase four of Anderson's behavioural model of health care utilization makes it possible to examine practically the pathway through which enabling environment (health care system including, organization, policy, resources and external environment), population characteristics (predisposing, enabling and need) and health behaviour (health seeking behaviour and healthcare service utilization) influence health related quality of life.

Second, the use of the Medical Outcome Short Form (36) Health Survey tool with its high reliability and validity ensured accurate measurements of health-related quality of life. This is first time such a tool has been used successfully in Ghana.

Third, although very few studies on health-related quality of life exist none has been done to measure health-related quality of life and search for its predictors or determinants in Ghana. This study is the only one to detail determinants of physical component, mental component and overall health related quality of life.

Four, the comprehensive nature of the study made it possible to elucidate gaps in policy implementation, interventions and management of older adults in Ghana. This creates an opportunity for government and other stakeholders to institute mechanisms to improve the health-related quality of life of older adults.

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APPENDICES

APPENDIX A

APPENDIX B

NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH (NMIMR)
COLLEGE OF HEALTH SCIENCES, UNIVERSITY OF GHANA, LEGON

INSTITUTIONAL REVIEW BOARD

APPENDIX A- CONSENT FORM

Title: Availability and Utilization of Health Care Services and the Health Related Quality of Life of Older Adults in the Greater Accra.

Principal Investigator:

Cecilia Eliason
Department of Population, Family and Reproductive Health;
School of Public Health, College of Health Sciences,
P.O. Box LG 13, University of Ghana.
celiason10@yahoo.com

General Information about Research

I would like to invite you to participate in a research study that is intended to gather views on availability and utilization of health care services and the health related quality of life of older adults in the Accra Metropolis. These views will help address the health service needs of older adults and improve the use of health services and their health related quality of life. The research intends gathering factors that influence the use of health services and health related quality of life among people aged 60 years and above. I would like to involve you in an individual interview that will last within 20-30 minutes about factors that influence the use of health facility and its impact on your health related quality of life. Interviews will be conducted at times and place convenient to you. The interview will involve filling of a questionnaire, your name would not be included on the questionnaire. You would be interview at a place convenient to you. You may also choose not to answer particular question(s) during the interview. The information you will share will not be linked to your name in the report of this study.

Possible Risks and Discomforts

You will not be exposed to any risks as you partake in this study. However, if you experience any discomfort during the session, you can request for 5 to 10 minutes break for the interview to be stopped if you wish. The researcher can provide information about services you can seek for help.

Possible Benefits

Participation in this survey may not benefit you directly, it is expected that this study will reveal some of the factors that influence the use of health care services and its impact on your health related quality of life. The information generated would help health professionals to better understand some of the factors that influence your health related quality of life. It will also inform policy makers to enhance the implementation of health policies to improve the quality of life of older adults.

Confidentiality

The researcher will not disclose your identity by making sure your name is not recorded during the data collection. Also any information about you that will identify you will not be disclosed in this study.
The data from you will be kept in a locked cabinet and the data that is stored in the computer will be protected with a password. This data will be kept for five years following the completion of the study, after which time the data will be destroyed. Also no information provided will be disclosed to a third party except my research supervisor(s). All bio-data about you will be kept confidential

Compensation

At the end of the interview you will be given a token of GH ₵10 for Snacks. This is to show appreciation of your time.

Voluntary Participation and Right to Leave the Research

Participating in this research study is completely voluntary. You have the right to quit the interview at any time without suffering any consequences.

Contacts for Additional Information

In case of any questions or further clarification please contact the following persons

Cecilia Eliason,
Department of Population, Family and Reproductive Health,
School of Public Health, College of Health Sciences,
P.O. Box LG 13, University of Ghana.
celiason10@yahoo.com;
0233244638716

Prof. Richard Adanu
Department of Population, Family and Reproductive Health
School of Public Health, College of Health Sciences
P.O. Box LG 13, University of Ghana
rmadanu@ug.edu.gh
0244238556

Your rights as a Participant

This research has been reviewed and approved by the Institutional Review Board of Noguchi Memorial Institute for Medical Research (NMIMR-IRB). If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8am-5pm through the landline 0302916438 or email addresses: nirb@noguchi.ug.edu.gh

VOLUNTEER AGREEMENT

The above document describing the benefits, risks and procedures for the research title *(Availability and Utilization of Health Care Services and the Health Related Quality of Life of Older Adults in the Accra Metropolis, Ghana)* has been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

