FACTORS OF ACCESS TO HEALTHCARE SERVICES AMONG THE AGEING POPULATION: A CASE OF HOSPITAL SUPPORT ORGANISATION AT AFRICAN INLAND CHURCH KIJABE HOSPITAL, KENYA

BEATRICE WANJIKU NJOROGE

A Research Project Report Submitted In Partial Fulfilment Of The Requirements For The Award Of The Degree Of Master Of Arts in Project Planning And Management At The University Of Nairobi

2020

DECLARATION

I declare that this research project report is my original work and has not been presented for the award of a degree in any University.

Signed: _____ Date: _____

Beatrice Wanjiku Njoroge

L50/78150/2015

This research project report has been submitted with our approval as university supervisors.

Signed: _____ Date: _____

Dr. Josephine W. Ngunjiri

Lecturer

School of Open, Distance and eLearning (ODEL)

University of Nairobi

Signed: _____ Date: _____

Prof. Peter Keiyoro

Professor

School of Open, Distance and eLearning (ODEL)

University of Nairobi

DEDICATION

To my husband Mr. George Nduti and children Wanjiku Nduti and Ngigi Nduti for their unconditional love, encouragement and inspiration that made every step possible.

ACKNOWLEDGEMENT

I express my sincere appreciation and thanks to all who assisted me in one way or another.

My sincere thanks go to my supervisors, Prof. Peter Keiyoro and Dr. Josephine W. Ngunjiri for their insight and knowledge that they impacted in me during this research. Thank you for the time taken to read and re-read my work, providing the necessary guidance needed to complete my research.

I acknowledge the support received from; The University of Nairobi Staff at the School of Open and Distance Learning, my colleagues and friends, who have critiqued my work and advanced my knowledge in writing this research report.

TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS AND ACRONYMS

HAQ	The Healthcare Access and Quality Index
NCDs	Non-communicable Diseases
SDGs	Sustainable Development Goals
SDI	Socio-Demographic Index
SPSS	Statistical Package for Social Science, by IBM Incorporated
UHC	Universal Health Coverage
UN	United Nation
WHO	World Health Organisation

ABSTRACT

Ageing is a process which starts from the time one is born and therefore, there is a need to prepare for old age in human development. The population of the world is ageing. Each nation is experiencing an increase in the proportion and number of aged people in the population. In most situations the expectation age of humans is sixties and above. In most human populations, conditions of old age and non-communicable diseases tend to make up the rising share of disease burden. There is need to consider the challenges that ageing population face and the support they need to be able to access the available healthcare services. The purpose of the study was to establish the factors influencing the access of healthcare services among the ageing population. The factors such as socio-economic factors, socio-cultural factors, institutional characteristics and the clinical manifestation of the disease were investigated in this study. A descriptive, cross-sectional design was employed in the collection of data. The researcher targeted the ageing population from 60 years and above who sought health care at the Africa Inland Church Kijabe Hospital in Kenya. The sample size was 372, calculated based on Fisher's model and simple random sampling was employed in determining the study sample. An inclusion/exclusion criterion was applied during sampling. The study employed quantitative design using a closed researcher administered questionnaire. Descriptive and inferential analysis were adopted. The quantitative data was analysed using the Statistical Package for Social Science Version 21.0 and Microsoft Excel. Inferential statistics that is correlations, chi-square and t-test were employed to make conclusions. Visual presentations such tables were used to summarize, organize, simplify and interpret the collected data. Study findings revealed that socioeconomic factors such as individuals' age, marital status, monthly cash transfer, education level and monthly income has a greater influence on access to healthcare services while gender and religion had no influence on access to healthcare services among the ageing population. The support the ageing population receive from their families determine their access to healthcare services. Similarly, the person who advises the ageing population on whether to seek the medical services had a great influence on their access to healthcare services. A significance association existed between lack of diagnostic equipment in the hospitals and access to healthcare services among the ageing population. This implied that availability of diagnostic equipment had influence on healthcare services access. Similarly, availability of drugs in the hospitals had a significant influence on access of healthcare services among the ageing population. The individual's health status also influenced the access to healthcare services. Most ageing population who visited the Kijabe hospital were reported to have been suffering from diabetes and those who were suffering from cancer. Other illnesses reported by the respondents included arthritis, hypertension and vision loss. Therefore, the researcher recommends that both national and county government as well as hospital management should ensure drugs and diagnostic equipment are available in hospitals. It is also recommended that AIC Kijabe Hospital management should come up with a strategies that ensure the ageing population do not take a long time waiting for their healthcare services at the hospital facilities and ample time to be provided with the health care provider during consultation period. Further research should be carried on the influence of other factors other than socioeconomic, sociocultural, institutional characteristics and nature and clinical manifestation of disease on the access to healthcare services among the ageing population.

CHAPTER ONE
INTRODUCTION

1.1 Background of the study

The long-term goal of Kenyan Vision 2030 is to elevate a more prosperous and healthier country by 2030. The vision defines the ageing population as 65 years and older as a vulnerable group. This vision cannot be attained if the elderly and other vulnerable groups continue to live in abject poverty. Specific strategies targeted involve improving health services access since the ageing population in Kenya could be faced with several challenges that include high levels of poverty, health insecurity, weak family and community support (The National Economic and Social Council of Kenya, 2007). According to the World Health Organization (2018) a longer life is beneficial to the older persons, their families and the society in general. The Department of Economic and Social Affairs (DESA) (2015), reported that the ageing population contributes greatly to development in the areas of governance, participating in economic activities and the social welfare of the family and community. The ability of old persons to behave and act in a way that not only benefits themselves but the public needs to be recognized and integrated into programmes and policies in all aspects of life. Thus, the systems of healthcare need to be flexible in meeting the needs of the ageing population. Policies that encourage lifelong healthcare and give special emphasis to preventive care including ensuring good nutrition, encouraging physical activity, discouraging the use of tobacco, alcohol and other forms of drugs need to be adopted. Moreover, in developing countries, preparation should be made for the rising need for facility-based and home-based long-term care to make sure that the well-being of old persons.

The WHO (1948) espouses that health is the complete mental, social and physical wellbeing and not simply the absence of any infirmity or illness. Healthcare systems are all the undertakings whose main aim is the promotion, restoration and maintenance of the well-being of people (WHO, 2000). The Institute of Medicine, Committee on Monitoring Access to Personal Healthcare (1993) notes that healthcare access implies having the timely use of healthcare services in order to attain the best health results. The best health outcomes are measured as the mental, social and physical health status;

disability and disease prevention; life quality; the detection of health issues and its treatment; life expectancy and preventable death. In addition, healthcare access may be described as the ease of a person to get necessary healthcare services including emergency and outpatient services, preventative medicine, palliative care, specialist care example geriatrics, oncologists. The Agency for Healthcare Research and Quality (2014), access requires three discreet steps: entering the healthcare system, having access to the site where the required services are offered and identifying the people responsible for meeting the needs of a person. The access to quality health care can be affected by economic, social, geographical and cultural factors.

DESA (2015) observes that the population of the world is ageing. Each nation is experiencing an increase in the proportion and number of aged people in the population. Globally, the population level aged 60 and above is growing rapidly in comparison to the younger population. In the 21st Century, the growing of the ageing population is a distinct phenomenon whose consequences affect all sectors of a society including the healthcare sector. According to WHO (2018) the ageing population in high income nations like Japan comprise above 30% of the entire population. Currently, meddle and low income nations are experiencing a big change. By the year 2050, most nations including Iran, Chile, Russia and China are expected to report a higher proportion of older people than Japan. Moreover, according to Global Ageing (2018), it is expected that in Africa by the year 2050, the ageing population will have grown from 50 million to 200 million.

The WHO (2017) through its global strategy and action plan on ageing and health provides a political responsibility of what is required to ensure the long-term health of each individual. The strategy follows 5 distinct goals; to encourage nations to take action; to ensure the development of environments that are age-friendly; to ensure alignment between the systems of healthcare and the needs of the ageing population and to formulate equitable and sustainable systems for long-term healthcare. Lastly, the strategy encourages the importance of improving data, research, measurement and ensuring that the older individuals are involved in the decisions that concern their health. The strategy encourages its partners to promptly prepare for the coming decade between

2020-2030 which has been referred to as the health ageing decade. Through, the implementation of the strategy, nations will be making steps towards attaining the Sustainable Development Goals of 2030 which requires for all persons to be involved irrespective of age in ensuring that dignity and equality for all is attained.

1.2 Statement of the Problem

Data from the WHO (2018) shows that between the years 2015-2050, the population of the world aged 60 years and above will double from 12% to 22%. By the year 2020, it was projected that the number of the old persons aged 60 years and above will exceed that of children aged 5 years and below. Further key facts from WHO state by the year 2050, approximately 80% of the elderly will be residing in low-middle income nations. Thus, all states face this challenge of making sure that their social and health systems are prepared for the demographic shift. The KNBS (2015) explained that the population of older persons aged 60 years and above has risen rapidly. In 1949 when the first census was conducted in Kenya, the population of older persons was 270,000, it rose to 1.4 million in 1999 and to 1.9 million in 2009. Further, the population projection for the year 2020 is 2.6 million.

According to the World Health Statistics (2018), as population age globally and in Kenya, conditions of old age and non-communicable diseases (NCDs) contribute to the rising disease burden. NCDs are key causes of mortality and morbidity across the world. The Global Burden of Disease (2016) reported deaths from NCDs are 72.3% of deaths in 2016. These NCDs were cardiovascular diseases, cancers, diabetes, upper respiratory diseases as well as other prominent causes of disability such as arthritis, hearing and vision loss, depression, dementia and Alzheimer's disease. The report further states that, previously infectious diseases were given more attention, and this may be confronting healthcare systems with new prevention and treatment challenges of NCDs.

Further, the KNBS and WHO (2015) reported that the NCDs in Kenya account for more than half of the admissions in hospitals and more than 55% of hospital deaths. Kenya could address these issues by projecting the coming shift in demographics and developing policies that adapt with the ageing population. This emerging epidemic of

NCDs and related risk factors may reverse Kenya's gains in the health sector, unless urgent and deliberate steps are taken.

A study by Nabalamba and Chikoko (2011), reported that majority of aged people in Africa do not have any pension. This is because, contributory pension schemes in the continent covers a small population due to informal employments and livelihood activities in the region. Many African societies reside in rural areas and the largest percentage operates in the informal sectors. Further, the Republic of Kenya (2011), states that inadequate social protection is a major challenge among the ageing population in Kenya. To enhance the opportunities and capacity for the vulnerable and the poor to sustain and improve their welfare and livelihoods. This can be in the form of disability insurance, pensions or healthcare benefits for the elderly. Social protection would enable the ageing population to have access to affordable healthcare.

The Standard Digital (2018), reported that the health experts who specialize in taking care of the older persons in Kenya are very few, medical doctors who specialise in diseases that affect the elderly are almost non-existent in Kenya. The country however has one medical gerontologist and two social gerontologists at the moment. Further, a report by The Task Force for Global Health (2017) found out that Kenya has 13.8 doctors, midwives and nurses per 10,000 individuals only. This is way below the recommendation by WHO for 44.5/10,000 persons so as to attain UHC

AIC Kijabe was chosen as it is a tertiary referral centre which offers outpatient, surgical, ENT, Dental, Paediatrics, TB/AIDS, X-Ray and CT scan among other services. It is a faith-based hospital, established in 1915, sponsored by the Africa Inland Church (AIC) Kenya. AIC Kijabe Hospital was accessible to the researcher as she works with Hospital Support Organisation, a Non-Governmental Organisation, which has partnered with the Hospital. Hospital Support Organisation's objective is to tackle the difficulties following resource mobilization, the allocation of scarce resources, and supporting the growth of the hospital while ensuring attention is made on partner hospitals on helping the needy members of the society to access healthcare.

1.3 Purpose of the study

This study purposed to determine the factors that influence the access of healthcare services among the ageing population. The study was to establish: the socio-economic factors; the socio-cultural factors; the institutional characteristics and how the clinical manifestation of disease influence access of healthcare services among the ageing population.

1.4 Objectives of the study

The main objective of this study was to determine the factors that determine access to healthcare services among the ageing population. The specific objectives of the study were:

I. To determine how the socioeconomic factors, influence access to healthcare services among the ageing population.
II. To establish how the socio-cultural factors, influence access to healthcare services among the ageing population.
III. To assess how the institutional characteristics influence access to healthcare services among the ageing population.
IV. To determine how the clinical manifestation of disease influence access to healthcare services among the ageing population.

1.5 Research questions

I. How do socioeconomic factors influence access of healthcare services among the ageing population?
II. How do socio-cultural factors determine access to healthcare services among the ageing population?
III. What are the institutional characteristics that influence access to healthcare services among the ageing population?
IV. How do the clinical manifestation of the disease determine access to healthcare services among the ageing population?

1.6 Significance of the study

This study provided useful information on access of healthcare services among the ageing population that could be used by health workers and policy makers such as, hospitals, government agencies, health insurance groups, Ministry of Health and relevant

Non-Governmental Organisations. The information may help them to come up with appropriate interventions to improve access to healthcare among the ageing population and enable then to enjoy quality life. This study helped to identify the gaps in knowledge on access to healthcare among the ageing population. The information generated could help in creation of programs that improve access to healthcare among the ageing population.

The information generated could help institute culture and institutional change such as motivating medical personnel to specialize in geriatrics. It is important to study the ageing population as people are living longer and the benefits of greater longevity to individuals, families and societies are many. The benefits include a prolonged working life. Families are beneficiary of the older population through support from a financial aspect, assistance in child care and maintaining the household. In general, the society benefits from an ageing population from the experiences and wisdom of the elderly and from their contribution in the work force, volunteerism, philanthropy and civic engagement (The Department of Economic and Social Affairs, 2015).

1.7 Basic assumptions of the study

This study assumed that the factors of access to healthcare services among the sample ageing population were constant and that they reflected the population under study.

1.8 Limitations of the study

The study involved qualitative data collected and based on the patient's opinion. The data collection tool was administered in such a manner that the clients were interviewed when attending the Hospital.

1.9 Delimitation of the study

This study was limited to the ageing population attending AIC Kijabe Hospital. Another study limitation was that data was gathered in one hospital while we hope to generalize the findings on factors of access to healthcare services among the ageing population. And the data from the generalized findings to be used to plan interventions all over the country.

1.10 Definitions of significant terms used in the study

Access to healthcare services	This is the ease with which people and in particular patients are able to obtain healthcare services such as: emergency services, outpatient services, preventative medicine, palliative care, specialist care example geriatrics, oncologists. Indicated by the: availability, acceptability, adequacy, quality and affordability of the healthcare services.
Factors	Factors that affect access to healthcare such as socio-economic factors, socio-cultural factors, institutional characteristics and the clinical manifestation of disease.
Institutional characteristics	that affect access to healthcare, determined by: services provided; type of health work force; availability of drugs and equipment; patient-provider relation and policies to improve access
Nature and clinical manifestation of disease	that affect access to healthcare, determined by: type of disease; symptoms of the disease and perceptions about the disease
Ageing population	Adults aged 60 years and above. It is a distribution shift on the population of a country towards old age.
Socio-cultural factors	Factors that affect access to healthcare, determined by: religion and beliefs; customs and practices; lifestyle and family support.
Socio-economic factors	Factors that affect access to healthcare, determined by: type of employment; level of education; income level; gender and marital status

1.11 Organisation of the study

The study report was divided into five chapters. Chapter one focused on the introduction of the study. Chapter two discussed the literature review. Chapter three was on the research methodology for the study. Chapter four was on data analysis, presentations and interpretations. Chapter five summarized the findings, discussions, conclusions and recommendations.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter covered the literature review on the factors of access to healthcare services among the ageing population. Literature on the determining factors, which were: socioeconomic factors, sociocultural factors, institutional characteristics and the clinical manifestation of the disease were reviewed. A theoretical framework and a conceptual framework were included in this chapter. Finally, gaps in the literature review were identified.

2.2 Access to healthcare services among the ageing population

DESA (2015) reported that global ageing population is a challenge to all nations across the globe. In developing countries, the ageing of population alters the demands for systems of healthcare. The healthcare system must meet the needs of the ageing population while still meeting the needs of the other populations including offering child care and maternal services. The ageing of the population is a challenge to the healthcare system since it demands that an increase of more services and the use of technology in order to treat NCD and other illnesses associated with old age. Hence, the ageing of population emphasizes on the urgency of addressing age-related discrimination, protecting and promoting the dignity and rights of older individuals and in ensuring the participation of the aged in the society.

The WHO (2018) states that, the rate of the global ageing population is growing. In France, the ageing population increased within 150 years from 10% -20% of people aged 60 and above. However, it is expected that other nations such as India, Brazil and China will experience the rapid growth within 20 years. The NCPD (2013) (2013) notes that most African nations like Kenya are well prepared and equipped to handle the rise of the ageing population. The key concern is associated with healthcare provision and social protection schemes and poverty.

Guven and Leite (2016) found that inadequate social protection affects access of healthcare services by the ageing population. In many nations in the sub-Saharan Africa, older people are more likely to live in poverty since they lack stable incomes and social

security systems. The lack of efficient social security systems in SSA, the presence of large informal settlements and the pace of ageing population are factors that can result in long-term challenges of the inability of nations to offer income security to all old people. This had led to many of the ageing population to face the challenge of having easy access to healthcare and increasing the likelihood of becoming impoverished as they continue ageing.