Date _____ Name and signature or mark of volunteer _____

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

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

Date _____ Name and signature of witness _____

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

Date _____ Name Signature of Person Who Obtained _____
Consent

APPENDIX C

Appendix B: STUDY QUESTIONAIRE

Dear Participant,
The purpose of this questionnaire is to solicit information on factors influencing utilization of Health care services on the quality of life among older adults in the Accra Metropolis. Anonymity and confidentiality of the information given is assured. Your candid response to the questions will be very much appreciated. Thank you

SECTION A – Predisposing factors

Demographic Data

1. Age in years

Answer	Code
60-64	1
65-69	2
70-74	3
75-79	4
80-84	5
85 and above	6

2. Sex

Answer	Code
Female	1
Male	2

3. Residential status

Answer	Code
Living alone	1
Living with family member	2
Living with spouse	3

4. Ethnicity

Answer	Code
Akan	1
Ga-Dangme	2
Ewe	3
Mole-Dagbani	4

5. Religion

Answer	Code
Christianity	1
Islam	2
Traditional	3
Non Traditional	4

1

6. What is your marital status?

Answer	Code
Single	1
Married	2
Divorced/ Separated	3
Cohabitation	4
Widow / widower	5

7. Do you have any children?

Answer	Code
Yes	1
No	2

8. What is your Household/Family size

Answer	Code
One	1
Two	2
Three	3
Four	4
Five	5
Six and above	6

9. Have you ever attended school and which level did you achieve?

Answer	Code
None	1
Primary	2
Middle	3
Secondary	4
Tertiary	5

10. What is your main occupation?
Please indicate: .....

SECTION B- Enabling Factors

This set of questions asks questions about your healthcare and how you pay for it.

11. Which of the following best describes your employment status?

Answer	Code
Employed	1
Unemployed	2
Self employed	3
Retired	4
Casual laborer	5
Domestic employed	6
Civil service	7
Small-scale business	8

12. Is this work paid?

Answer	Code
Yes	1
No	2

13. Who provides source of income to your household?

Source of Income	Regular income (Each month)	Not regular income (some months)	Infrequent (rarely)
Self			
Husband			
Wife			
Others in household			
Others from outside the household			

14. Are you on any pension scheme?

Answer	Code
Yes	1
No	2

15. How much is your monthly income?

Answer	Code
GHC 100 – 300	1
GHC 400 – 600	2
GHC 700 – 900	3
GHC 1000 and above	4

16. Do you receive any benefit from the government

Answer	Code
Yes	1
No	2

17. What type of benefit, please specify?

.....

18. Do you have a regular medical insurance?

Answer	Code
Yes	1
No	2

19. Which type of health insurance do you use?

Answer	Code
NHIS	1
Universal	2
Mutual insurance	3
Other	4

20. Are you on any of the Government subversion such as

Answer	Code
NHIS	1
LEAP	2
Other	3

Section C: Health seeking behavior / Health information

21. How would you rate your current health?

Rating	Code
Poor	1
Fair	2
Good	3
Excellent	4

22. How would you rate your health in the past year?

Rating	Code
Poor	1
Fair	2
Good	3
Excellent	4

23. Have you been ill in the past 3 months?

Answer	Code
Yes	1
No>> Q. 30	2

24. Do you know what was making you ill? (If multiple causes, circle each)

Illness	Code
Malaria	1
Diarrhoea	2
Common cold	3
Hypertension	4
Diabetes	5
Arthritis	6
Respiratory tract infection	7
Other: 1.	8

25. How did you know what was making you ill?

Diagnosis	Code
Self-diagnosis	1
Friend, household member	2
Chemical, pharmacy shop	3
Clinic/hospital/medical person	4
Traditional healer	5
Other: specify	6

26. Did you seek any treatment?

Answer	Code
Yes	1
No	2

27. If yes, where did you seek treatment?

Diagnosis	Code
Self-treatment	1
Chemical /pharmacy shop	2
Government hospital/clinic	3
Private hospital/clinic	4
Traditional healer	5
Other: specify	6

28. Were you able to get all the treatment you needed?

Answer	Code
Yes	1
No	2

29. If No, why?

Answer	Code
Felt better	1
Too expensive	2
Entire Treatment not available	3
Other: specify	4

30. What kind of health facility is nearest to your house?

Health facility	Code
Hospital	1
Polyclinic	2
Health center	3
Other: specify	4

31. a. How long does it take you to get to the nearest health facility?

Answer	Code
Less 15 minutes	1
Between 15and 30 minutes	2
Between 1 and 2 hours	3
More than 2 hours	4

b. Mode of commuting from home health facility. .....

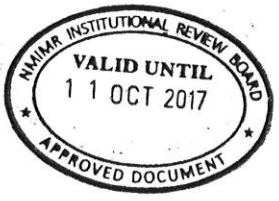
32. If you had a choice where would you seek treatment for yourself?

Diagnosis	Code
Self-treatment	1
Chemical /pharmacy shop	2
Government hospital/clinic	3
Private hospital/clinic	4
Traditional healer	5
Other: specify	6

33. Reason for your choice.....

34. Who makes decision about your health care?

Person	Code
Self	1
Partner	2
Children	3
Relative	4
Medical personnel(CHN)	5
Traditional healer	6
Other: specify	7



35. Have you been diagnosed with any chronic disease?

Answer	Code
Yes	1
No	2

36. If yes, which one? (circle as many as possible)

Diagnosis	Code
Hypertension	1
Diabetes	2
Eye problems	3
Arthritis or joints pain	4
Hearing problem	5
Other: specify	6

37. In the last 12 months, about how often did you visit your hospital for check-up?

Number of times	Code
None	1
2 times	2
3 times	3
4 times	4
5 or more	5
Other: specify	6

38. In the last 12 months, did you receive any of the following Government health services?

Service	Code
Public Health or Community Nurse	1
Occupational therapy	2
Psychological/counseling services	3
Personal care attendant	4
Social work services	5
Optician service	6
Day center services	7
Other: specify	

39. What is your main reason for using the health facility within your community?

_____

_____

_____

40. Why are you not using the health facility within your community?

_____

41. How much did you pay in all for your last visit to the hospital? _____

42. In the last 12 months, how many times did you visit a hospital Emergency Department (sometimes called A&E or Accident and Emergency) as a patient? _____
43. In the last 12 months, about how many visits did you make to a hospital as an out-patient? (Include all types of consultations, tests, operations, procedures or treatments)

_____

44. On how many of these visits did you have a substantial procedure, operation or test i.e. one which took a considerable amount of time to perform? _____
45. In the last 12 months, on how many occasions were you admitted to hospital overnight? _____

46. Does your health insurance cover your treatment bills?

Answer	Code
Yes	1
No	2

Section D: Health Related Quality of Life (SF36 Health Survey)

This set of 36 questions asks for your views about your health. This information will help keep track of how you feel and how well you are able to do your usual activities. Answer every question by marking the answer as indicated. If you are unsure about how to answer a question please give the best answer you can.

1. In general, would you say your health is;

Answer	Code	Score
a. Excellent	1	100
b. Very good	2	75
c. Good	3	50
d. Fair	4	25
e. Poor	5	0

2. Compared to one year ago, how would you rate your health in general now

Answer	Code	Score
a. Much better than last year	1	100
b. Somewhat better now than one year ago	2	75
c. About the same as one year ago	3	50
d. Somewhat worse now than last year	4	25
e. Much worse now than one year ago	5	0

The following questions are about activities you might do during a typical day. Does your health now limit you in these activities, if so how much?

Activities	Yes limited a lot	Yes limited a little	Not limited at all	**Score per Item**
Score	**0**	**50**	**100**	
3. **Vigorous activities** such as running, lifting heavy objects, participating in strenuous sport	1	2	3	
4. **Moderate activities**, such as moving a table, pushing a vacuum cleaner, mopping , general cleaning	1	2	3	
5. Lifting or carrying of loads	1	2	3	
6. Climbing several flights of stairs	1	2	3	
7. Climbing one flights of stairs	1	2	3	
8. Bending, kneeling, or stooping	1	2	3	
9. Walking more than a mile	1	2	3	
10. Walking to markets	1	2	3	
11. Walking long distance	1	2	3	
12. Bathing or dressing	1	2	3	

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

Physical problems	**Yes**	**No**	**score per item**
Score	**0**	**100**	
13. Cut down on the amount of time you spent on work or other activities	1	2	
14. Accomplished less than you like	1	2	
15. Were limited in the kind of work or other activities	1	2	
16. Had difficulty performing the work or other activities	1	2	

During the past 4 weeks, have you had any of the following problems with work or other regular daily activities as a result of your emotional health?