Institute for Health Metrics and Evaluation (2014), states that the cost of healthcare may influence access to healthcare services among the ageing population. Kenya has the highest average facility costs per outpatient visit in comparison to other nations (Ghana, Uganda and Zambia) in sub-Saharan Africa included in the Access Bottlenecks Cost and Equity Study. The average cost is Kenya Shillings 814 which is equivalent to 8.5 dollars.

Ouma, Maina, and Thuranira (2018) collected data from the first geo-coded database of public health facilities in 48 SSA nations. The study revealed that timely and ease of accesses to emergency healthcare is essential min lowering the mortality rate. For the study, majority of the nations were below the set benchmark for universal healthcare by the year 2030 where 80% and less of the population out to reside approximately two hours travel time to an emergency facility. It was recorded that 29% of the SSA population and 29% of women who are of age to bear children resided in marginalized areas which took more than two hours travel time to the public hospitals. The study revealed that only 16 out of the studied 48 countries had approximately 80% of their population residing two hours away from healthcare facilities.

Geduld, Hynes, Wallis, and Reynolds (2018), observed that there is an assumption made that the proximity of hospitals equal the ease of access to emergency medical services. Majority of the patients facing the need of emergency care are likely to encounter ineffective, limited and non-existence emergency health care. The national analysis in Sub-Saharan Africa using the WHO emergency care system tool has revealed that first level hospital that offer their services to the largest share of the population have little to no capacity of acknowledging and managing situations of emergency. This is due to the gaps present in technology and legislation, human resources, delivery of services and essential medication.

2.3 Socio eeconomic factors and access to healthcare services among the ageing population

A study by Almeida, Nunes, Duro, Facchinu (2017) stated that higher level of education and income are positively correlated with the access and use of medical appointments in both the developed and developing nations. This same correlation is observed in the dental practice. In conclusion, they observed that in most countries the access and usage of healthcare is unequal among the ageing population generated by socio economic inequalities. Further, Ahmed, Tomson, Petzold and Kabir (2005), found out that the poverty status of a household was a key indicator of health-seeking behaviour. The results of the odd ratio that people from poor households sought treatment from unqualified practitioners and professional was 0.6 (95% confidence interval=0.40-0.78) whether they would seek care from qualified allopathic practitioners 0.7 (95% confidence interval=0.60-0.95). The odd ratio for self-treatment and care was 1.8 (95% confidence interval=1.43-2.36). In addition, the level of education of the patients was found to affect their self-treatment and the purchase of drugs from unlicensed and untrained personnel.

In 2016, the Global Burden of Disease Cancer Collaboration (2018) revealed that there were 17.2 million cases of cancer across the world; this is a rise of 28% over the last 10 years. Moreover, the study revealed that more than 8.9 million cancer related deaths were reported in 2016. The study adopted social-demographic index for the analysis on the basis of income, fertility and education rates where nations with a high SDI have high levels of education and income and low fertility rate while the nations with a low SDI have low levels of education and income and high rate of fertility. The results indicated that the cancer incidents rates and deaths were high in nations with high SDI. However, the fastest and largest increase in new cancer cases were reported to be in countries that recorded moderate SDI. Women in countries with low SDI were established to be four times more vulnerable to cervical cancer unlike women in countries with a high SDI. Moreover, it was established that cervical cancer was the most common type of cancer that resulted in deaths among women.

The Institute for Health Metrics and Evaluation and the International Centre for Humanitarian Affairs (2016), data showed that in 1990, male life expectancy in Kenya at birth was 62 years while the female one was 64. This was comparable to the global average which was 65 years at the time, for both sexes. Life expectancy in Kenya started to decline in the early 2000s because of the HIV/AIDS epidemic. Similar declines were seen in the sub-Saharan region. In Kenya, as of 2013, the life expectancy during birth was 63 years for the males and 67.5 years for the females. This is lower than the global life expectancy at 68.8 for males and 74.3 for females.

WHO (2011) explains that on average women live longer as compared to men, hence make up the largest percentage of older persons, particularly during their advanced ages. In the coming decade the sex balance was projected to remain relatively the same without having any significant change. As women live to a more advanced age, they may be more likely than men to experience disabilities and multiple health problems associated with old age. Further, the KNCHR (2009) explains that the significant increase in the numbers of older women as compared to men implies that the challenges faced by older women should be a core focus of governments, more so in developing nations such as Kenya. In situations where most of the older women are widowed, disinherited and in dire poverty although they remain the primary care givers in particular to the orphans of HIV/AIDS pandemic as they are the traditional care givers (ref(s)). The Institute for Health Metrics and Evaluation and the International Centre for Humanitarian Affairs (2016), found out that NCDs are higher among the males than among the females due to Chronic Obstructive Pulmonary Disease and Ischemic stroke.

A study by Kakwani and Subbarao (2005) found out that aged persons are often poorer in comparison to the general population in SSA. Moreover, the study established that a high percentage of single older persons live in poverty in rural regions in comparison to urban areas. According to Wandera, Kwagala, and Ntozi (2015), in the Ugandan context, socioeconomic factors such as the wealth status of the household over the last one month among the aged persons. Access to health care declined for the aged persons coming from poor households but it increased among those earning wages. Further, Ezeh, Chepngeno, Kasiira and Woubalem (2006), found out that older women residing in

informal settlements were vulnerable to poverty resulting from their low to no participation in any form of employment which was worsened by their low level of academic achievements.

Data from the integrated household budget survey 2005/06 in Kenya revealed that the rate of the elderly living under poverty was high at 56.4% in comparison to the national average that stands at 45.9%. Notably, the level of poverty worsened in families where the elderly lived in households that have small children at 61.3%. The Kenya Demographic and Health Survey 2009/08 further indicated that families headed by women are likely to live in poverty (Kenya National Bureau of Statistics, 2010). Data from the Global Ageing (2018) of a survey of 15 nations in Africa revealed that 11 of the studied nations the rate of the elderly living in poverty was higher in comparison to their respective national averages. Moreover, it was stated that this was worse in households where the elderly people lived with young children.

The universal declaration of human rights (1966) and the United Nation (1948) hold that people in their old age have a right to income security, Kenya signed the international covenant on economic, social and cultural rights on 1st May 1972. More recently, in 2015, following the vision 2030 for sustainable development, a social protection highlighting the minimum living standard was addressed. Kenya has been a big advocate of Agenda 2030 (N, 2015). The Republic of Kenya constitution of 2010 in the Bill of Right, Article 57, recognises the rights of the elderly it acknowledges that the state shall undertake actions and measures to recognize the rights of the elderly persons. Further, it explains that the elderly have a right to actively participate in societal decisions, to live in dignity and respect, to pursue their own goals and interests, to be free from any form of abuse and to receive assistance and care from their respective families and the state in general. The Senate Bills (2014) passed the Senior Citizens Care and Protection Bills which provides a framework through which county governments are to establish approaches to implement programmes and policies necessary for the realisation of the rights of senior citizens under the constitution.

The Kenya Vision 2030 aims to establish a social protection fund through cash transfer to the elderly. This is one of its flagship projects which started being implemented in

2008 under the Older Persons Cash Transfer Programme (The NESC of Kenya, 2007). In 2017, the Kenyan government expanded the Older Persons Cash Transfer Programme to be an inclusive programme through the launch of Inua Jamii 70 years and above cash transfer programme. It is an unconditional, non-contributory social pension that targets the needy aged 70 years and above. Moreover, the government of Kenya has plans to provide NHIF to complement support to the Inua Jamii programme beneficiaries (Hunger Safety Net Programme, 2017 and Ministry of Gender, Children and Social Development and Help Age International, 2011).

A study by the Retirement Benefits Authority in Kenya (2007) demonstrated how young and working adults are not saving for retirement and that the informal sector is excluded from the few available schemes. The study found out that only 400,000 Kenyans were saving for retirement while 6 million were not. Only 22% of adults aged 19-30 years and 31% of adults aged 31-40 years were saving for old age. This creates a larger burden on the economy because of providing for older persons. Further, another study by the Retirement Benefits Authority in Kenya (2012) indicated that Kenya risks having a burden of a poor and ageing population. This is because most people are withdrawing their pensions before retirement. Since the government allows one to withdraw up to 75% of pension before retirement age. According to, Ezeh et al. (2006), the informal sector of employment is a big employer to many people residing in the slums of Nairobi, hence, they are not included in the contributory pension program as it is accessible to the formally employed only. Less than 10% of the old population in slums areas of Nairobi were found to be receiving any pension. The decline in physical status and health of older people in competitive markets that discriminates on the basis of age makes it difficult for the age group to get well-paying jobs, as they mostly engaged in petty trading.

2.4 Socio-cultural factors and access to healthcare services among the ageing population

The World Health Organisation (2018), stated that, lifestyle by some ageing population exposes them to risk factors for NCDs commonly referred to as chronic conditions. The most essential risk factors of cardiovascular diseases include; consuming unhealthy diet,

use of alcohol and tobacco and lack of physical activities. In 2000, the Institute for Health Metrics and Evaluation and the International Centre for Humanitarian Affairs (2016) reported that 19.4% of health loss was as a result of NCDs across all the health age groups in the country. By the year 2013, this proportion had risen to nearly 30% majorly because of increase in cerebrovascular disease (stroke) and ischemic heart disease.

The KNBS and WHO (2015), STEPs survey for NCDs and Risk Factors revealed that 25.9% of Kenyan citizens aged 45-69 practice different lifestyles that make them vulnerable to more than one of the risk factors. The risk factors identified included consuming less than 5 servings of vegetables and fruits in a day, smoking, inadequate physical exercises, obesity and high blood pressure. The survey further shows that older persons aged 60-69 have the highest prevalence of raised blood pressure of 53%. Women have a higher prevalence at 58% in comparison to the men in the same age group whose prevalence is 49%. High blood pressure is a core risk factor in the development of cardio vascular diseases.

The World Health Organisation (2018) espoused that practicing healthy behaviours contributed to reduced risk of NCDs and improves the mental and physical health capacity. The KNBS and WHO (2015) established that investing in healthcare among the elderly encourages improvement of behavioural risk factors and early detection and treatment of NCDs is critical. Health lifestyle advice by health workers finding were worrying in the STEPs Survey. Health personnel are important in ensuring the prevention of NCDs by raising awareness and educating patients on adopting healthy lifestyles. In Kenya, only 8% and 10% of the population has been advised to quit or not indulge in tobacco smoking and excessive use of alcohol respectively. Another 10% had been advised to lower their consumption of fats and salt in diet and advices to eat adequate fruits and vegetables.

Data from the DESA (2017) revealed that the number of old people is expected to double by the year 2050 from 500 million in 1990 and to triple by the year 2100 and to rise from 962 million in 2017 to 1.4 billion by 2030 to 2.1 billion in 2050 to 3.1 billion in 2100. The growth of the ageing population is also accelerating in the developing

countries including Kenya and it is projected that these countries collectively will account for 6.3 percent of the global population aged 60 years or over in 2030.

DESA (2015), explains that the ageing population is facilitated by the decline of the rate of fertility and the increase of longevity meaning that populations expect to live for more years and bear few children are potential sources to support old age. Lack of enough social support could affect access to healthcare services among the ageing population. Data from the World Health Organisation (2018) states that despite the number of generations that have survived in a family has increased, today, these generations are likely to live separately than the generations in the past. Ezeh et al. (2006), found out that the elderly who reside alone in a home are likely to report cases of illnesses unlike the old people who live with other adults or their spouses; the elderly living alone are more inclined not to seek assistance from a treatment facility.

UNAIDS and World Health Organisation (2006) reported that the trends in HIV/AIDs create a challenge of younger population transferring the responsibility of child rearing to the ageing population. Further data from the Global Ageing (2018), shows that the African traditional forms of caring for the elderly are breaking down. In the Southern Africa region, it is approximated that 50% of orphans in the region are cared for by old people. According to Ezeh, et al. (2006), a large percentage of older persons residing in informal settlements are alone. Hence, they are not likely to benefit from any form of care and support traditionally offered to the elderly by extended members of the family. Moreover, it was revealed that there is a high prevalence of older men to live alone unlike older women who live with children of ages 15 years and below. The older women who live with children pointed to HIV/AIDs as a leading cause of the high mortality rate among the middle age group.

The World Health Organisation (2018), reported that older persons are in most instances perceived to be a burden, dependent and frail by the society. These ageist attitudes ought to be address by public health and the society as they can result in discrimination influencing the development of policies and the chances that ageing population must experience healthy ageing. Further information from the World Health Organisation (2018) reports on abuse of the elderly which is a repeated or a single act, or inadequate

action, taking place in a relationship where trust is expected which leads to distress and harm to the older individuals. The aspects of the abuse are: physical, sexual, psychological, emotional, financial, neglect, and respect and dignity loss. During the past years, 1 in every 6 of aged people over 60 years has experienced at least one form of abuse within the community. The rate abuse of elders is high in nursing homes where 2 in every 3 of the staffs have been reported for being perpetrators of abuse against the elderly. The abuse of the elderly can result in long-term physical injuries and psychological outcomes. The abuse of the elderly is projected to rise because of the rapid ageing populations.

HelpAge International (2001) found widespread elder abuse within the health sector in Kenya. The study noted that this was regarding: the huge costs of healthcare since introduction of cost sharing in public hospitals; negative attitudes; ignorance and/ or mistreatment by heath care workers and abandonment in hospitals by their families. In essence therefore, older people do not have ready and easy access to healthcare and rehabilitation services. Further, a report by the KNCHR (2009) found out that older persons are discriminated against and their rights violated through various acts such as neglect by their families, discrimination by health providers and killings in some parts of Kenya on allegations of practising witchcraft.

The Kenya National Commission on Human Rights (2009) report on the general attitude towards growing old found out that most respondents, 69%, thought positively of ageing. Those who thought of ageing negatively associated it with issues such as sickness, physical incapacitation, abuse, loneliness and general suffering. 65.7% of respondents reported that ageing was a burden to those caring for older persons.

Ahmed, Tomson, Petzold and Kabir, (2005) found no significant variations in the health seeking behaviour of the young people aged 20-59 and the elderly people aged 60 and above. In general, 35% of the individuals that reported being sick over the 15 day did not seek professional care but self-medicated/self-treated. Paraprofessionals (medical assistants, village doctors and community health workers) were the commonly used healthcare providers.

2.5 The institutional characteristics and access to healthcare services among the ageing population

The second, world assembly on ageing was conducted in 2002 in Madrid, Spain. Kenya was also represented during the meeting. The assembly adopted the Madrid International Plan of Action on Ageing and a Political Declaration. The action plan called for alteration in the practices, policies and attitudes in all sectors and levels to attain the potential of ageing in the 21st Century. According to the UN (2002), it made recommendations that emphasize on prioritizing the need of the older populations and improving healthcare services to meet the needs of the ageing population while providing a conducive, supportive and enabling environment.

At the regional level, the HelpAge International Africa Regional Development Centre and African Union (2002), has developed an Africa ageing policy; African Union Policy Framework and Plan of Action on Ageing. It was developed after the African Union recognised the need for a regional mechanism to protect the dignity and rights of the ageing population. It recognises the need for the Governments, NGOs, private sector and the society in general to prepare for a forecast of rapid ageing of the population.

In 2014, the Kenyan National Policy on Older Persons and Ageing was reviewed in line with the Republic of Kenya constitution of 2010 which recognises the older persons as distinct right holders in article 57. It was also reviewed to include emerging issues and concerns among the ageing population for the realization of Kenya's vision 2030. The policy recognises that ageing population is important segment of the National population whose rights need to be respected, acknowledged, promoted and protected. The policy objective on health is to facilitate the access and highest achievable health standard for ageing population. The government in collaboration with relevant stakeholders shall: facilitate access to geriatrics health, review existing health sectors laws and policies to ensure they respond to the need of ageing population, decentralize and strengthen healthcare to ease access, expand and strengthen the family and society based systems of healthcare support, involve the gerontology and geriatrics studies and research with respect to training and education curricula and mobilize communities to ensure

meaningful involvement and participation in management of their lifelong healthcare needs (Republic of Kenya, Ministry of Labour, Social Security and Services, 2014).

At the international level, instructive statues for the health sector are the International Health Regulations and SDGs 2015. Goal number 3 aims at good health and wellbeing, maintaining healthy lives and wellbeing promotion for people of all ages. Also, the Abuja Declaration of 2001 where the AU leaders pledged to set targets of allocating approximately 15% of their annual budgets towards the improvement of the health sector (KNCHR, 2016).

Target 4 of SDG 3 aims ate lowering the premature mortality from NCDs by one third through treatment, prevention and promotion of well-being and mental health. The number of deaths caused by NCDs rises due to the growing and ageing of the population. Adults in middle and low income nations face almost twice the risk in comparison to adult residing in high income nations. Target 8 of SDG 3 opines that all nations need to work to attain UHC by promoting easy access to quality, effective, safe, and affordable healthcare services, medicines and vaccines to all. Further, it was observed that the UHC gaps is still a big challenge among poor states. Universally, the average national percentage of the expenditure by the government on health was recorded to be 11.7% in the year 2014. Moreover, more than half of the population of the world, lack access to full medical coverage. In 2010, it was observed that 808 million people which accounted for 11.7% of the population of the world spent at least 10% of the budget of their households to pay out of pocket healthcare services. Further, still in 2010, an estimated 97 million individuals were impoverished by out-of-pocket healthcare spending. Target 3d of SGD 3 aims to improve the capacity of developing nations for early warning signs, reduction of risk and national and global health risks management (WHS, 2018; WHO, 2018).