Emotional problems	**Yes**	**No**	**Score per Item**
Score	**0**	**100**	
17. Cut down on the amount of time you spent on work or other activities	1	2	
18. Accomplished less than you like	1	2	
19. Didn't do work or other activities as carefully as usual	1	2	

20. During the past 4 weeks, to what extent has your physical health or emotional problems interfere with your normal social activities with family, friends, neighbors or group? (Choose one box)

Response	Answer	**Score**
a. Not at all	1	**100**
b. Slightly	2	**75**
c. Moderately	3	**50**
d. Quite a bit	4	**25**
e. Extremely	5	**0**

21. How much physical pain have you had during the past 4 weeks?

Response	Answer	**Score**
a. None	1	**100**
b. Very mild	2	**80**
c. Mild	3	**60**
d. Moderate	4	**40**
e. Severe	5	**20**
f. Very severe	6	**0**

22. During the past 4 weeks , how much did pain interfere with your normal work (both work outside home and house work)

Response	Answer	Score
a. Not at all	1	100
b. Slightly	2	75
c. Moderately	3	50
d. Quite a bit	4	25
e. Extremely	5	0

These questions are about how you feel and how things have been with you during the past 4 weeks. Please give the one answer that is closest to the way you have been feeling for each item.

(Please circle one number on each line.)	All of the Time	Most of the Time	A Good Bit of the Time	Some of the Time	A Little of the Time	None of the Time	Score per Item
SCORE	**100**	**80**	**60**	**40**	**20**	**0**	
23. Did you feel full of life?	1	2	3	4	5	6	
SCORE	**0**	**20**	**40**	**60**	**80**	**100**	
24. Have you been a very nervous person?	1	2	3	4	5	6	
25. Have you felt so depressed that nothing could cheer you up?	1	2	3	4	5	6	
SCORE	**100**	**80**	**60**	**40**	**20**	**0**	
26. Have you felt calm and peace ful?	1	2	3	4	5	6	
27. Did you have a lot of energy?	1	2	3	4	5	6	
Score	**0**	**20**	**40**	**60**	**80**	**100**	
28. Have you felt downhearted and depressed?	1	2	3	4	5	6	
29. Did you feel worn out?	1	2	3	4	5	6	
Score	**100**	**80**	**60**	**40**	**20**	**0**	
30. Have you been a happy person?	1	2	3	4	5	6	
Score	**0**	**20**	**40**	**60**	**80**	**100**	
31. Did you feel tired?	1	2	3	4	5	6	

32. During the past 4 week, how much of the time has your physical health or emotional problems interfered with social activities(like visiting with friends, relatives etc)

Time	Answer	SCORE
a. All of the time	1	**0**
b. Most of the time	2	**25**
c. Some of the time	3	**50**
d. A little of the time	4	**75**
e. None of the time	5	**100**

How TRUE or FALSE is each of the following statement for you?

(please circle one number on each line)	Definitely true	Mostly true	Don't know	Mostly false	Definitely false	Score per item
SCORE	**0**	**25**	**50**	**75**	**100**	
33. I seem to get sick a little easier than other people	1	2	3	4	5	
SCORE	**100**	**75**	**50**	**25**	**0**	
34. I am as healthy as anybody I know	1	2	3	4	5	
Score	**0**	**25**	**50**	**75**	**100**	
35. I expect my health to worse	1	2	3	4	5	
score	**100**	**75**	**50**	**25**	**0**	
36. My health is excellent	1	2	3	4		

Thank you

APPENDIX D

Appendix C – Interview Guide

This interview is to identify services and interventions available for the older adult in this facility. The checklist would help build a profile of morbidity profile of older adults seen in this facility. This study is part of a survey of older adult living in the Accra Metropolis on the availability of health services and its utilization on the health related quality of life.

Key Informant interview

1. Type of facility: _____
2. Name of facility: _____
3. Identity of key informant at the facility level:

   _____
4. What type of health services do you provide for older adult in the community?
5. How do the older adult access the services in your facility?
6. How do older adults pay for the services receive at your facility?
7. Are older adults given special attention at the OPD?
8. If yes, how is care delivered?

1

APPENDIX E

In case of the reply the number and the date of this letter should be quoted.

GHANA HEALTH SERVICE
REGIONAL HEALTH SERVICES
GREATER ACCRA REGION
P. O. BOX 184
ACCRA.

Tel: 0302-226203

17th November,*2016*

My Ref. No: GAR/RHD/

You're Ref. No.
.....

THE METRO DIRECTOR OF HEALTH SERVICES
METRO HEALTH DIRECTORATE
ACCRA

LETTER OF INTRODUCTION
MRS. CECILIA ELIASON

This is to introduce to you the above named fourth year PhD student from School of Public Health, College of Health Sciences, University of Ghana who is undertaking her thesis.

She is conducting a study on **"Availability and Utilization of Health Care Services and the Health Related Quality of Life of Older Adults in the Accra Metropolis, Ghana''** at the under listed facilities;

1. USSHER POLYCLINIC
2. MAMPROBI POLYCLINIC
3. MAMOBI HOSPITAL
4. ADABRAKA POLYCLINIC
5. KANESHIE POLYCLINIC

Kindly accord her the necessary assistance.