The WHO (2018) holds that little evidence today, posits that the ageing populations are experiencing improved health than their parents. While, over the last 30 years, there has been a decline in the severe disability rate, no significant change has been recorded with respect to moderate and mild disabilities over the same 30 years' period.

According to the SDGs by the UN, there are 50 health based indicators. From 1990-2016, the Global Burden of Disease (2016) assessed 37 of the health-related indicators by the SDGs. Across the world, the median health based index was found to be 56.7 and the performance according to countries varied. Over the period 200-2016, improvements towards UHC index were attained. The Healthcare Access and Quality (HAQ) index showed a summary of access and quality of personal healthcare using a scale ranging from 0-100. It assessed how access and quality of personal healthcare was measures against the best possible. The measure was grounded on risk standardization rate of mortality from causes that ought not to lead to death if quality healthcare is available.

Kenya had a HAQ Index of 32.4 in 1990, 32.3 in 2000 and 39.5 in 2016 (Global Burden of Disease, 2016). Further, data from the Institute for Health Metrics and Evaluation (2018) revealed that the HAQ index in 2016 ranged from 97.1 (95% UI 95.8-98.1) in Iceland to as low as 19.0 (95% UI 14.3-23.7) in the Central African Republic. The progress pace attained varied during the period 2000-2016, however, faster improvements were visible during the time frame for many nations in the SSA region and South East Asia. Some nations in Latin America reported stagnated progress following the HAQ index advances during the same time frame. In general, the HAQ index on national performance had a positive association with the higher total health spending and health systems inputs.

The Kenyan health sector operates within a policy and legal framework that comprises both national and international instruments. Some of the key instruments at the National level are: Kenya Health Sector Strategic and Investment Plan 2013-2017; Kenya Health Policy of 2014-2030 and Vision 2030 where the government under the social pillar commits to improve the quality of life for all citizens through ensuring quality, affordable and equitable access to the highest standard of healthcare. The key statue is the Republic of Kenya constitution of 2010 in article 43 states that every individual has a right to have access to the highest standard of healthcare (Kenya National Commission on Human Rights, 2016).

Institute for Health Metrics and Evaluation and the International Centre for Humanitarian Affairs (2016), explained the long history of Kenya in using evidence in

developing national health programs and policies to improve the health sector. This lays a strong foundation for the proper implementation of vision 2030. The evidence presented included results on the disease burden targeting the key causes of health loss. The assessment of health facilities established the gaps present in NCDs management which was driven by the Kenya National Strategy for Prevention and Control of Non-Communicable Diseases, 2015-2020. The policy also targets to lower the use of tobacco, encourage physical activity and reduce the harmful drinking of alcohol and sodium intake, reduce the rate of obesity, diabetes and cases of high blood pressure. Further, the Kenya Health Policy 2014-2030 acknowledges the need to set strategic national goals.

The Ministry of Health (2012), stated that, the strategic and investment plan of Kenya's health sector for the year 2013-2017 was guided by the Agenda 2030. It recognizes that improving the health sector is important in attaining the vision. The strategic plan mirrors the aspirations of the Republic of Kenya constitution of 2010, chapter four on the bill of rights, article 43 guarantees that it is a right to have access to the highest attainable health services. The plan is further guided by the 2012-2030 health policy that targets the attainment of the highest level and distribution of health care within the middle and low income regions of the country through ensuring that specific health targets are achieved. The Kenya Essential Package for Health comprehensively defines the interventions and services that need to be provided with its main goal towards attaining UHC. It focusses on improving the different health phases of human development, including the elderly (60 years and above). All service providers in health should aim to offer the Kenya Essential Package of Health.

According to the Institute for Health Metrics and Evaluation (2018) the global spending on health is estimated to increase from $1 trillion in 2015 to $20 trillion in 2040. Further, it was projected that the per capita spending would increase at a faster rate in upper-middle income nations at 4.2% followed by lower-middle income nations at 2.2%. Across the world, the health spending share covered by resource mobilizations ranges from 19.8% in Nigeria to 97.9% n Seychelles. Historically, the UHC performance was to a large extent associated with mobilized resources per capita. It was estimated that UHC would reach between 5.1 billion (4.9-5.3 billion) and 5.6 billion (5.3-5.8 billion) lives in

2030. Making sure that all nations sustainably mobilize healthcare resources is important in attaining UHC.

Data from a study by Nabalamba and Chikoko (2011), show that most African governments spent far less on healthcare as compared to developed nations. In 2005, approximately 48 of the 54 countries in Africa spent approximately less than $26 per capita on healthcare. Private households paid for healthcare out-of-pocket and spent more than $58 per capita the same year. In addition, majority of the poor people had to inter into debts by borrowing money to pay for the healthcare services. Muga, Kizito, Mbayah, and Gakuruh (2015) explained that the approved budgetary allocation for the health sector in Kenya rose from Kshs. 77 Billion in 2011/12 to Kshs. 94 Billion in 2012/2013. This was a significant increase but still below the recommended minimum of 15% of the total budget under the Abuja Declaration. In 2013/2014 the allocation reduced to Kshs. 45Billion due to devolvement of health functions as stipulated in the fourth schedule of the constitution. Low expenditure on public health contributes to poor health security and poor care for the ageing population since most old people finance their healthcare services using out-of–pocket funding.

The Government of Kenya in the year 2015 rolled out the Managed Equipment Services Project which would be implemented in partnership with all the 47 counties. This involves outsourcing medical equipment to a third-party facility which offer the expertise to buy, install, manage, train staff and maintain the portfolio of the medical equipment for the long-term. The project on Managed Equipment Services will get it funding from the government of Kenya through the health ministry to the tune of Kenya shillings 38 billion over a period of ten years. There will be acquisition of specialized state of the art health equipment such as digital X-rays machines, modern theatre equipment, ICU equipment, Imaging and ultrasound equipment, surgical and sterilization equipment, laboratory equipment and Kidney dialysis equipment. It is projected that each county would have 2 fully equipped hospitals, besides the 4 the National Referral hospitals with appropriate equipment by end of 2015/2016 fiscal year. The equipment will help in management of NCDs which have been on the rise. This

project is one of the largest of its kind in Africa; its goal is to ensure sustainable healthcare that is aligned with the visions 2030 o Kenya (Ministry of Health, 2015).

The Institute for Health Metrics and Evaluation (2014) found out that the provision of the 3 important facility equipment, these are: medical, laboratory and imaging varied across the types of health services as per the Access Bottlenecks, Costs and Equity study. Many healthcare facilities have the basic medical equipment. 45% of the provisional and national hospitals do not possess an electrocardiography machine, which was found only in 7% of district hospitals. The electrocardiography machine, which is an important equipment in the handling of the rising rates of NCDs. There is also low availability of glucometers which are used to test blood sugar in dispensaries and health centres at 42% within the public sector. Ultrasounds were only available at 39% of hospitals. The study indicated that the higher levels of healthcare may not provide the required diagnostics imaging services. Guided by the World Health Organisation (2013) Service Availability and Readiness Assessment survey for what type of equipment should be at available in hospital: averagely, provisional and national hospitals possessed 91% of the necessary equipment, 72% were found in district and sub-district hospitals while 84% were found kin private hospitals.

The Kenya Ministry of Medical Services and Ministry of Public Health and Sanitation (2010) suggests that each public sector level needs to possess, Access Bottlenecks, Costs and Equity study found out that. Majority of the facilities possessed at least 50% of the required pharmaceuticals. National and provincial hospitals had an average of 83%, district and sub-district at 74%, public health centres and private health centre at 65%. The private medical facilities were established to have a high level of disease specific capacity of services; this was especially evident in lower levels of medical care. On average, as was posited by the Institute for Health Metrics and Evaluation (2014), pubic dispensaries and health centres accounted for less than 30% of the required supplies to offer disease-specific services.

The public health sector in Kenya has grappled with several issues and challenges. The issues range from funding constraints, professional malpractices and poor administration. According to Barnes et al., (2010) a large Kenyan population seeks care

from NGO-owned and private hospitals. Moreover, the Institute for Health Metrics and Evaluation (2014) revealed that in Kenya, the highest percentage of patients spend less than one hour travelling to the medical facilities. 84% of HIV-patients spend less than one hour travelling to a medical facility. Waiting time to receive medical services deferred with respect to the facilities. The study indicated that approximately 90% of the patients received treatment within an hour in private hospitals, 71% reported the same wait time at public facilities. The patients targeted reported that they were satisfied with the healthcare services offered such as visit satisfaction and interaction with providers and staff. However, the facility characteristics received low rating such as spaciousness and wait time. However, facility cleanliness and privacy was rated highly.

Doubova and Cuevas (2018), reported that, for improved health outcomes, it should be considered that: the training and supply of healthcare providers is low in middle and low income socio demographic countries does not measure to increasing the demands and complexity of healthcare services. Previously, maternal and child healthcare and infectious diseases were a priority, however today NCDs have been added into the priority list.

The US Agency for International Development together with the Kenyan government, in a project dubbed FUNZOKenya are collaborating to strengthen Kenya's health worker education and training systems. The program has a budget of 40 million Dollars for the duration of 2012-2017. They have initiated public-private partnerships to increase available funding for health worker training and professional development. As of March, 2017, almost 16,000 health staff in the country had acquired up to date training in child, and maternal health, HIV, family planning and other critical areas of healthcare. The goal is to uplift Kenya's health system to WHO's recommendation of a minimum 23 skilled healthcare personnel per 10,000 individuals to attain UHC (Intrahealth International, 2017).

2.6 The clinical manifestation of disease and access to healthcare services among the ageing population

The Foundation for Health in ageing (2017), states that, the ageing population have special needs that complicates their medical care for geriatrics. More than 50% of adults

aged 65 years and above have more than three medical complications including high blood pressure or Alzheimer's disease, arthritis and diabetes. Example of the complexities in care is prescription of medicine. A drug meant to treat one disease may cause more complications, and taking multiple medication may result in mode side effects and medical challenges. Data from the World Health Organisation (2018) indicates that there are complex health states that occur in older ages known as geriatric syndromes. Often, they face challenges of multiple underlying factors including delirium, urinary inconsistencies, frailty, pressure ulcers and falls. Geriatric syndrome is a better factor of death than the number or presence of particular diseases. However, they are often ignored by traditional structures of healthcare systems and in epidemiological studies.

Across Eastern sub-Saharan Africa, NCDs are increasingly prominent especially in countries with higher economic development (Institute for Health Metrics and Evaluation and the International Centre for Humanitarian Affairs, 2016). According to Wandera et al. (2015), in Uganda, self-reported NCDs, illness severity and limitations of mobility were the key indicators of healthcare access over the last 30 days among the ageing population. Ageing population who reported to have NCDs including hypertension, diabetes and heart disease were likely to have healthcare access over the last one month. Further, Ezeh et al. (2006), found out that there was low healthcare service utilization among the elderly residing in the slums. Less than the people reported a disease in the 14 days preceding their household visits sough medical care services. The Institute for Health Metrics and Evaluation and the International Centre for Humanitarian Affairs (2016), reported that in Kenya, there is a growing burden of NCDs also known as chronic disease and related risks. The four major NCDs in Kenya are: cancer, diabetes, chronic respiratory disease and cardiovascular disease. In addition, these are the other significant NCDs: mental disorders, violence, eye and oral disease, congenital heart disease, low back pain. The related risk factors that contribute to development of NCDs are: poor diet, hypertension, high fasting blood glucose, high total cholesterol and physical inactivity. The NCDs rise is majorly because of changing lifestyles whereby there is high caloric intake, reduced physical activity and ageing population.

Data from the Global Disease Burden (2016) shows that during the time period 1990-2016, there was a significant shift of number of deaths of older people. A 178% increase in deaths was witnessed among adults aged 90-94 and 210% (95% UI 208-212) increase in deaths among the ageing population aged 95 years. There is a universal change with respect to the number of deaths of older people. Further data from the Institute for Health Metrics and Evaluation and the International Centre for Humanitarian Affairs (2016), shows that the overall health for Kenya as compared to Eastern sub-Saharan Africa has made remarkable progress. Rates of overall death and health loss are lower than the average of Eastern sub-Saharan Africa and many neighbouring countries.

A study conducted in 22 European countries by Gianino, Lenzi, Fantini, Ricciardi and Gianfranceo, (2017), set out to examine the particular systems of healthcare related with the decline in trends in amenable mortality during the period 2000-2014. Amenable mortality is defined as premature death resulting from different conditions that out not to have occurred if timely and effective healthcare was administered. The study revealed a decline in amenable mortality, although at different annual changes in the countries. Healthcare systems with private provision had reduced as amenable mortality declined over time. It appears that is an essential dimension in identifying varying patterns for mortality decline.

2.7 Theoretical framework

Access to health care and health seeking behaviour among the ageing population may be explained by the theory developed by Penchasky and Thomas, the concept of access. Access is the level of fit between a user and a service, the better the fit, the higher the chances for easy access. The optimization of access is dome by accounting for the various access dimensions including; affordability, availability, adequacy and acceptability in the design of the service, its implementation and evaluation. According to Penchasky and Thomas (1981), these dimensions are interconnected yet independent and each of the dimensions is essential to analyse the attainment of access.

The Health Belief Theory may be adopted to give an explanation to healthcare access and health seeking behaviour among the ageing population. It was introduces by Hochbaum, Rosenstock and Kegels who were social psychologists in the 1950s working

on public health services in the United States. The theory is adopted to explain and predict the behaviour and actions of people when their health suffers, or they are at risk of ill health. Different groups vary in their response and this is likely to impact on the decisions they make about their health. For instance, the belief by some older African Americans that breast cancer is caused by an injury to the breast may hinder their ability to seek medical care and go for screening if they have no history of an injury (Guidry, Matthews-Juarez, and Copeland, 2003).

The social theory of bureaucracy and its rationality and the predicament of institutionalising charismatic leadership can be used to explain how institutional characteristics influence access to healthcare among the ageing population. The German sociologist Max Weber developed this theory, which structures an organisation into a hierarchy and the members are governed by clearly defined rules. The theory is pertinent to understanding how bureaucracies are indifferent as they become impediments to implementation of global health programmes and how they influence Non-Governmental Organisations to falter after their founders depart (Kleinman, 2010).

2.8 Conceptual Framework

Andersen's original Behavioural model was first introduced in the late 1960's. Its goal is to facilitate an understanding of health services usage, to describe and measure access to equitable healthcare and hence facilitate the development of health policy to promote UHC. The model aims to determine the factors that result in the usage of healthcare services. With regards to the model, the healthcare services usage is identified using three distinct factors including; predisposing, enabling and need/health benefits factors. The predisposing characteristics/ independent variables are the demographic factors including gender and age; social structure factors such as occupation, education, ethnicity and culture. The enabling factors are such as: social networks, social interactions and health insurance. Health facilities and personnel need to be available where people work and live. In addition, people ought to possess the knowledge and means to accesses these services and use them. According to Anderson (1995) regular care source, health insurance, times of travel and waiting are important measures.

This study looked at the possible relationship between socio-economic factors, socio-cultural factors, institutional characteristics, nature and clinical manifestation of the disease and access to healthcare services among the ageing population.

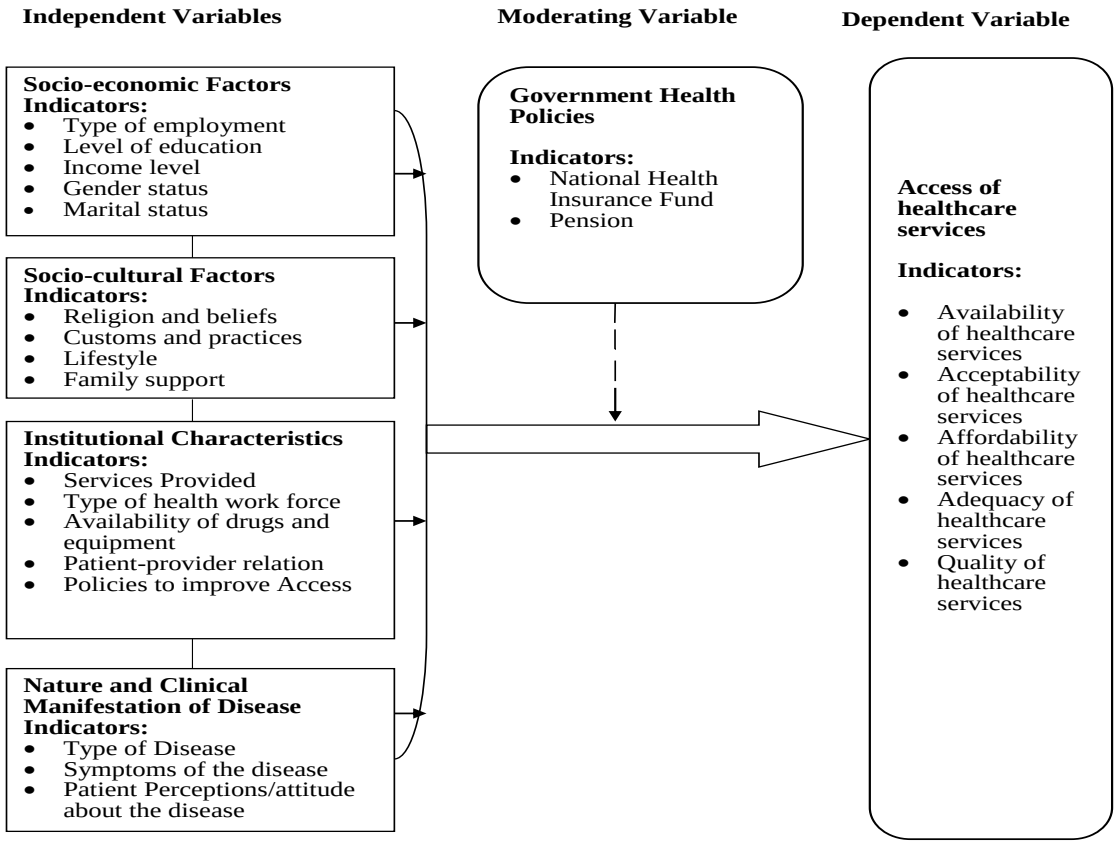


Figure 2.1 Conceptual Framework

Showing the association between socio-economic factors, socio-cultural factors, institutional characteristics, nature and clinical manifestation of the disease and access to healthcare services among the ageing population.

2.9 Gaps in literature reviewed

This table contains gaps in the literature that was reviewed. The gaps were based on the research objectives. The gaps were discussed based on previous research, findings and gaps identified from the previous research.

Table 2.1 A table showing Gaps in Literature Reviewed

Research Objectives	Previous Research: Author, Year and Area of study	Findings	Gaps
To determine the socioeconomic factors that influence access of healthcare services among the ageing population	Wandera S.O., Kwagala B., Ntozi, J., (2015). Factors of access to healthcare by older persons in Uganda: a cross-sectional study.	In the Ugandan context, socioeconomic factors such as status on household wealth and wages were the key factors of healthcare access over the last 30 days among the ageing population.	Determining healthcare gaps and gains at local levels because of characteristics that differentiate countries and also within the countries such as national health insurance schemes.
To establish how the socio-cultural factors, influence access of healthcare services among the ageing population	Kenya National Bureau of Statistics (KNBS) and World Health Organisation (WHO). (2015). Kenya STEPwise Survey for Non-communicable Disease and Risk Factors.	STEPs survey for NCD and risk factors revealed that approximately less than 25.9% of Kenyan citizens from the age of 45-69 practice a lifestyle where they are exposed to more than one risk factors for NCDs. The risk factors identified included consuming less than 5 servings of vegetables and fruits in a day, smoking, inadequate physical exercises, obesity and high blood pressure.	Up to date sociocultural factors that influence access to healthcare services, with a larger age gap 60 years old and above, among the ageing population.
To establish how the institutional characteristics influence access of healthcare services among the ageing population	Republic of Kenya, Ministry of Labour, Social Security and Services. (2014). National Policy on Older Persons and Ageing.	The Kenyan National Policy on Older Persons and Ageing goal is to facilitate the access and highest standard of healthcare for ageing population. The government in collaboration with relevant stakeholders shall: facilitate access to geriatrics health, review existing health sectors laws and policies to ensure they respond to the need of ageing population, decentralize and strengthen healthcare to ease access, expand and strengthen the family and society on the grounds of support systems of healthcare, incorporate gerontology and geriatrics studies and research in the training and education curricula and mobilize communities to ensure meaningful involvement and participation in management of their lifelong healthcare needs	Monitoring re-orientation and integration of health services to accommodate evolving needs of ageing population and the higher disease burden. And the education and specialization of doctors in geriatrics. More policies and programs targeted at the ageing population are needed to ensure they access healthcare services.
To determine how the clinical manifestation of disease influence access of healthcare services among the ageing population	Institute for Health Metrics and Evaluation (IHME) and the International Centre for Humanitarian Affairs. (2016). The Global Burden of Disease: Generating Burden of Disease: Generating Evidence, Guiding Policy in Kenya.	The NCDs in 2000 accounted for 19.4% of health loss across all genders and health ages in Kenya. By the year 2013, the rate had risen to 30% majorly because of increase in cerebrovascular disease (stroke) and ischemic heart disease. This emerging epidemic of NCDs and related risk factors may reverse Kenya's gains in the health sector, unless urgent and deliberate steps are taken.	Further assessment on the influence of the clinical manifestation of disease on access to healthcare services among the ageing population.

2.10 Summary of Literature Review

Achievement of Universal Health Coverage by 2030 and Kenya's Vision 2030- whose long-term objective is making Kenya to be healthier by 2030- is dependent on improving both access and quality of healthcare for all populations. There was need for bolstering public health programs, policy actions and investments that target the ageing population. Through advancing access on key health services especially on NCDs which are targeted by service quality across different aspects of healthcare.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter described the methods and materials used in determining factors that influence access of healthcare services among the ageing population. The aspects of research methodology described in this chapter were: research design, population and sampling of the study, data collection methods, reliability and validity tests as well as data analysis.

3.2 Research design

A descriptive, cross-sectional survey research design was used to undertake the study. It described the determining factors that affect access of healthcare services among the ageing population. Burns and Groove (2003) define descriptive research as a design that gives a picture of a situation just as it happens. This is in agreement to Gakuu, Kidombo and Keiyoro (2016), who state that descriptive cross sectional design describes the variables of the research. They further explain a cross sectional design as research gathers data from an entire population or a sample of the population at a particular time. Further, Gakuu et al. (2016), indicate that a survey is suitable to collect data in a descriptive research design. The survey research design had the potential of providing a lot of data that could help determine the factors that influence access to healthcare services among the ageing population. The study adopted a quantitative approach by administering structured questionnaires. The quantitative approach process was clear and there was precision of the data obtained.

3.3 Target population

A target population is a group of items and people from which research samples are obtained (Kombo & Tromp, 2006). This study targeted the ageing population. The target population were the patients attending AIC Kijabe Hospital, Kenya. The patients targeted were those who are aged 60 years and above, who are attending the outpatient clinics or admitted in the general wards.

The table below shows the number of patients, aged 60 years and above, who visited AIC Kijabe Hospital in the year 2017/2018. There was a total of 11,657 patients in the outpatient ward and 1,096 in the inpatient ward, totalling to 12,753.

Table 3.2 Target population

Departments	Outpatient		Inpatient	
	Male	Female	Male	Female
	5,675	5,982	140	956

3.4 Sample size

The sample size was calculated based on Fisher's et al. (1991). The estimated number of the target population was obtained from the sample frame, which was the patient record for all the patients ageing population (60 years and above) attending or admitted in the hospital on a day. Recommendations were as follows:

$n = Z^2 pq/d^2$

Where n= the desired sample size (assuming the population is greater than 10,000)

z=the standard normal deviation, set at 1.96, which corresponds to 95% confidence level

p= the proportion in the target population (ageing population aged 60 years and above) estimated to have a characteristic. If there is no reasonable estimate, then use 50 percent (the study will use 0.50).

q= 1-p (the proportion without characteristics)

d= level of statistical significance (degree of freedom = 0.05)

In substitution,

$n= 1.96^2 (0.5) (1-0.5)/ (0.05)^2$

n=384

The proposed sample size needed to be adjusted because of logistical and economic constraints.

Adjustment was calculated as below:

nf=n/(1+n/N)

Where nf = the adjusted sample size

n=the calculated sample size (384)

N= the population size, representing the number of patients attended at AIC Kijabe Hospital within the period of 1 year.

To substitute the formula:

nf=384/1+[{384/12753}]

From the calculation, the adjusted sample size, **nf, is 372**

3.5 Sampling Procedure

Simple random sampling was adopted to choose the ageing population (60 years and above) according to the calculated sample size. The sample was obtained from the sample frame, which was the patient record for all the patients, ageing population (60 years and above) attending or admitted in the hospital on a day. From the sample frame, the elements were numbered randomly to choose the required sample. Gakuu et al. (2016), state that a simple random technique ensures that all the targeted respondents have an equal chance of being included in the study. Every ageing population (60 years and above) attending AIC Kijabe Hospital had a chance to be sampled. This technique was relevant to the study and efficient to operate. It is statistically representative of the population.

3.6 Inclusion and Exclusion criteria

The Inclusion criteria was the ageing population (aged 60 years and above) who were attending AIC Kijabe Hospital.

The exclusion criteria were ageing population (aged 60 years and above) attending AIC Kijabe Hospital but they refused to consent to take part in the research or those who were very ill and admitted in the High Dependency Unit or the Intensive Care Unit. Also, patients with mental illness were excluded.

3.7 Data collection instrument

Questionnaires were researcher administered, to avoid misinterpretation of the questions by the respondents. The questionnaires had a letter of introduction that sought informed consent. The questions answered the objectives of the research and were divided into sections as per the objectives.

3.8 Pilot testing of the instruments

Piloting was done at Naivasha Medical Centre. 15 questionnaires were administered to patients aged 60 years and above attending the hospital that day. These questionnaires, were not included in the final survey. The aim was to ensure the reliability and accuracy of the questionnaires. The piloting of the study was used as an opportunity to train enumerators who were involved in the main survey.

The piloting of the instruments occurred in three stages: Before the pre-test (the researcher used themselves to gauge the tools); during the pre-test and after the pre-test. After the pre-test, appropriate corrections were made, to ensure reliability and validity of the questionnaires.

3.9 Validity of the instrument

Validity is the level to which the gathered data is able to assess what it intended to measure (Norland-Tilburg, 1990). Validity of the instrument was ensured using a well-designed questionnaire. To measure content validity a pilot test was conducted. The pilot test assessed any weaknesses that were present in the research instruments. The researcher corrected the weaknesses of the questionnaires and constructed the final questionnaire guide. Further, consultation with the research supervisors was conducted. The researcher corrected the questionnaires with respect to the suggestions by the expert opinion and academic supervisors

3.10 Reliability of the instrument

Reliability focusses on internal consistency of a measurement grounded on the method data collection and analysis of data (Gakuu ,Kidombo and Keiyoro , 2018). A pilot study was conducted to ensure the reliability of the research instruments. To assess reliability

of scales, Cronbach's Alpha reliability test was employed. The Cronbach's alpha ranges between Zero and One. The closer the co-efficient is to one, it implies that the research item has a greater internal consistency, while if the coefficient is closer Zero, it implies that the research item has a lesser internal consistency (Bolarinwa, 2015). For this study, the value of 0.7 was used as the cut-off point. Any value below 0.7 was rejected since it implies weak internal consistency. Moreover, the researcher ensured reliability by training research assistants who helped in the collection of data.

3.11 Data collection procedures

Data collection was conducted using researcher-administered questionnaires. The hospital administration's consent alongside the relevant government body (National Council for Science and Technology) permit was sought to facilitate field entry. A sampling frame, which is the patient record for all the patients (60 years and above) attending or admitted in the hospital on a day, was used to draw the sample population at the hospital. Piloting of the instruments was implemented before the main survey. After piloting, adjustments were made to the questionnaire.

Questionnaires administration to patients: the researcher had a one on one session with the ageing population attending AIC Kijabe Hospital. First, the researcher introduced themselves then sought consent from the respondents. On agreeing, the respondent was asked to answer questions as they follow each other on the questionnaire. The researcher clarified any questions when the need arose.

Questionnaire administration to Management: the researcher had a one on one session with a manager at AIC Kijabe Hospital and from Hospital Support Organisation. First, the researcher introduced themselves then sought consent from the respondents. On agreeing, the respondent was asked to answer questions as they follow each other on the questionnaire. The researcher clarified any questions when the need arose.

3.12 Data analysis techniques

The data gathered was cleaned, edited and coded to ensure completeness and consistency before analysis. Descriptive and inferential analysis techniques were used to analyse the data. The quantitative data from the researcher administered questionnaire

were analysed using the IBM SPSS vs 21.0 and Microsoft Excel. Descriptive analysis statistics were employed on the independent variables (socioeconomic factors, sociocultural factors, institutional characteristics and nature and clinical manifestation of disease) and the dependent variable (access of healthcare services). It involved: measures of frequency, central tendency and dispersion or variation and measure of poison (percentile/ quartile ranks).

Inferential statistics were employed to make conclusions or inferences. Through comparing means example T-test and cross tabulation, correlations to know about the relationship between the independent variables (socioeconomic factors, sociocultural factors, institutional characteristics and nature and clinical manifestation of disease) and dependent variable (access of healthcare services). The relationships were established at 95% confidence interval. Regression was done since it emphasizes on showing the relationship between the study variables. Visual presentations such as tables, frequency distribution was used to summarize, organize, simplify and interpret the collected data.

3.13 Dissemination of findings

The findings were shared through journal publications. There was a plan to publish at least three papers in peer reviewed journals. The selected journals were both local and international. The report would also be shared with health workers and policy makers (such as, hospitals, government agencies, health insurance groups, Ministry of Health and relevant Non-Governmental Organisations) through presentations in targeted workshops and conferences.

3.14 Ethical considerations

An approval to collect data was obtained from AIC Kijabe Hospital ethics research committee. In addition, the researcher obtained a research permit from Ministry of Education, Science and Technology.

These are the set rules, regulations and principles that guided this study to ensure ethical considerations are upheld. Informed consent was used to indicate the voluntary agreement of the respondents to take part in the study. Informed consent involved researchers providing enough information and assurances about taking part in the study

and implications of participation, to allow a respondent to reach a decision whether to participate or not without any pressure or coercion. Beneficence was upheld by ensuring that study participants were not harmed in any way. Respect for anonymity and confidentiality for the respondent was of paramount importance. Justice was maintained to research participants by avoiding deceptive practices or exaggeration about research goals. The respondents were also informed that the can withdraw from the study at any point they wish (Bryman and Bell, 2007).

The researcher administered questionnaire which took approximately 30 minutes to be completely filled. The researcher administered the questionnaire while the patient was waiting to be seen by a doctor or after they had seen the doctor. The process in no way interfered with the patient receiving treatment at the hospital.

3.15 Operational definition of the variables

This table contains the operational definition of the variables. The variables were derived from the study objectives. The indicators were deduced for each variable and their measurement scale, together with the method of data collection, instrument of data collection and their data analysis techniques outlined.

Table 3.3 Variables and their operational indicators

Objective/ Research Questions	Type of Variable	Indicators	Measurement Scale	Method of Data Collection	Instrument/ Data Collection Tools	Data Analysis Techniques
How do the socioeconomic factors influence access of healthcare services among the ageing population?	Socio-economic factors- Independent Variable Access of healthcare services - Dependent Variable	-Type of employment -Level of education -Income level -Gender status -Marital status.	-Nominal -Interval -Interval -Nominal -Nominal	Administering Questionnaire	Researcher administered questionnaire	Descriptive Statistics Inferential Statistics
Do the socio-cultural factors influence access of healthcare services among the ageing population?	Socio-cultural factors - Independent Variable Access of healthcare services - Dependent Variable	-Religion and beliefs -Customs and practices -Lifestyle -Family support.	-Nominal -Interval -Interval -Ratio	Administering Questionnaire	Researcher administered questionnaire	Descriptive Statistics Inferential Statistics
How do the institutional characteristics influence access of healthcare services among the ageing population?	Institutional characteristics -Independent Variable Access of healthcare services - Dependent Variable	-Services provided -Type of health work force -Availability of drugs and equipment -Patient-provider relation -Policies to improve access.	-Ordinal -Ordinal -Ordinal -Ordinal -Interval	Administering Questionnaire	Researcher administered questionnaire	Descriptive Statistics Inferential Statistics
Does the clinical manifestation of disease influence access of healthcare services among the ageing population?	Nature and clinical manifestation of disease - Independent Variable Access of healthcare services - Dependent Variable	-Type of disease -Symptoms of the disease -Patient perceptions/attitude about the disease.	-Nominal -Interval -Ordinal	Administering Questionnaire	Researcher administered questionnaire	Descriptive Statistics Inferential Statistics

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter contained the data analysis, presentation, interpretation and discussion on the factors of access to healthcare among the ageing population. The discussions were divided in the following major objectives that influence access of healthcare services among the ageing population: socioeconomic factors, sociocultural factors, institutional characteristics, nature, and clinical manifestation of the disease.

4.1.1 Questionnaire return rate

The sample size for this study was 372. The questionnaire return rate was 100% as 372 study participants were administered to questionnaires. However, some questionnaires were not complete as some participants were not able to answer all the required questions. The incomplete questionnaires were at 7%.

4.2 Characteristics of the respondents

Table 4.4 below provides the findings on the respondents' gender.

Table 4.4 A table showing distribution of the study population by sex

Gender	Frequency	Percentage frequency	Cumulative frequency
Male	177	47.58	47.58
Female	195	52.42	100
Total	372	100	

Of the 372 study participants 195 (52.4%) were female while 177 (47.6%) were male, thus the majority of the participants were females.

Further, the respondents were requested to indicate their age since different ages own different opinions on matters of access to health. Table 4.5 provides a summary results.