Thank you.

PETER MENSAH (MR)
DEPUTY DIRECTOR (ADMINISTRATION)
FOR: REG.DIR.OF HEALTH SERVICES
GREATER ACCRA REGION

Cc: The Specialist In-charge, Ussher Polyclinic
The Specialist In-charge, Mamprobi Polyclinic

The Medical Supt. In-charge, Mamobi Hospital
The Director, Adabraka Polyclinic
The Director, Kaneshie Polyclinic

In case of the reply the number and the date of this letter should be quoted.

GHANA HEALTH SERVICE
REGIONAL HEALTH SERVICES
GREATER ACCRA REGION
P. O. BOX 184
ACCRA.

Tel: 0302-226203

17th November, *2016*

My Ref. No: GAR/RHD/

You're Ref. No.
.....

MAMPROBI POLYCLINIC RECEIVED

THE METRO DIRECTOR OF HEALTH SERVICES
METRO HEALTH DIRECTORATE
ACCRA

LETTER OF INTRODUCTION
MRS. CECILIA ELIASON

This is to introduce to you the above named fourth year PhD student from School of Public Health, College of Health Sciences, University of Ghana who is undertaking her thesis.

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2. MAMPROBI POLYCLINIC
3. MAMOBI HOSPITAL
4. ADABRAKA POLYCLINIC
5. KANESHIE POLYCLINIC

Kindly accord her the necessary assistance.

Thank you.

PETER MENSAH (MR)
DEPUTY DIRECTOR (ADMINISTRATION)
FOR: REG.DIR.OF HEALTH SERVICES
GREATER ACCRA REGION

DR. EMILY ONUOHA
SNR. SPECIALIST (PUBLIC HEALTH) I/C
MAMPROBI POLYCLINIC

Cc: The Specialist In-charge, Ussher Polyclinic
The Specialist In-charge, Mamprobi Polyclinic

In case of the reply the number and the date of this letter should be quoted.

GHANA HEALTH SERVICE
REGIONAL HEALTH SERVICES
GREATER ACCRA REGION
P. O. BOX 184
ACCRA.

Tel: 0302-226203

17th November, 2016

My Ref. No: GAR/RHD/

You're Ref. No.
.....

ADABRAKA PC
18 JAN 2017
ACCRA

THE METRO DIRECTOR OF HEALTH SERVICES
METRO HEALTH DIRECTORATE
ACCRA

LETTER OF INTRODUCTION
MRS. CECILIA ELIASON

This is to introduce to you the above named fourth year PhD student from School of Public Health, College of Health Sciences, University of Ghana who is undertaking her thesis.

She is conducting a study on **"Availability and Utilization of Health Care Services and the Health Related Quality of Life of Older Adults in the Accra Metropolis, Ghana"** at the under listed facilities;

1. USSHER POLYCLINIC
2. MAMPROBI POLYCLINIC
3. MAMOBI HOSPITAL
4. ADABRAKA POLYCLINIC
5. KANESHIE POLYCLINIC

Kindly accord her the necessary assistance.

Thank you.

PETER MENSAH (MR)
DEPUTY DIRECTOR (ADMINISTRATION)
FOR: REG.DIR.OF HEALTH SERVICES
GREATER ACCRA REGION

Cc: The Specialist In-charge, Ussher Polyclinic
The Specialist In-charge, Mamprobi Polyclinic

Attn Admin
Please, assist the above Student -
24/1/17.

Attn Admin
The introduce to you the above
24/1/17

In case of reply the number and date of this letter should be quoted.

My Ref : SOD/AU/21
Your Ref. No.

Shai-Osudoku District Health Admin
Ghana Health Service
P. O. Box DD1
Dodowa.
Ghana.
Tel: 0244668487
E-mail:easiamah@yahoo.com

18th January, 2017

THE MEDICAL SUPERINTENDENT
SHAI-OSUDOKU DISTRICT HOSPITAL
DODOWA

Dear Sir,

RE: LETTER INTRODUCTION
MRS. CECILIA ELIASON

This is to introduce to you the above mentioned PhD student from School of Public Health, University of Ghana – Legon.

She is conducting a study titled '**Availability and Utilization of Health Care Services and the Health Related Quality of Life of Older Adults in the Accra Metropolis, Ghana**' at Shai-Osudoku District Hospital.

Attached is her introductory letter from the Regional Health Directorate.

Thank you.