Table 4.5 A table showing distribution of the study population by age group

Age band in years	Frequency	Percentage frequency	Cumulative frequency
≤64 years	117	31.45	31.45
65-69 years	76	20.43	51.88
70-74 years	93	25.00	76.88
75-79	50	13.44	90.32
≥ 80	36	9.68	100

The age ranged from 60-96 years with a mean of 69.71 years, and mode of 64 years. The age of the study respondents was categorized into four age groups, 64 years and below, 65-69 years, 70-74 years, 75-79 and 80 years and above. Majority of the respondents were in the age group 64 years and below (31.4%) followed by the 70-74years age group (24.9%) and the least were those above 80 years (9.9%).

The table 4.6 below show the cross tabulation between the age categories and the sex of the respondents.

Table 4.6 Distribution of the study population by age group and sex

	Gender		
Age group	**Male**	**Female**	**Both sexes**
≤ 64 years	50	67	117
65-69 years	36	40	76
70-74 years	47	46	93
75-79 years	27	23	50
≥ 80 years	17	19	36
Total	177	195	372

The results reveals that the majority of the respondents who participated in this study were females below 64 years while the least group was men above 80 years of age.

4.3 Access of Healthcare Services among the Ageing Population

In a series of questions, the respondents were asked different questions with regards to access to healthcare services. Specifically, respondents were asked about: level of satisfaction with healthcare services; level of satisfaction with healthcare givers;

preference on where to seek treatment; distance of the nearest public health facility from their home and availability of special service for the elderly at health facilities.

Level of satisfaction with health services is an important factor in examining access to health care services. Patients were asked, to what extent were you satisfied with the healthcare services you received when you last visited a hospital? A majority of 48.39% were satisfied. Results are summarised in table 4.7

Table 4.7 level of satisfaction with the healthcare services

Extent to what you were satisfied with the healthcare services	**Frequency**	**Percentage frequency**
Very satisfied	82	22.04
Satisfied	180	48.39
Dissatisfied	51	13.71
Very Dissatisfied	27	7.26
Neither satisfied nor dissatisfied	32	8.60
Total	372	100

Level of satisfaction with health givers is an important factor in examining access to health care services. Patients were asked, in your view, to what extent were you satisfied with the way the healthcare givers attended to you the last time you visited a hospital? Results are outlined in table 4.8 a majority of 47.04% were satisfied.

Table 4.8 level of satisfaction with the healthcare givers

Extent to what you were satisfied with the healthcare givers	**Frequency**	**Percentage frequency**
Very satisfied	102	27.42
Satisfied	175	47.04
Dissatisfied	40	10.75
Very Dissatisfied	27	7.26
Neither satisfied nor dissatisfied	28	7.53
Total	372	100

Preference in mode of treatment is an important factor in examining access to health care services. Patients were asked when you are sick, where would do you prefer to seek treatment? A majority of 67.74% preferred mission hospitals. Results are outlined in table 4.9

Table 4.9 Preference on mode of treatment

Prefer to seek treatment	Frequency	Percentage frequency
Self-medication	4	1.08
Pharmacy/ Chemist	10	2.69
Health centre	27	7.26
District hospital	23	6.18
County/ referral hospital	13	3.49
Private clinic	7	1.88
Private hospital	36	9.68
Mission hospital	252	67.74
Total	372	100

Patients were asked for the reasons for their preference on mode of treatment when they are sick. Results are outlined in table 4.10 a majority of 55.65% gave the reason as availability of services. Followed by availability of health workforce at 22.04%. Thirdly, the distance from home at 11.56% and lastly cost of services at 9.95%.

Table 4.10 Reasons on preference of mode of treatment

Why would you seek treatment with the above provider?	Frequency	Percentage frequency	Cumulative frequency
Affordable cost of service	37	9.95	9.95
Availability of services	207	55.65	65.6
Availability of health workforce	82	22.04	87.64
Distance from home	43	11.56	99.2
Others specify	3	0.80	100
Total	372	100	

Availability of special services for the elderly is an important factor in examining access to health care services. One of the interviewees from the management team indicated that special services for the ageing population at the hospital were enough while the

other respondent indicated that special services for the ageing population at the hospital were minimal. However, both interviewees agreed on need to have improvement on the special services for the ageing population. Doctors specialised in geriatrics and education and training of caregivers in geriatric medicine were recommended. A respondent indicated that there was a geriatrics doctor at the hospital while one of the management leaders was not aware of any geriatrics doctor.

Patients were asked, in the last 3 months, how often when you visited a heath facility; did you find special services for the elderly people? A majority of 79.12% said they had found no special services. The results are outlined in table 4.11

Table 4.11 Availability of special services for the elderly at health facilities

In the last 3 months, how often when you visited a heath facility, did you find special services for the elderly people?	**Frequency**	**Percentage frequency**
None	288	79.12
Rarely	52	14.29
Regularly	24	6.59
Total	364	100

Distance and/or geographical accessibility of health services is an important factor in examining access to health care services. Patients were asked how far the nearest public health facility from your home is. Table 4.12 presents the percentage of patients and the nearest public health facility from their home. A majority of 48.1% have the nearest public health facility more than 5 kilometres from their home. 28.53% travels three to five kilometres to access the health care services, this could have discouraged many ageing people from attending to the health services.

Table 4.12 Distance from the Nearest Public Health Facility

Distance	**Frequency**	**Percentage frequency**
More than 5 kilometres	177	48.1
3-5 kilometres	105	28.53
1-2 kilometres	68	18.48
Less than a kilometre	18	4.89
Total	368	100

4.4 Socioeconomic Factors That Influence Access of Healthcare Services among the Ageing population

In a series of questions, the respondents were asked different questions about socioeconomic factors that influence access to healthcare services. Specifically, respondents were observed on gender and asked about: marital status; highest level of education completed; main work status and occupation over the past 12 months; monthly cash transfer from the government; average income in a month and registration with health insurance

Among the study participants 189 (52.2%) were female while 173 (47.7%) were male. Implying that more females were considered in this study. Chi-square analysis was conducted to establish if there existed a significant association between participant's gender and the level satisfaction to the healthcare services received. The finding indicated no statistically significant (χ^2 = 4.714, p=.318>0.05) association between gender and the level satisfaction. This implies that neither the ageing males nor females who are more satisfied than the other. Therefore, we can conclude that individual's sex does not affect the level of access to health services. Results are stipulated in table 4.13 below.

Table 4.13 Gender Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.714[a]	4	.318
Likelihood Ratio	4.751	4	.314
Linear-by-Linear Association	.849	1	.357
N of Valid Cases	362		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 12.43.

The age ranged from 60-96 years with a mean of 69.71 years, and mode of 64 years. The age of the study respondents was categorized into four age groups, 64 years and below, 65-69 years, 70-74 years, 75-79 and 80 years and above. Majority of the respondents were in the age group 64 years and below (31.4%) followed by the 70-74years age group (24.9%) and the least were those above 80 years (9.9%). Table 4.14 provides a summary.

Table 4.14 Distribution of the study population by age group

Age band in years	Frequency	Percentage frequency	Cumulative frequency
≤64 years	117	31.45	31.45
65-69 years	76	20.43	51.88
70-74 years	93	25.00	76.88
75-79	50	13.44	90.32
≥ 80	36	9.68	100

Further, inferential statistics was conducted to determine if participants' age different influenced access of healthcare services among the ageing population. Findings from the t-test indicated a significant ($t(351)=174.345$, $p=.000<0.05$) relationship between the age and the level of satisfaction to the healthcare services accessed (see table 4.15).

Table 4.15 Age Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	
Pair 1	Age - Healthcare access	66.107	7.11403	.3791	65.3622	66.8537	174.34	351	.000

Further, Pearson correlation was conducted and revealed a weak significant correlation ($corr=.222$, $p=000<0.05$) between age and the healthcare access. This implied that the more ageing an individual is, the more satisfied is with the healthcare services received. Hence can conclude that individuals' age influences access of healthcare services among the ageing population.

Table 4.16 Age and level of healthcare Satisfaction Correlations

		Age	Healthcare_access
Age	Pearson Correlation	1	.222**
	Sig. (2-tailed)		.000
	N	353	352
Healthcare access	Pearson Correlation	.222**	1
	Sig. (2-tailed)	.000	
	N	352	373

**. Correlation is significant at the 0.01 level (2-tailed).

Marital status is the personal status of each individual in relation to the marriage laws or customs of a country and it is indeed a very important socioeconomic factor. A question regarding marital status was included in the study. Table 4.17 presents the marital status of the respondents in percentages. Of the 370 respondents 218 (58.9%) were married, followed by 116 (31.35%) who were widowed. It was apparent that the married individuals were the majority.

Table 4.17 Marital Status of the Study Participants

Marital status	**Frequency**	**Percentage frequency**
Single	13	3.51
Currently married	218	58.92
Separated	12	3.24
Divorced	9	2.43
Widowed	116	31.35
Declined to answer	2	0.54
Total	370	100

Chi-square analysis was conducted to establish whether marital status influenced access of healthcare services among the ageing population. A significance association (χ^2 = 37.965, p=.009<0.05) was established between the marital status and healthcare access. This implied that different individual's marital status influenced healthcare services access differently. It was noted that those who were currently in marriage were highly satisfied with the healthcare services than those separated.

Table 4.18 Chi-Square Tests for marital status

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	37.965[a]	20	.009
Likelihood Ratio	37.321	20	.011
Linear-by-Linear Association	.022	1	.881
N of Valid Cases	369		

a. 18 cells (60.0%) have expected count less than 5. The minimum expected count is .14.

Table 4.19 presents the education status of the respondents in percentages. Of the 368 respondents about a quarter (26.63%) and (26.09 %) had some primary and completed primary school respectively. Only 8.42 % of the study participants were reported to have completed college. Further, Spearman's correlation analysis shown a weak significance relationship (Corr = .354, p=.017<0.005) between level of education and healthcare services Access. This implies that the healthcare services accessed by an individual can be determined by the individual's level of education.

Table 4.19 Education level of the study participants

Education level	**Frequency**	**Percentage frequency**
No formal schooling	62	16.85
Some Primary school	98	26.63
Completed Primary School	96	26.09
Some Secondary school	34	9.24
Completed Secondary school	40	10.87
Some College level	7	1.9
Completed College level	31	8.42
Total	368	100

Table 4.20 presents results of the occupation of the study participants. Approximately a third (35.69 %) of the study participants are self-employed, followed by the Housewife/house husbands (17.9%) and the least were those in professional/mangers (0.5%).

Table 4.20 Work Status

Occupation	**Frequency**	**Percentage frequency**
Government employee	6	1.63
Self-employed/ Business	131	35.69
Professional/ managerial	2	0.54
Housewife/house husband	66	17.98
Retired with pension	43	11.72
Retired without pension	27	7.36
Unemployed	24	6.54
Unable to work	66	17.98
Declined to answer	2	0.54
Total	367	100

A question regarding cash transfer from the government to the ageing population over 70 years old was included in the questionnaire. Slightly more than half of the respondents 51.72% (90) did not receive the cash transfer, only 48.28% (84) indicated to

have received the monthly cash transfer from the government. Independent t-test was conducted to establish if there was statistical mean difference between those received monthly cash transfer and those did not receive

Table 4.21 Cash transfer Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Healthcare access	Equal variances assumed	25.620	.000	4.130	364	.000
	Equal variances not assumed			4.831	180.711	.000

Results in the table 4.21, indicated a statistical and significant means difference ($t(364)=4.13$, $p=.000<0.005$) between participants who received monthly cash transfer and those did not. A mean of 4.0952 was registered to those who had cash transfer while those did not receive cash transfer had a mean of 3.5071, this was statistically significant. The finding implies that Cash transfer has a high influence to the healthcare services access. Participants who received cash transfer were more satisfied with the healthcare services accessed.

Table 4.22 shows the income of the study participants, specifically they were asked to specify the amount they earn and were given various ranges to select from. A majority (74.79 %) of the respondents in the study were reported to be earning less than 10,000 per month, whereas only two respondents (1.56%) were reported to be earning more than 65,000.

Table 4.22 Monthly Income of the Study Participants

Amount earned	**Frequency**	**Percentage frequency**
Less than 10,000	270	74.79
10,000-24,999	76	21.05
25,000-39,999	6	1.66
40,000-64,999	7	1.94
65,000-79,999	1	0.28
80,000-99,999	1	0.28
Total	361	100

Chi-square analysis was further conducted to establish whether monthly income level influenced access to healthcare services among the ageing population. The results indicated a significance association (χ^2 = 36.784[a], p=.001<0.05) between the monthly income and healthcare access. This implied that different individual's monthly income has a great influence on healthcare services access. Therefore, the level of individual satisfaction on healthcare services access is determined by the income one earn. Results are shown in table 4.23 below.

Table 4.23 Chi-Square Tests on Income

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	36.784[a]	16	.001
Likelihood Ratio	35.534	16	.021
Linear-by-Linear Association	14.132	1	.006
N of Valid Cases	360		

Having health insurance is important for several reasons. Uninsured people receive less medical care and less timely care, they have worse health outcomes, and lack of insurance is a fiscal burden for them and their families. Respondents were asked about their registration status with NHIF or any other health insurance. Table 4.24 presents the proportion of the respondents' insurance registration status. Overall it is evident that a majority (71.2%) of the respondents used NHIF which they paid for themselves.

Table 4.24 Registration Status with NHIF or any Other Health Insurance

Registration status	**Frequency**	**Percentage frequency**
Private Insurance company	32	8.7
NHIF paid by self	262	71.2
NHIF sponsored by government	37	10.05
None	37	10.05
Total	368	100

From, the T-test analysis there was a statistical significance difference (t (364) =4.327, p=.023<0.005) between participants who were registered with NHIF or any other health

insurance and those who were not registered. This implies that being registered with NHIF or any other health insurance does not influence healthcare services access.

4.5 Socio-Cultural Factors That Influence Access of Healthcare Services among the Ageing population

In a series of questions, the respondents were asked different questions with regards to socio-cultural factors that influence access of healthcare services among the ageing population. Specifically, respondents were asked about: religion; number of children;, who they live with; level of satisfaction from family support; where they normally seek treatment when sick; who advices them where to seek treatment; who pays for their medical bills; lack of healthcare services due to financial constraints and what gender of healthcare giver they prefer to attend to them.

Table 4.25 presents the religion status of the respondents in percentages. Majority of the respondents (55.43%) were Protestants followed by the Catholics (37.5%) and the least were African-traditional churches (1.09%). Further, finding indicated that there was no statistically significant (χ^2 = 7.141, p=.377>0.05) association between participants' religion and the level satisfaction with the healthcare provided. Therefore, we can conclude that individual's religion does not influence the level of access to healthcare services.

Table 4.25 Participants' Religion

Religion	Frequency	Percentage frequency
Catholic	138	37.5
Protestant	204	55.43
African-traditional churches	4	1.09
Muslim	18	4.89
Others specify	4	1.09
Total	368	100

The respondents were requested to indicate the number of children they had. On average, most respondents had five (5) living children, with the highest household having 17 children. In addition, it was noted that some of the respondents interviewed

had no living child. Further, the respondents were requested to indicate whom they lived with. From the analysis, slightly more than half at 53.61% lived with their spouse, followed by 31.67% who live with their children. This was investigated since living support is an important factor when determining access to healthcare services. The results are outlined in table 4.26 below.

Table 4.26 People living among Respondent

Whom do you live with?	**Frequency**	**Percentage frequency**
Alone	32	8.89
My spouse	193	53.61
My children	114	31.67
Extended family	13	3.61
Others specify	8	2.22
Total	360	100

Chi-square analysis was conducted to establish whether the people living with ageing population had influence on their access to healthcare services. The finding indicated a statistically significant ($\chi^2 = 26.193$, $p=.032<0.05$) association between the people living with ageing population and the level satisfaction with the healthcare provided. Therefore, we can conclude that the people living with ageing population have influence the level of access to healthcare services.

Family support is an important factor when determining access to healthcare services. The respondents were asked how satisfied they were with the support they were receiving from their family. A majority of 65.75% responded to very satisfied, followed by 30.68% who were satisfied and a tie of 0.27% who were dissatisfied and very dissatisfied. Table 4.27 outlines the results

Table 4.27 Level of satisfaction from Family Members

How satisfied are you with the support you get from your family?	**Frequency**	**Percentage frequency**
Very satisfied	240	65.75
Satisfied	112	30.68
Dissatisfied	1	0.27
Very Dissatisfied	1	0.27
Neither satisfied nor dissatisfied	11	3.01
Total	365	100

Pearson correlation was conducted to determine whether those who get enough support from their family accessed best healthcare care services. The results indicated a significant correlation (Corr = .286, p=.000<0.05) between support from family and healthcare access. This implies that an increase in support the ageing population get from their family leads to increase on access to healthcare services. Table 4.28 below shows the results.

Table 4.28 Correlations between level of satisfaction and Family support

		Access healthcare	Support from home
Access healthcare	Pearson Correlation	1	.286
	Sig. (2-tailed)		.000
	N	373	362
Support from home	Pearson Correlation	.286	1
	Sig. (2-tailed)	.000	
	N	362	363

Table 4.29 shows the preferred healthcare provider as chosen by the study respondents. More than half of the respondents (50.68%) chose mission hospitals as their preferred healthcare providers followed by the (10.08%) who chose health centre as their preferred healthcare provider and the least were those who attended private clinics (1.09%).

Table 4.29 Preferred healthcare provider

Preferred healthcare provider	Frequency	Percentage frequency
Self-medication	6	1.63
Pharmacy/ Chemist	26	7.08
Herbal/ alternative therapy	6	1.63
Health centre	59	16.08
District hospital	37	10.08
County/ referral hospital	11	3
Private clinic	4	1.09
Private hospital	32	8.72
Mission hospital	186	50.68
Total	367	100

Table 4.30 presents the proportion of the different individuals who gave advice to the respondents on where to seek health care services. Overall, it is evident that a majority (75%) of the respondents did not obtain advice from anyone on where to seek healthcare services but rather it was their own choice.

Table 4.30 Healthcare services advisers

Person	Frequency	Percentage frequency
Self	276	75
Spouse	17	4.62
Children	72	19.57
Others specify	3	0.82
Total	368	100

Chi-square analysis was conducted to establish whether ageing population advisers has influence on access of healthcare services among the ageing population. A significance association (χ^2 = 17.350, p=.037<0.05) was established between the advisers to seek medical services and healthcare services access. This implied that different ageing advisers to seek medical services influences healthcare services access. It was noted that those who were advised by children had high access to healthcare services, followed by spouse and self-advisers. Table 4.31 shows the results.

Table 4.31 Healthcare services advisers Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.350[a]	12	.037
Likelihood Ratio	22.811	12	.029
Linear-by-Linear Association	3.233	1	.072
N of Valid Cases	367		

a. 10 cells (50.0%) have expected count less than 5. The minimum expected count is .20.

Table 4.32 presents results of the bill payment as reported by the study participants. A majority (42.9%) of the respondents reported that their children catered for their medical bills, while only (2.9%) reported that their bills were paid by NHIF sponsored by government

Table 4.32 Who Pays respondent's medical bills

Who pays the respondent's medical bills	**Frequency**	**Percentage frequency**
Self	106	28.96
Spouse	36	9.84
Children	157	42.9
Private Insurance company	28	7.65
NHIF paid by self	22	6.01
NHIF sponsored by government	8	2.19
Others	9	2.46
Total	366	100

Chi-square analysis was conducted to establish if there existed a significant association between persons who pay respondents medical bill and the level satisfaction to the healthcare services received. The finding indicated a statistically significant ($\chi^2 = 45.943$, $p=.000<0.05$) association between person who pays medical bill and the level of access. Therefore, we can conclude that the persons' who pay medical bill for the ageing influences the level of access to health services. Persons who used NHIF and insurance cards to pay their bills highly accessed healthcare services than the others.

Overall, it is evident that a majority (83%) of the respondents were able to access medical services and did not experience any financial constrain in the last three months preceding the survey (Table 4.33).

Table 4.33 Inability to seek medical care

Inability to seek medical care	Frequency	Percentage frequency
On a daily basis	1	0.28
On a weekly basis	3	0.84
On a monthly basis	56	15.6
None at all	298	83.01
All the time	1	0.28
Total	359	100

Table 4.34 shows the preferred gender of healthcare giver as reported by the study participants. Majority of the respondents (83.7%) were okay with any gender attending to them. While only 3.59 % preferred to attend by a health care giver of the opposite sex.

Table 4.34 Preferred Gender of Healthcare Giver

Preferred gender	Frequency	Percentage frequency
Any	303	83.7
Same sex	45	12.43
Different sex	13	3.59
Others specify	1	0.28
Total	362	100

4.6 Institutional Characteristics that Influence Access of Healthcare Services among the Ageing population

In a series of questions, the respondents were asked different questions with regards to institutional characteristics that influence access of healthcare services among the ageing population. Specifically, respondents were asked about: the availability of diagnostic equipment; the availability of drugs; availability of means of transport to the hospital; length of stay with healthcare provider; the facility's waiting time and county of residence.

According to the management team interviewees, the hospital had sufficient quantity of diagnostic equipment; however, the interviewees recommended addition of more Imaging equipment (MRI, CT Scanners, ultrasound and x-ray). Also, despite the quantity of availability of prescription medicine at the hospital being sufficient, the respondents further recommended for improvement on the quantity of availability of prescription medicine. The interviewees from the hospital management team indicated that the quality of the healthcare services offered at the hospital was good; however, there was a need to improve on Emergency, Laboratory and Radiology Services. Further, the respondents indicated that the quality of the healthcare givers attending at the hospital was good and improvement was needed in provision of up to date Knowledge and skills. They indicated that access to internet, training from professional institutions, in-service training courses and scholarships were the opportunities available in the country for health workers to keep their knowledge and skills up-to-date and all the respondents agreed on need to improve the continuing education of healthcare givers in the country.

The respondents were asked if they had ever missed treatment due to lack of diagnostic equipment. Overall majority of the respondents 70.36% (254) reported not to have missed treatment at the facilities due to lack of diagnostic equipment. 18.01% (65) rarely missed treatment due to lack of diagnostic equipment while 11.63% (42) regularly missed treatment due to lack of diagnostic equipment. Further, due to importance of the availability of drugs when determining access of healthcare services. The respondents were asked if they had ever missed treatment due to lack of drugs. Overall majority of the respondents (60.94%) reported not to have missed treatment at the health facilities due to lack of drugs. 17.73% reported that they were regularly not treated due to lack of drugs as shown in the Table 4.35.

Table 4.35 Number not treated due to lack of drugs

Number not treated due to lack of drugs	Frequency	Percentage frequency
None	220	60.94
Rarely	75	20.78
Regularly	64	17.73
Invalid	2	0.55
Total	361	100

Further, chi-square analysis was conducted to establish whether lack of diagnostic equipment in hospital had any effect on access of healthcare services among the ageing population. A significance association (χ^2 = 37.841[a], p=.000<0.05) was established which implied that availability of diagnostic equipment had influence on healthcare services access. Similarly, availability of drugs in hospital was found to significantly influence access of healthcare services among the ageing population (χ^2 = 52.992[a], p=.000<0.05). Results are shown in table 4.36 below.

Table 4.36 Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	52.992[a]	12	.000
Likelihood Ratio	42.308	12	.000
Linear-by-Linear Association	25.238	1	.000
N of Valid Cases	360		

a. 6 cells (30.0%) have expected count less than 5. The minimum expected count is .14.

Availability of means of transport is an important factor when assessing access to healthcare services. The respondents were asked, how often they had been unable to visit a healthcare facility due to lack of a means of transport. A majority of 88.8% said none at all. The results are outlined in table 4.37.

Table 4.37 Need of Healthcare Services But Unable To Visit

In the last 3 months, how often have you been in need of healthcare services but have been unable to visit a healthcare facility due to lack of a means of transport?	**Frequency**	**Percentage frequency**
On a daily basis	2	0.56
On a weekly basis	3	0.84
On a monthly basis	35	9.8
None at all	317	88.8
Total	357	100

The management team interviewees rated the length of time that patients spend with a healthcare provider at the hospital and the length of time that patients have to wait to see a healthcare provider as poor. Time spent with a healthcare provider or at the hospital is an important factor when determining access to healthcare services. The respondents were asked to rate the length of time they spent with a healthcare provider. 39.23% rated it as very good and 28.18% as good compared to 0.55% who rated the time as very poor and 9.94% as poor. The results are outlined in table 4.38. Further, chi-square results revealed a significance association ($\chi^2 = 125.125$, $p=.000<0.05$) between time spent with a health care provider and healthcare services access. This implied that time spent with a health care provider influences healthcare services access.

Table 4.38 Time Spent with a Health Care Provider

On a scale of 1-5, how would you rate the length of time that you spent with a healthcare provider?	**Frequency**	**Percentage frequency**
Very Good	142	39.23
Good	102	28.18
Okay	80	22.1
Poor	36	9.94
Very Poor	2	0.55
Total	362	100

The respondents were asked to rate the facilities waiting time this is with regards to the time of arrival at the health facility to the time they received their service. Majority (41.71%) rated the waiting as okay. While 20.17% and 8.29% rated the waiting time as good and very good respectively. 29% expressed dissatisfaction with the waiting time. Table 4.39 shows the results.

Table 4.39 Waiting time at the facility

Waiting time	**Frequency**	**Percentage frequency**
Very Good	30	8.29
Good	73	20.17
Okay	151	41.71
Poor	80	22.1
Poor	28	7.73
Total	362	100

Further, chi-square results revealed a significance association (χ^2 = 117.489, p=.000<0.05) between waiting time and healthcare services access. This implied that time spent waiting influences healthcare services access.

Table 4.40 Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	117.489[a]	16	.000
Likelihood Ratio	99.631	16	.000
Linear-by-Linear Association	42.528	1	.000
N of Valid Cases	361		

a. 6 cells (24.0%) have expected count less than 5. The minimum expected count is 1.94.

The respondents were asked their county of residence. The majority of them at 40.5% resided in Kiambu County where Kijabe hospital is found. Followed by 16.53% from the neighboring Nakuru County. The results are outlined in table 4.41

Table 4.41 County of Residence

Where do you live?	Frequency	Percentage frequency
Nairobi County	28	7.71
Kiambu County	147	40.5
Nakuru County	60	16.53
Kajiado County	18	4.96
Narok County	11	3.03
Nyandarua County	34	9.37
Nakuru County	5	1.38
Machakos County	13	3.58
Other (Specify)	47	12.95
Total	363	100

4.7 The Influence of the clinical Manifestation of Disease on Access of Healthcare Services among the Ageing population

In a series of questions, the respondents were asked different questions with regards to the influence of the clinical manifestation of disease on access of healthcare services among the ageing population. Specifically, they were asked: frequency of illness in the last three months; reason for seeking treatment when sick; yearly checkups; presence of chronic condition; treatment of the chronic condition and general health status in the past three months.

The respondents were asked their frequency of illness leading to medical attention in the past 3 months. Nearly half of them (49.44%) was at a monthly basis while 48.32% were not sick. Table 4.42 shows the results.

Table 4.42 Sick and Need of Medical attention

In the last 3 months, how frequent were you sick and in need of medical attention?	Frequency	Percentage frequency
Daily	4	1.12
On a weekly basis	4	1.12
On a monthly basis	177	49.44
None at all	173	48.32
Total	358	100

The respondents were asked if they had received medical checkup, when not sick, in the last one year. A majority of 82.37% had not had medical checkup when not sick. The findings are shown in table 4.43 below.

Table 4.43 Routine medical check up

In the last one year, how often did you go for medical check-up even when you were not sick?	**Frequency**	**Percentage frequency**
On a monthly basis	13	3.76
On a yearly basis	48	13.87
None at all	285	82.37
Total	346	100

The health status of individuals is an important factor in determining access to health care services. The respondents were asked how they would rate their health in the last three months. Slightly more than half at 53.87% rated it as good and 30.37% rated their health as neither poor nor good. Table 4.44 outlines the results.

Table 4.44 Health status

Overall, in the last 3 months, how would you rate your health?	**Frequency**	**Percentage frequency**
Very good	29	8.31
Good	188	53.87
Poor	23	6.59
Very poor	3	0.86
Neither poor nor good	106	30.37
Total	349	100

Further, a chi-square analysis was conducted to establish whether individual's health status influenced access of the healthcare services. The results revealed a significance association ($\chi^2 = 31.492$, $p=.012<0.05$) between individual's health status and access of the healthcare services as shown in table 4.45

Table 4.45 Chi-Square Tests Health status

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	31.492[a]	16	.012
Likelihood Ratio	34.158	16	.005
Linear-by-Linear Association	5.877	1	.015
N of Valid Cases	349		

a. 12 cells (48.0%) have expected count less than 5. The minimum expected count is .21.

The reason for seeking treatment is an important factor in examining access of healthcare services. The respondents were asked what prompts them to seek treatment when they are sick. Majority answered symptoms of illness (38.86%) and seriousness of the illness (38.57%). Table 4.46 outlines the results. Detailed chi-square analysis revealed no relationship between participants' reasons for seeking treatment and healthcare services access (χ^2 = 13.435, p=.641<0.05). This implies that the reason for seeking treatment in hospital does influence healthcare services access.

Table 4.46 Reason for seeking treatment

When you are sick, what prompts that you seek medical attention?	**Frequency**	**Percentage frequency**
Symptoms of illness	136	38.86
Frequency of illness	27	7.71
Seriousness of the illness	135	38.57
Previous experience with the illness	50	14.29
Others specify	2	0.57
Total	350	100

How much time was spent waiting while receiving outpatient services at the hospital, was one of the questions asked to the respondents. Slightly more than half at 53.28% reported 4-6 hours followed by 37.12% at 3 hours and below. The results are outlined in table 4.47

Table 4.47 Waiting time at the hospital

On average, how much time is spent waiting while receiving outpatient services at the hospital?	Frequency	Percentage frequency
3 hours and below	85	37.12
4-6 hours	122	53.28
7-9 hours	21	9.17
Above 10 hours	1	0.44
Total	229	100

Presence of a chronic condition in a patient is an important factor in determining access to health care services. The respondents were asked if they had ever been diagnosed with a chronic condition. Overall majority of the respondents (80.85%) reported that they had a chronic condition. Only 19.95% reported that they did not suffer from any chronic illness. The results are outlined in table 4.48.

Table 4.48 Diagnosed with a chronic condition

Diagnosed with a chronic condition	Frequency	Percentage frequency
Yes	287	80.85
No	68	19.15
Total	355	100

Further, a chi-square analysis was conducted to establish whether individuals diagnosed with a chronic condition influences access of the healthcare services. The results revealed a significance association (χ^2 = 12.372, p=.000<0.05) between the variables which implies that being diagnosed with chronic condition influences access of the healthcare services.

Among the respondents who reported to have been suffering from a chronic condition they were asked to specify the chronic condition they were suffering from. More than half of the respondents (53.82%) reported that they were suffering from diabetes, followed by 21.18% who reported that they were suffering from cancer. Other illnesses reported by the respondents included arthritis (10.42%), Hypertension (8.68%), vision loss (1.74%) among others. Table 4.49 outlines the results

Table 4.49 Specific chronic condition suffered

Specific chronic condition	Frequency	Percentage frequency
Diabetes	155	53.82
Hypertension	25	8.68
Cardiovascular	6	2.08
Arthritis	30	10.42
Cancer	61	21.18
Hearing loss	1	0.35
Vision loss	5	1.74
Others specify	5	1.74
Total	288	100

Among the respondents who reported to have been suffering from a chronic condition they were further asked to specify the duration of the chronic condition they were suffering from. 31.64% of the respondents reported that they had the chronic condition for over 10 years, followed by those who suffered for between 1-3 years (26.55%), the least were those who suffered for less than 1 year (9.82%). Table outlines the results

Table 4.50 Duration of the chronic illness

Duration of condition	Frequency	Percentage frequency
below 1 year	27	9.82
between 1-3 years	73	26.55
between 4-6 years	60	21.82
between 7-9 years	28	10.18
Above 10 years	87	31.64
Total	275	100

Among the respondents who reported to have been suffering from a chronic condition, they were further asked whether they were currently receiving treatment. Almost all (98.96%) reported that they were receiving medication. The results are outlined in table 4.51.

Table 4.51 Treatment for the chronic condition

Currently receiving treatment	Frequency	Percentage frequency
Yes	285	98.96
No	3	1.04
Total	288	100

Further, a chi-square analysis was conducted to establish whether individual's currently receiving treatment influenced access of the healthcare services. Results are as shown in table 4.52 below

Table 4.52 Treatment for the chronic condition

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.501[a]	4	.021
Likelihood Ratio	7.012	4	.135
Linear-by-Linear Association	.176	1	.674
N of Valid Cases	288		

a. 12 cells (48.0%) have expected count less than 5. The minimum expected count is .21.

The results revealed a significance association (χ^2 = 11.501, p=.021<0.05) between the variables.

CHAPTER FIVE
SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of key findings made by the study, discussions of the findings, conclusions drawn from the study, and recommendations proposed by the researcher. The conclusions and recommendations are focused on addressing the main objective of the study. This chapter also discusses suggested areas for further research.

5.2 Summary of the Findings

A majority of 48.39% were satisfied with healthcare services they received when they last visited a hospital. A majority of 47.04% were satisfied with the way the healthcare givers attended to them the last time they visited a hospital. A majority of 67.74% preferred to attend mission hospitals when they are sick. The reason for the preference on mode of treatment was given as: a majority of 55.65% gave the reason as availability of services. Followed by availability of health workforce at 22.04%. Thirdly, the distance from home at 11.56% and lastly cost of services at 9.95%. A majority of 79.12% said they had found no special services for the elderly in the last 3 months when they visited a health facility. A majority of 48.1% have the nearest public health facility more than 5 kilometres from their home. 28.53% travels three to five kilometres to access the health care services.

Among the study participants 189 (52.2%) were female while 173 (47.7%) were male. Implying that more females were considered in this study.