REV. EBENEZER ASIAMAH
DISTRICT DIRECTOR OF HEALTH SERVICES
SHAI-OSUDOKU

APPENDIX F

Test of Internal consistency reliability Cronbach's alpha and item internal **consistency**

Scale	**Number of items**	**Internal consistency reliability (Cronbach's alpha)**	**Range of item internal consistency**	**Cronbach's alpha of current study**
PF	10 items	α= 0.93	0.64 – 0.83	**0.93**
SF	2 items	α = 0.90	0.39-0.56	**0.82**
RP	4 items	α = 0.82	0.86-0.89	**0.94**
BP	2 items	α = 0.95	0.26-0.56	**0.90**
GH	5 items	α = 0.82	0.65-0.83	**0.73**
MH	5 items	α = 0.80	0.62 –0.77	**0.87**
RE	3 items	α = 0.83	0.83 –0.77	**0.90**
VT	4 items	α =0.82	0.77 –0.80	**0.82**
Sarfati & Haslett (1999)				**HRQOL=0.95 Source: Field data 2017**

APPENDIX H

```
oneway PCS  ageinyears, bonf
                    Analysis of Variance
   Source            SS        df      MS          F     Prob > F
------------------------------------------------------------------------------
Between groups      33462.6177      5   6692.52353     16.31     0.0000
 Within groups      196963.912    480   410.341484
------------------------------------------------------------------------------
   Total            230426.53    485   475.106248
Bartlett's test for equal variances:  chi2(5) =  14.5819  Prob>chi2 = 0.01
 Comparison of PCS by Ageinyears (Bonferroni)
Row Mean-|
Col Mean |   1. 60-64   2. 65-69   3. 70-74   4. 75-79   5. 80-84
---------+--------------------------------------------------------
2. 65-69 |    -5.7298
         |      0.159
         |
3. 70-74 |    -12.057   -6.32724
         |      0.000      0.349
         |
4. 75-79 |   -22.8209   -17.0911   -10.7638
         |      0.000      0.001      0.224
         |
5. 80-84 |   -28.5973   -22.8675   -16.5403   -5.77644
         |      0.000      0.000      0.004      1.000
         |
6. 85 an |   -27.0521   -21.3223   -14.9951   -4.23125    1.54519
         |      0.050      0.318      1.000      1.000      1.000
.
oneway PCS   sex, bonf
                    Analysis of Variance
   Source            SS        df      MS          F     Prob > F
------------------------------------------------------------------------------
Between groups      6693.67905      1   6693.67905     14.45     0.0002
 Within groups      224722.426    485   463.345209
------------------------------------------------------------------------------
   Total            231416.105    486   476.164826

Bartlett's test for equal variances:  chi2(1) =   0.0993  Prob>chi2 = 0.753
 Comparison of PCS by Sex    (Bonferroni)
Row Mean-|
Col Mean |   1. femal
---------+-----------
 2. male |     7.5043
         |      0.000
. oneway PCS    resstatus, bonf
                    Analysis of Variance
   Source            SS        df      MS          F     Prob > F
------------------------------------------------------------------------------
Between groups      2332.25239      2    1166.1262      2.46     0.0865
 Within groups      229408.393    484   473.984284
------------------------------------------------------------------------------
   Total            231740.646    486   476.832605

Bartlett's test for equal variances:  chi2(2) =   0.5537  Prob>chi2 = 0.758
Comparison of PCS by ResStatus  (Bonferroni)
Row Mean-|
```

```
Col Mean |   1. livin   2. livin
---------+----------------------
2. livin |   -2.62834
         |      1.000
         |
3. livin |    2.07057    4.69891
         |      1.000      0.084

. oneway PCS    ethnicity, bonf
                  Analysis of Variance
   Source            SS        df      MS          F     Prob > F
------------------------------------------------------------------------
Between groups      7765.49468      6   1294.24911      2.78     0.0115
 Within groups      223975.405    481   465.645333
------------------------------------------------------------------------
   Total            231740.9    487   475.854004
Bartlett's test for equal variances:  chi2(5) =   3.5110  Prob>chi2 = 0.622

                    Comparison of PCS by Ethnicity
                          (Bonferroni)
Row Mean-|
Col Mean |    1. Akan   2. Ga-Da     3. Ewe   4. Mole-    5. Guan   6. Sisal
---------+--------------------------------------------------------------------
2. Ga-Da |   -5.48626
         |      0.486
         |
  3. Ewe |   -3.54797    1.93829
         |      1.000      1.000
         |
4. Mole- |    4.96916    10.4554    8.51713
         |      1.000      0.068      0.892
         |
 5. Guan |    8.34643    13.8327    11.8944    3.37727
         |      1.000      1.000      1.000      1.000
         |
6. Sisal |    20.6964    26.1827    24.2444    15.7273      12.35
         |      1.000      1.000      1.000      1.000      1.000
         |