Findings from this study revealed a weak significant relationship at 95% confidence interval between the age and the level of satisfaction to the healthcare services. This implied that the more ageing an individual is, the more satisfied is with the healthcare services received. Hence an individuals' age influences access of healthcare services among the ageing population. A significance association was also established between the marital status and healthcare access. This implied that different individuals' marital status influenced healthcare services access differently. It was noted that those who were

currently in marriage were highly satisfied with the healthcare services than those separated. Further a statistical and significant means difference between participants who received monthly cash transfer and those did not receive cash transfer was established. The finding implied that those who receive cash transfer had a high influence to the healthcare services access.

The study revealed a significant relationship between level of education and healthcare services Access. This implied that the healthcare services accessed by an individual could be determined by the individual's level of education. The results indicated a significance association between the monthly income and healthcare access, which implied that different individual's monthly income, influenced healthcare services access. Therefore, the level of individual access on healthcare services can be determined by the income one earn. From, the T-test analysis there was statistical significance difference between participants who were registered with NHIF or any other health insurance and those who were not registered. This implies that being registered with NHIF or any other health insurance influences healthcare services access. However, the study established that there was no statistically significant association at 95% confidence level between gender and the level satisfaction, hence an individual's gender does not affect the level of access to health service.

Pearson correlation was conducted to determine whether those get enough support from their family accessed best healthcare care services. The results indicated a weak positive correlation between the variables. This implies that the level of support the ageing population get from their family can determine their level of access to healthcare services. A significance association was established between the advisers to seek medical services and healthcare services access. This implied that different ageing advisers to seek medical services influences healthcare services access. It was noted that those who were advised by children had high access to healthcare services, followed by spouse and self-advisers. Further, a majority of the respondents (83.7%) were okay with any gender attending to them. While only 3.59 % preferred to attend by a health care giver of the opposite sex.A statistically significant association at 95% confidence interval was established between the people living with ageing population and access of

healthcare services hence people living with ageing population influence their level of access to healthcare services. This study conducted a chi-square analysis to establish if there existed a significant association between persons who pay respondents medical bill and the level satisfaction to the healthcare services received. The finding indicated a statistically significant association between person who pays medical bill and the level of access. Therefore, the persons' who pay medical bill for the ageing population influences the level of access to health services.

However, finding in this study indicated that there was no statistically significant association at 95% confidence level between participants' religion and the level satisfaction with the healthcare provided. Therefore, individual's religion does not influence the level of access to healthcare services.

This study establishes a significance association between lack of diagnostic equipment in hospital and access of healthcare services among the ageing population which implied that availability of diagnostic equipment had influence on healthcare services access. Similarly, availability of drugs in hospital was found to significantly influence access of healthcare services among the ageing population.

Availability of means of transport is an important factor when assessing access to healthcare services, majority of the respondents had no challenge of transport. The majority of them at 40.5% resided in Kiambu County where Kijabe hospital is found. Followed by 16.53% from the neighbouring Nakuru County. Further, chi-square results revealed a significance association between time spent with a health care provider and healthcare services access. This implied that time spent with a health care provider influences healthcare services access. The study also revealed a significance association between waiting time and healthcare services access. This implied that time spent waiting influences healthcare services access. Most people indicated they spent 4-6 hours waiting while receiving outpatient services at the hospital.

The study established that nearly half of the participants had illness leading to medical attention on monthly basis. The reason for seeking treatment was an important factor in examining access of healthcare services. Detailed analysis revealed no relationship

between participants' reasons for seeking treatment and healthcare services access, which implied that the reason for seeking treatment in hospital does influence healthcare services access. Majority of respondents were noted not to have received any medical checkup, when not sick, despite the health status of individuals being an important factor in determining access to health care services. The results further revealed a significance association between individual's health status and access of the healthcare services.

Further, a chi-square analysis was conducted to establish whether individuals diagnosed with a chronic condition influences access of the healthcare services. The results revealed a significance association between the variables which implies that being diagnosed with chronic condition influences access of the healthcare services. Among the respondents who reported to have been suffering from a chronic condition they were asked to specify the chronic condition they were suffering from. More than half of the respondents reported that they were suffering from diabetes, followed by those who reported that they were suffering from cancer. Other illnesses reported by the respondents included arthritis, Hypertension and vision loss. Further, a chi-square analysis was conducted to establish whether individual's currently receiving treatment influenced access of the healthcare services. The results revealed a significance association between the variables.

5.3 Discussions of the findings

Access to health care and health seeking behaviour among the ageing population may be explained by the theory developed by Penchasky and Thomas, the concept of access. Access is the level of fit between a user and a service, the better the fit, the higher the chances for easy access. The optimization of access is dome by accounting for the various access dimensions including; affordability, availability, adequacy and acceptability in the design of the service, its implementation and evaluation (Penchasky and Thomas, 1981). A majority of 48.39% and 47.04% were satisfied with healthcare services they received when they last visited a hospital and the way the healthcare givers attended to them the last time, they visited a hospital, respectively. A study by the Institute for Health Metrics and Evaluation (2014) found out that in Kenya, patients felt satisfied with the services offered in facilities such as visit satisfaction and interaction

with staff and providers. This is further explained by a study by the DESA (2015), ageing of the population is a challenge to the healthcare system since it demands that an increase of more services and the use of technology in order to treat NCD and other illnesses associated with old age. The ageing of population emphasizes on the urgency of addressing age-related discrimination, protecting and promoting the dignity and rights of older individuals and in ensuring the participation of the aged in the society. The public health sector in Kenya has grappled with a number of issues and challenges. The issues range from funding constraints, professional malpractices and poor administration. According to Barnes et al., (2010) a large Kenyan population seeks care from NGO-owned and private hospitals. This study found out that a majority of 67.74% preferred to attend mission hospitals when they are sick.

The reason for the preference on mode of treatment was given as: a majority of 55.65% gave the reason as availability of services. Followed by availability of health workforce at 22.04%. Thirdly, the distance from home at 11.56% and lastly cost of services at 9.95%. A study by the Institute for Health Metrics and Evaluation (2014), states that the cost of healthcare may influence access to healthcare services among the ageing population. The report further stated that Kenya has the highest average facility costs per outpatient visit compared to other countries (Ghana, Uganda and Zambia) in sub-Saharan Africa included in the Access Bottlenecks Cost and Equity Study. The average cost is Kenya Shillings 814 which is equivalent to 8.5 dollars.

A majority of 79.12% said they had found no special services for the elderly in the last 3 months when they visited a health facility. This is in line to the National Council for Population and Development (2013) that reported most African nations like Kenya are not best equipped to deal with the rise in the numbers of ageing population. The main concerns are related to poverty, healthcare provision and social protection schemes.

A majority of 48.1% have the nearest public health facility more than 5 kilometres from their home. 28.53% travels three to five kilometres to access the health care services. A study by the Institute for Health Metrics and Evaluation (2014) found out that in Kenya, most patients spent less than one hour travelling to facilities. Similar to the findings of Ouma et al. (2018) collected data from the first geo-coded database of public health

facilities in 48 SSA nations and found that the majority of the nations were below the set benchmark for universal healthcare by the year 2030 where 80% and less of the population out to reside approximately two hours travel time to an emergency facility. Also inline to the study by Geduld et al. (2018), observed that there is an assumption made that the proximity of hospitals equal the ease of access to emergency medical services. Majority of the patients facing the need of emergency care are likely to encounter ineffective, limited and non-existence emergency health care.

Among the study participants 189 (52.2%) were female while 173 (47.7%) were male. Implying that more females were considered in this study. The World Health Organisation (2011) explains that on average women live longer as compared to men, hence make up the largest percentage of older persons, particularly during their advanced ages. In the coming decade the sex balance was projected to remain relatively the same without having any significant change. As women live to a more advanced age, they may be more likely than men to experience disabilities and multiple health problems associated with old age. Further, the KNCHR (2009) explains that the significant increase in the numbers of older women as compared to men implies that the challenges faced by older women should be a core focus of governments, more so in developing countries like Kenya. Where majority of older women are widowed, disinherited and in dire poverty although they remain the primary care givers

The study established that there was no statistically significant association at 95% confidence level between gender and the level satisfaction ($\chi^2 = 4.714$, $p=.318>0.05$). This implies that neither the ageing males nor females are more satisfied than the other. Therefore, an individual's gender does not affect the level of access to health services.

Further, the study revealed a significant correlation between education level and healthcare services access (Corr = .354, $p=.017<0.005$). This implied that the healthcare services accessed by an individual could be determined by the individual's level of education. This finding was in line with Almeida et al., (2017) who found that higher level of education and income are positively correlated with the access and use of medical appointments in both the developed and developing nations. This was similar to a study by Ahmed et. al.., (2005), that found out that a patient's level of education of the

patients was found to affect their self-treatment and the purchase of drugs from unlicensed and untrained personnel.

According to The Institute for Health Metrics and Evaluation and the International Centre for Humanitarian Affairs (2016), in 1990, male life expectancy in Kenya at birth was 62 years while the female one was 64. Findings from this study revealed a significant relationship between the age and the level of satisfaction to the healthcare services accessed ($t(351)=174.345$, $p=.000<0.05$). This finding is in line with Ahmed et al., (2005) who found major differences in the health seeking behaviours between elderly people (aged 60 years and above) and younger people (ages 20-59 years). Further, Pearson correlation was conducted and revealed a weak significant correlation between age and the healthcare access ($corr=.222$, $p=000<0.05$). This implied that the more ageing an individual is, the more satisfied is with the healthcare services received. Hence, we can conclude that individuals' age influences access of healthcare services among the ageing population.

A significant association was established between the marital status and healthcare access ($\chi^2 = 37.965$, $p=.009<0.05$). This implied that different individual's marital status influenced healthcare services access differently. It was noted that those who were currently in marriage were highly satisfied with the healthcare services than those separated. This was in line with Ezeh et al., (2006) who found out that the elderly who reside alone in a home are likely to report cases of illnesses unlike the old people who live with other adults or their spouses; the elderly living alone are more inclined not to seek assistance from a treatment facility.

Guven and Leite (2016) found that inadequate social protection affects access of healthcare services by the ageing population. In many nations in the sub-Saharan Africa, older people are more likely to live in poverty since they lack stable incomes and social security systems. The lack of efficient social security systems in SSA, the presence of large informal settlements and the pace of ageing population are factors that can result in long-term challenges of the inability of nations to offer income security to all old people. In this study, a statistical and significant means difference between participants who received monthly cash transfer and those who did not was established. A mean of 4.0952

was registered to those who had cash transfer while those did not receive cash transfer had a mean of 3.5071. The finding implied that those who receive cash transfer had a high influence to the healthcare services access. This was in line with the Kenya Vision 2030 which aimed to establish a social protection fund through cash transfer to the elderly. This was one of its flagship projects which started being implemented in 2008 under the Older Persons Cash Transfer Programme (The NESC of Kenya, 2007).

Chi-square analysis was further conducted to establish whether monthly income level influenced access to healthcare services among the ageing population ($\chi^2 = 36.784^a$, $p=.001<0.05$). The results indicated a significance association between the monthly income and healthcare access. This implied that different individual's monthly income influence healthcare services access. According to Wandera, Kwagala, and Ntozi (2015), in the Ugandan context, socioeconomic factors such as wealth status of the household over the last one month is a factor on the behaviour of the elderly in seeking health care services. Access to health care declined for the aged persons coming from poor households but it increased among those earning wages. Further, Ahmed et al. (2005), found out that poverty status of a household was a key indicator of health-seeking behaviour. The results of the odd ratio that people from poor households sought treatment from unqualified practitioners and professional was 0.6 (95% confidence interval=0.40-0.78) whether they would seek care from qualified allopathic practitioners 0.7 (95% confidence interval=0.60-0.95). The odd ratio for self-treatment and care was 1.8 (95% confidence interval=1.43-2.36).

The level of individual satisfaction on healthcare services can be determined by the income one earns'. Ezeh et al. (2006), found out that there was low healthcare service utilization among the elderly residing in the slums. Less than the people reported a disease in the 14 days preceding their household visits sough medical care services. A study by Kakwani and Subbarao (2005) found out that aged persons are often poorer in comparison to the general population in SSA. Moreover, the study established that a high percentage of single older persons live in poverty in rural regions in comparison to urban areas. Data from the Global Ageing (2018) of 15 nations in Africa revealed that 11 of the studied nations the rate of the elderly living in poverty was higher in

comparison to their respective national averages. Moreover, it was stated that this was worse in households where the elderly people lived with young children. Further, data from the integrated household budget survey 2005/06 in Kenya revealed that the rate of the elderly living under poverty was high at 56.4% in comparison to the national average that stands at 45.9%. Notably, the level of poverty worsened in families where the elderly lived in households that have small children at 61.3%. (Kenya National Bureau of Statistics, 2010).

From, the T-test analysis there exists a statistical significant difference between participants who were registered with NHIF or any other health insurance and those who were not registered ($t(364) = 4.327$, $p = .023 < 0.005$). This implies that being registered with NHIF or any other health insurance has influence on healthcare services access. This was in line with a study by the World Health Statistics, 2018 and WHO, 2018 documents that approximately 50% of the population of the world is not fully covered for essential health services. It was observed that gaps in UHC service coverage remain among the poorest. In 2010, it was estimated that 808 million people which accounted for 11.7% of the population of the world spent at least 10% of the budget of their households to pay out of pocket healthcare services. Further, still in 2010, an estimated 97 million individuals were impoverished by out-of-pocket healthcare spending. Further data from a study by Nabalamba and Chikoko (2011), show that in 2005 private households paid for healthcare out-of-pocket and spent more than USD 58 per capita in the same year. Further, many poorer people had to borrow or sell property to pay for healthcare.

Further data from the Global Ageing (2018) shows that the African traditional forms of caring for the elderly are breaking down. Findings in this study indicated that there was no statistically significant association at 95% confidence interval between participants' religion and the level of satisfaction with the healthcare provided ($\chi^2 = 7.141$, $p = .377 > 0.05$). Therefore, individual's religion does not influence the access level to healthcare services.

Further, a statistically significant association ($\chi^2 = 26.193$, $p = .032 < 0.05$) was established between the people living with ageing population and access level to healthcare services

hence people living with ageing population influences the access level to healthcare services among ageing population. Pearson correlation was conducted to determine whether those who get enough support from their family accessed best healthcare care services (Corr = .286, p=.000<0.05). The results indicated a positive weak correlation between the variables. This implies that the level of support the ageing population get from their family determines their access to healthcare services. Findings were similar to a study DESA (2015), explains that the ageing population is facilitated by the decline of the rate of fertility and the increase of longevity meaning that populations expect to live for more years and bear few children are potential sources to support old age. Lack of enough social support could affect access to healthcare services among the ageing population. Data from the WHO (2018) states that despite the number of generations that have survived in a family has increased, today, these generations are likely to live separately than the generations in the past.

A significant association (χ^2 = 17.350, p=.037<0.05) was established between the advisers to seek medical services and healthcare services access. This implied that different ageing advisers to seek medical services influences healthcare services access. It was noted that those who were advised by children had high access to healthcare services, followed by spouse and self-advisers. According to Ezeh, et al. (2006), a large percentage of older persons residing in informal settlements are alone. Hence, they are not likely to benefit from any form of care and support traditionally offered to the elderly by extended members of the family. Moreover, it was revealed that there is a high prevalence of older men to live alone unlike older women who live with children of ages 15 years and below. The older women who live with children pointed to HIV/AIDs as a leading cause of the high mortality rate among the middle age group. The WHO (2018), reported that older persons are in most instances perceived to be a burden, dependent and frail by the society. These ageist attitudes ought to be address by public health and the society as they can result in discrimination influencing the development of policies and the chances that ageing population must experience healthy ageing. This study conducted a chi-square analysis to establish if there existed a significant association between persons who pay respondents medical bill and the level satisfaction to the healthcare services received. The finding indicated a statistically significant

association between persons who pay medical bill and the level of satisfaction (χ^2 = 45.943, p=.000<0.05). Therefore, we can conclude that the persons' who pay medical bill for the ageing influences the level of access to healthcare services. HelpAge International (2001) found widespread elder abuse within the health sector in Kenya. The study noted that this was regarding: the huge costs of healthcare since introduction of cost sharing in public hospitals; negative attitudes; ignorance and/ or mistreatment by heath care workers and abandonment in hospitals by their families. In essence therefore, older people are denied access to essential healthcare and rehabilitation services. Further, a report by the Kenya National Commission on Human Rights (2009) found out that older persons are discriminated against and their rights violated through various acts such as neglect by their families, discrimination by health providers and killings in some parts of Kenya on allegations of practising witchcraft.

The Healthcare Access and Quality (HAQ) index showed a summary of access and quality of personal healthcare using a scale ranging from 0-100. It assessed how access and quality of personal healthcare was measures against the best possible. The measure was grounded on risk standardization rate of mortality from causes that ought not to lead to death if quality healthcare is available. In general, the HAQ index on national performance had a positive association with the higher total health spending and health systems inputs. Kenya had a HAQ Index of 32.4 in 1990, 32.3 in 2000 and 39.5 in 2016 (Global Burden of Disease, 2016). This study established a significant association (χ^2 = 37.841[a], p=.000<0.05) between lack of diagnostic equipment in hospital and access of healthcare services among the ageing population which implied that availability of diagnostic equipment had influence on healthcare services access. The Institute for Health Metrics and Evaluation (2014) found out that the provision of the three main types of facility equipment, these are: medical, laboratory and imaging varied across levels of health service as per the Access Bottlenecks, Costs and Equity study. Majority of facilities had the basic medical equipment example blood pressure cuffs, stethoscopes and scales. 45% of national and provincial hospitals lacked an electrocardiography machine, which was found only in 7% of district hospitals. The electrocardiography machine, which is an important equipment in the handling of the rising rates of NCDs. There is also low availability of glucometers which test blood sugar at health centres and

dispensaries at 42% in the public sector. Ultrasounds were only available at 39% of hospitals. The study indicated that the higher levels of healthcare may not provide the required diagnostics imaging services. Guided by the World Health Organisation (2013) Service Availability and Readiness Assessment survey for what type of equipment should be at available in hospital: averagely, provisional and national hospitals possessed 91% of the necessary equipment, 72% were found in district and sub-district hospitals while 84% were found kin private hospitals.