7. Hausa |    12.7714    18.2577    16.3194    7.80227      4.425     -7.925
         |      1.000      1.000      1.000      1.000      1.000      1.000

. oneway PCS     religion, bonf
                  Analysis of Variance
   Source            SS        df      MS          F     Prob > F
------------------------------------------------------------------------
Between groups      6282.02689      3   2094.00896      4.49     0.0040
 Within groups      225210.414    483    466.27415
------------------------------------------------------------------------
   Total          231492.441    486   476.321896

Bartlett's test for equal variances:  chi2(3) =   2.4570  Prob>chi2 = 0.483
                    Comparison of PCS by Religion
                          (Bonferroni)
Row Mean-|
Col Mean |   1. chris   2. Islam   3. Traid
---------+---------------------------------
2. Islam |    4.73179
         |      0.766
         |
3. Traid |   -15.2074   -19.9391
```

```
       |      0.223      0.063
       |
4. Non t |   -15.1411   -19.8729    .066239
       |      0.079      0.018      1.000

. oneway PCS   rmaritalstatus, bonf
                   Analysis of Variance
   Source              SS         df      MS            F     Prob > F
------------------------------------------------------------------------
Between groups      28005.9778      4   7001.49446     16.67     0.0000
 Within groups       201610.67    480   420.022229
------------------------------------------------------------------------
   Total          229616.648    484   474.414562

Bartlett's test for equal variances:  chi2(4) =   2.5402  Prob>chi2 = 0.637
                  Comparison of PCS by marital status
                        (Bonferroni)
Row Mean-|
Col Mean |   1. singl   2. marri   3. divor   4. cohab
---------+--------------------------------------------
2. marri |    .329374
       |      1.000
       |
3. divor |     -7.067   -7.39637
       |      0.676      0.045
       |
4. cohab |   -15.4643   -15.7937   -8.39729
       |      1.000      1.000      1.000
       |
5. widow |   -17.6924   -18.0218   -10.6254   -2.22816
       |      0.000      0.000      0.002      1.000

. oneway PCS   education, bonf

                   Analysis of Variance
   Source              SS         df      MS            F     Prob > F
------------------------------------------------------------------------
Between groups      5395.90679      4    1348.9767      2.88     0.0225
 Within groups      223684.999    477   468.941298
------------------------------------------------------------------------
   Total          229080.906    481    476.25968

Bartlett's test for equal variances:  chi2(4) =   3.4540  Prob>chi2 = 0.485
                Comparison of PCS by Level of Education
                        (Bonferroni)
Row Mean-|
Col Mean |    1. none   2. prima   3. middl   4. secon
---------+--------------------------------------------
2. prima |    6.36785
       |      0.421
       |
3. middl |    1.72413   -4.64372
       |      1.000      0.901
       |
4. secon |    11.0909    4.72309    9.36681
       |      0.035      1.000      0.072
       |
5. terti |    3.19343   -3.17443    1.46929   -7.89752
       |      1.000      1.000      1.000      1.000
```

```
. oneway MCS   ageinyears, bonf

                Analysis of Variance
   Source            SS        df      MS          F     Prob > F
------------------------------------------------------------------------
Between groups      23436.5972      5   4687.31944     17.28     0.0000
 Within groups      119874.957    442   271.210309
------------------------------------------------------------------------
   Total          143311.554    447   320.607503

Bartlett's test for equal variances:  chi2(5) =   7.3131  Prob>chi2 = 0.198
Comparison of MCS by Ageinyears  (Bonferroni)
Row Mean-|
Col Mean |   1. 60-64   2. 65-69   3. 70-74   4. 75-79   5. 80-84
---------+-------------------------------------------------------
2. 65-69 |   -5.17748
         |      0.102
         |
3. 70-74 |   -9.44982   -4.27234
         |      0.000      1.000
         |
4. 75-79 |   -25.8849   -20.7075   -16.4351
         |      0.000      0.000      0.000
         |
5. 80-84 |   -20.4649   -15.2875   -11.0151       5.42
         |      0.000      0.001      0.063      1.000
         |
6. 85 an |   -17.6983   -12.5208   -8.24846    8.18667    2.76667
         |      0.272      1.000      1.000      1.000      1.000

. oneway MCS    sex, bonf
                Analysis of Variance
   Source            SS        df      MS          F     Prob > F
------------------------------------------------------------------------
Between groups      2791.07781      1   2791.07781      8.79     0.0032
 Within groups      142198.154    448   317.406593
------------------------------------------------------------------------
   Total          144989.232    449   322.915883

Bartlett's test for equal variances:  chi2(1) =   0.0000  Prob>chi2 = 0.998
                    Comparison of MCS by Sex
                        (Bonferroni)
Row Mean-|
Col Mean |   1. femal
---------+-----------
 2. male |     5.0258
         |      0.003
. oneway MCS     resstatus, bonf
                Analysis of Variance
   Source            SS        df      MS          F     Prob > F
------------------------------------------------------------------------
Between groups       496.82384      2    248.41192      0.77     0.4640
 Within groups      144045.904    446    322.97288
------------------------------------------------------------------------
   Total          144542.728    448   322.640018
Bartlett's test for equal variances:  chi2(2) =   0.1370  Prob>chi2 = 0.934
  Comparison of MCS by ResStatus (Bonferroni)
Row Mean-|
Col Mean |   1. livin   2. livin
---------+----------------------
```

```
2. livin |   -3.64491
         |     0.701
         |
3. livin |   -3.75984   -.114932
         |     0.718     1.000
. oneway MCS   ethnicity, bonf
                    Analysis of Variance
    Source              SS        df      MS          F     Prob > F
------------------------------------------------------------------------
Between groups      5319.05462      6   886.509103      2.81     0.0107
 Within groups      139670.177    443   315.282567
------------------------------------------------------------------------
    Total           144989.232    449   322.915883
Bartlett's test for equal variances:  chi2(5) =   6.3017  Prob>chi2 = 0.278
  Comparison of MCS by Ethnicity          (Bonferroni)
Row Mean-|
Col Mean |    1. Akan   2. Ga-Da     3. Ewe   4. Mole-    5. Guan   6. Sisal
---------+--------------------------------------------------------------------
2. Ga-Da |   -2.05333
         |     1.000
         |
  3. Ewe |    -2.4774   -.424063
         |     1.000     1.000
         |
4. Mole- |    7.49135    9.54469    9.96875
         |     0.421     0.028     0.103
         |
 5. Guan |     14.433    16.4864    16.9104    6.94167
         |     1.000     0.852     0.863     1.000
         |
6. Sisal |     20.783    22.8364    23.2604    13.2917       6.35
         |     1.000     1.000     1.000     1.000     1.000
         |
7. Hausa |    6.34552    8.39885    8.82292   -1.14583   -8.0875   -14.4375
         |     1.000     1.000     1.000     1.000     1.000     1.000

. oneway MCS    rmaritalstatus, bonf
                    Analysis of Variance
    Source              SS        df      MS          F     Prob > F
------------------------------------------------------------------------
Between groups      10129.3208      4   2532.33021      8.38     0.0000
 Within groups      133913.457    443   302.287714
------------------------------------------------------------------------
    Total           144042.778    447   322.243351

Bartlett's test for equal variances:  chi2(4) =   0.9602  Prob>chi2 = 0.916
                  Comparison of MCS by marital status
                          (Bonferroni)
Row Mean-|
Col Mean |   1. singl   2. marri   3. divor   4. cohab
---------+--------------------------------------------
2. marri |    2.74831
         |     1.000
         |
3. divor |    1.13528   -1.61304
         |     1.000     1.000
         |
4. cohab |   -4.63235   -7.38066   -5.76763
         |     1.000     1.000     1.000
         |
```

```
5. widow |   -8.59126   -11.3396   -9.72654   -3.95891
         |      0.116      0.000      0.002      1.000

. oneway MCS    education, bonf
                    Analysis of Variance
    Source            SS         df      MS            F     Prob > F
------------------------------------------------------------------------
Between groups      2565.12813      4   641.282032      2.01     0.0917
 Within groups       140522.8    441   318.645806
------------------------------------------------------------------------
    Total           143087.928    445   321.545907
Bartlett's test for equal variances:  chi2(4) =   1.7815  Prob>chi2 = 0.776
      Comparison of MCS by Level of Education    (Bonferroni)
Row Mean-|
Col Mean |    1. none   2. primary   3. middle   4. second
---------+--------------------------------------------
2. prima |   -3.61161
         |      1.000
         |
3. middl |   -4.52427   -.912668
         |      0.434      1.000
         |
4. secon |    2.32412    5.93573     6.8484
         |      1.000      0.817      0.246
         |
5. terti |   -.815583    2.79602    3.70869   -3.13971
         |      1.000      1.000      1.000      1.000
```