Similarly, availability of drugs in hospital was found to significantly influence access of healthcare services among the ageing population ($\chi^2 = 52.992^a$, p=.000<0.05). The Kenya Ministry of Medical Services and Ministry of Public Health and Sanitation (2010) suggests that each public sector level needs to possess, Access Bottlenecks, Costs and Equity study found out that. Majority of the facilities possessed at least 50% of the required pharmaceuticals. National and provincial hospitals had an average of 83%, district and sub-district at 74%, public health centres and private health centre at 65%. The private medical facilities were established to have a high level of disease specific capacity of services; this was especially evident in lower levels of medical care. On average, as was posited by the Institute for Health Metrics and Evaluation (2014), pubic dispensaries and health centres accounted for less than 30% of the required supplies to offer disease-specific services.

Availability of means of transport is an important factor when assessing access to healthcare services, majority of the respondents had no challenge of transport. The majority of them at 40.5% resided in Kiambu County where Kijabe hospital is found. Followed by 16.53% from the neighboring Nakuru County. A study by the Institute for Health Metrics and Evaluation (2014) found out that in Kenya, most patients spent less than one hour travelling to facilities.

Further, chi-square results ($\chi^2 = 125.125$, p=.000<0.05) revealed a significance association between time spent with a health care provider and healthcare services access. This implied that time spent with a health care provider influences healthcare services access. The study also revealed a significance association ($\chi^2 = 117.489$, p=.000<0.05) between waiting time and healthcare services access. This implied that

time spent waiting influences healthcare services access. Most people indicated they spent 4-6 hours waiting while receiving outpatient services at the hospital. A study by the Institute for Health Metrics and Evaluation (2014) found out that in Kenya, waiting time differed, 90% of the patients received treatment within an hour in private hospitals, 71% reported the same wait time at public facilities.

According to the Foundation for Health in Ageing (2017), the ageing population have special needs that complicates their medical care for geriatrics. More than 50% of adults aged 65 years and above have more than three medical complications including high blood pressure or Alzheimer's disease, arthritis and diabetes. Data from the World Health Organisation (2018) indicates that there are complex health states that occur in older ages known as geriatric syndromes. Often, they face challenges of multiple underlying factors including delirium, urinary inconsistencies, frailty, pressure ulcers and falls. This study established that nearly half of the participants had illness leading to medical attention on monthly basis.

The reason for seeking treatment was an important factor in examining access of healthcare services. Detailed analysis revealed no relationship at 95% confidence interval between participants' reasons for seeking treatment and healthcare services access which implied that the reason for seeking treatment in hospital does not influence healthcare services access. However, the presence of a chronic condition in a patient was an important factor in determining access to health care services. This is in line with The Health Belief Theory that may be adopted to give an explanation to healthcare access and health seeking behaviour among the ageing population. It was introduces by Hochbaum, Rosenstock and Kegels who were social psychologists in the 1950s working on public health services in the United States. The theory has been used to explain and predict the behaviour and actions of people when their health suffers, or they are at risk of ill health. Different groups vary in their response and this is likely to impact on the decisions they make about their health (Guidry, Matthews-Juarez, and Copeland, 2003; Skinner, Arfken, and Sykes, 1998).

Majority of respondents were noted not to have received any medical checkup, when not sick, despite the health status of individuals being an important factor in determining

access to health care services. This is in line with The Health Belief Theory that may be used to explain access to health care and health seeking behaviour among the ageing population. The theory has been used to explain and predict the behaviour and actions of people when their health suffers, or they are at risk of ill health. Different groups vary in their response and this is likely to impact on the decisions they make about their health (Guidry, Matthews-Juarez, and Copeland, 2003). A study conducted in 22 European countries by Gianino, Lenzi, Fantini, Ricciardi and Gianfranceo, (2017), set out to examine the particular systems of healthcare related with the decline in trends in amenable mortality during the period 2000-2014. Amenable mortality is defined as premature death resulting from different conditions that out not to have occurred if timely and effective healthcare was administered. The study revealed a decline in amenable mortality, although at different annual changes in the countries. Healthcare systems with private provision had reduced as amenable mortality declined over time. It appears that is an essential dimension in identifying varying patterns for mortality decline. Data from the Global Disease Burden (2016) shows that during the time period 1990-2016, there was a significant shift of number of deaths of older people. There is a universal change with respect to the number of deaths of older people. Further data from the Institute for Health Metrics and Evaluation and the International Centre for Humanitarian Affairs (2016), shows that the overall health for Kenya as compared to Eastern sub-Saharan Africa has made remarkable progress. Rates of overall death and health loss are lower than the average of Eastern sub-Saharan Africa and many neighbouring countries

The results further revealed a significance association (χ^2 = 31.492, p=.012<0.05) between individual's health status and access of the healthcare services. Presence of a chronic condition in a patient was an important factor in determining access to health care services. Data from the World Health Organisation (2018) indicates that there are complex health states that occur in older ages known as geriatric syndromes. This study revealed an ooverall majority of the respondents (80.85%) reported that they had a chronic condition. Only 19.95% reported that they did not suffer from any chronic illness. Further, a chi-square analysis was conducted to establish whether individuals diagnosed with a chronic condition influences access of the healthcare services. The

results revealed a significance association between the variables (χ^2 = 12.372, p=.000<0.05) which implies that being diagnosed with chronic condition influence access of the healthcare services.

Among the respondents who reported to have been suffering from a chronic condition they were asked to specify the chronic condition they were suffering from. More than half of the respondents reported that they were suffering from diabetes, followed by those who reported that they were suffering from cancer. Other illnesses reported by the respondents included arthritis, Hypertension and vision loss. According to Wandera, et al., (2015) self-reported NCDs, illness severity and limitations of mobility were the key indicators of healthcare access over the last 30 days among the ageing population. Further, in 2016, the Global Burden of Disease Cancer Collaboration (2018) revealed that there were 17.2 million cases of cancer across the world; this is a rise of 28% over the last 10 years. Moreover, the study revealed that more than 8.9 million cancer related deaths were reported in 2016. The study adopted social-demographic index for the analysis on the basis of income, fertility and education rates where nations with a high SDI have high levels of education and income and low fertility rate while the nations with a low SDI have low levels of education and income and high rate of fertility. The results indicated that the cancer incidents rates and deaths were high in nations with high SDI. However, the fastest and largest increase in new cancer cases were reported to be in countries that recorded moderate SDI. Women in countries with low SDI were established to be four times more vulnerable to cervical cancer unlike women in countries with a high SDI.

Further, a chi-square analysis was conducted to establish whether individual's currently receiving treatment influenced access of the healthcare services. The results revealed a significance association between the variables (χ^2 = 11.501, p=.021<0.05). In line with the study by the KNBS and WHO (2015), STEPs survey for NCDs and Risk Factors revealed that 25.9% of Kenyan citizens aged 45-69 practice different lifestyles that make them vulnerable to more than one of the risk factors. The risk factors identified included consuming less than 5 servings of vegetables and fruits in a day, smoking, inadequate physical exercises, obesity and high blood pressure. The survey further shows that older

persons aged 60-69 have the highest prevalence of raised blood pressure of 53%. Women have a higher prevalence at 58% in comparison to the men in the same age group whose prevalence is 49%. High blood pressure is a core risk factor in the development of cardio vascular diseases.

5.4 Conclusions of the study

The researcher concluded that socioeconomic factors such as individuals' age, marital status, and monthly cash transfer, level of education and monthly income has a greater influence on access of healthcare services while gender and religion has no influence on access of healthcare services among the ageing population at 95% confidence level. Persons in marriage have high and better access to healthcare services than those separated. Similarly, persons who receive cash transfer have a high influence to the healthcare services access. Further, the study concluded that being registered with NHIF or any other health insurance influences healthcare services access. Those ageing population who have NHIF or any other health insurance access healthcare services more frequently than the others do.

The support the ageing population receive from their family has great influence on access to healthcare services. Similarly, the person who advises the ageing population on whether to seek the medical services has a great influence on the access to healthcare services. Ageing population who are advised by their children has high access to healthcare services, followed by spouse and self-advisers. Individual's religion does not influence the level of access to healthcare services. A statistical significant association exist between the people living with ageing population and the access of the healthcare services hence people living with ageing population influence their level of access to healthcare services. The persons' who pay medical bill for the ageing also influences the level of access to health services

A significance association between lack of diagnostic equipment in hospital and access of healthcare services among the ageing population exist, which implies that availability of diagnostic equipment, has influence on healthcare services access. Similarly, availability of drugs in hospital has a significantly influence on access of healthcare services among the ageing population. There is a significance association between time

spent with a health care provider and healthcare services access. This implies that time spent with a healthcare provider influences healthcare services access. The study also concludes that there exists a significance association between waiting time and healthcare services access, hence time spent waiting influences healthcare services access.

Further, the study concludes that there is no relationship at 95% confidence level between participants' reasons for seeking treatment and healthcare services access. Most people do not go for medical checkup, when not sick, despite the health status of individuals being an important factor in determining access to health care services. However, a significance association between individual's health status and access of the healthcare services exist. Most ageing population who visit AIC Kijabe hospital are reported to have been suffering from diabetes, followed by those who reported that they were suffering from cancer. Other illnesses reported by the respondents included arthritis, Hypertension and vision loss. An association exist between individual's currently receiving treatment and access of the healthcare services.

5.5 Recommendations of the study

Availability of drugs and diagnostic equipment in hospital was found to influence access to healthcare services among ageing population. Therefore, this study recommends both national and county government as well as hospital management to ensure drugs and diagnostic equipment are available in hospitals and further government to provide ageing population friendly services, in health institutions, to make them available and acceptable. This will go a long way towards achievement of UHC. The study established that time spent with a health care provider and time spent waiting for the healthcare services has an influence on the healthcare services access. Therefore, this study recommends the AIC Kijabe Hospital management to come up with a strategy to ensure the ageing population do not take a long time waiting for the healthcare services and ample time to be provided with the health care provider. Further recommendation is the training of geriatric experts, these are health experts who specialize in taking care of the older persons and also training and employment of adequate number of doctors and

nurses to the WHO recommendation of 44.5 per 10,000 needed in order to provide universal healthcare coverage.

Monthly cash transfer was found to have a great influence to the healthcare services access, therefore the government should ensure all elderly people receives monthly cash transfer. In addition, roll out the plans to provide National Health Insurance Fund cards that will complement this support. Coupled with mechanisms to establish diverse pension schemes that include the majority of Kenyans who work in the informal sector. The government needs to increase its' spending on healthcare to the recommended minimum of 15% of the total budget as under the Abuja declaration. Since low levels of public health expenditure contribute to a lack of health security and inferior care for older persons, as older persons finance most of their health care through out-of –pocket expenditure.

The government should put in place mechanisms for the implementation of policies and programmes necessary for the realisation of the rights of senior citizens under the constitution and senior citizens care and protection bill. Also, implementation of the social protection that establishes a minimum standard of living as was reflected in the 2030 Agenda for sustainable development. Further, implementation of Universal Declaration of human rights as Kenya is party to the covenant. Together with the Madrid International plan on ageing, an international policy on ageing for the 21st Century. We also have the 2014 Kenyan National Policy on older persons and ageing.

Conduct workshops among ageing population to inform them on their right to obtain better and quality care in hospitals as well as frequent check-ups in the nearest hospital even if they are not sick. This kind of awareness would lead to increase use of healthcare services at hospitals by elderly people. Finally, the government needs to establish the correct information. This should include health campaigns to promote healthy behaviours throughout life that reduce the risk of NCDs and improve physical and mental capacity. The government should institute a culture of saving for retirement through pension schemes and pass this information to the general public through the media, religious institutions among other relevant avenues.

5.6 Suggested area for further research

This study was carried out in AIC Kijabe hospital therefore, there is need to undertake similar research in other hospitals across the country to determine the factors that influence access to healthcare services among the ageing population for comparison.

This study relied heavily on quantitative data that were provided by the ageing population; hence another study should be carried out to establish factors of access to healthcare services among the ageing population using qualitative techniques and in different hospitals.

A research should be carried on the influence of other factors other than socioeconomic, sociocultural, institutional characteristics and nature and clinical manifestation of disease on the access to healthcare services among the ageing population.

REFERENCES

Almeida, A.P.S.C., Nunes, B.P., Duro, S.M.S., Faccchinu, L.A. (2017). Socioeconomic Factors of Access to Health Services among Older Adults: a systematic review. *Revista de Saude Publica,* Vol. 51, N0. 50, pp. 1-15

Agency for Healthcare Research and Quality. (2014). *National Healthcare Quality and Disparities Report.* Rockville, MD: U.S. Department of Health and Human Services

Ahmed,S.M., Tomson,G., Petzold, M. and Kabir, Z.N. (2005). *Socioeconomic status overrides age and gender in determining health-seeking behaviour in rural Bangladesh.* Geneva, Switzerland: Bulletin of the World Health Organisation

Andersen, R.M. (1995). Revisiting the behavioural model and access to medical care: does it matter? *Journal of Health and Social Behaviour,* Vol. 36, No. 1, pp. 1-10

Bolarinwa, O.A. (2015). Principles and method of validity and reliability testing of questionnaire used in social and health researches. *Nigeria Postgraduate Medical Journal,* Vol. 22, No. 4, pp. 195-201

Barnes, J., O'Hanlon B., Freeley F., Kimberly M., Nelson G., Caytie D. (2010). *Private Health Sector Assessment in Kenya.* Washington DC: World Bank

Bryman, A. and Bell, E. (2007). *Business Research Methods, 2nd Edition*. Oxford: Oxford University Press

Burns, N. and Grove, S.K. (2007). *Understanding nursing research*. Philadelphia: Saunders Company

Doubova, S.V. and Cuevas, R.P. (2018). Going further to measure improvements in healthcare access and quality. *The Lancet,* Vol. 391, No. 10136, pp. 2190-2192.

Department of Economic and Social Affairs. (2017). *World Population Prospects: The 2017 Revision, Key Findings and Advance Tables. Working Paper No (ESA/P/WP/248)*. New York : United Nations

Department of Economic and Social Affairs. (2015). *World Ageing population (ST/ESA/SER.A/390*). New York: United Nations

Ezeh,A.C., Chepngeno,G., Kasiira, A.Z. and Woubalem, Z. (2006). *The Situation of Older People in Poor Urban Settings: The Case of Nairobi, Kenya*. Washington, DC: The National Academies Press.

Foundation for Health in Ageing. (2017). *What is Geriatrics, Caring for Older Adults*. Retrieved from http://www.healthinageing.org/files/documents/WhatIsGeriatrics1Page.pdf

Global Burden of Disease Cancer Collaboration. (2018). Global, Regional, and National Cancer Incidence, Mortality, Years of Life Lost, Years Lived With Disability, and Disability-Adjusted Life-Years for 29 Cancer Groups, 1990 to 2016A Systematic Analysis for the Global Burden of Disease Study. *JAMA Oncology*. doi: doi:10.1001/jamaoncol.2018.2706

Global Ageing. (2018). *Ageing in Africa.* Retrieved from http://www.global-ageing.eu/agafrica.html

Geduld H., Hynes, E.C., Wallis, L.A. and Reynolds, T. (2018). Hospital Proximity does not guarantee access to emergency care. *The Lancet.* Vol.6 No.3 P.732

Gianino,M.M., Lenzi, J., Fantini, M.P., Ricciardi, W. and Gianfranceo,D. (2017). Declining amenable mortality: a reflection of health care sytems. *BioMed Central*. Vol.17, No.735

Gakuu,C.M., Kidombo, H.J. and Keiyoro, P.N. (2016). *Fundamentals of Research Methods. Concepts, Practice and Application*. Kenya: Aura Publishers

Global Burden of Disease. (2016). Causes of Death Collaborators. Global, regional and national age-sex specific mortality for 264 causes of death, 1980-2016: a systematic analysis for the Global Burden of Disease Study. *The Lancet*, Vol. 390, No. 1151, pp. 210

Guven M. and Leite, P., (2016). *Benefits and Costs of Social Pensions in Sub-Saharan Africa.* Washington, DC: World Bank

Guidry, J. J., Matthews-Juarez, P., and Copeland, V. A. (2003). Barriers to Breast Cancer Control for African American Women: The Interdependence of Culture and Psychosocial Issues. *Cancer*. Vol. 97 (1 Suppl), pp.318–323.

Hunger Safety Net Programme. (2017). *New Inua Jamii 70years and above cash transfer programme*. Retrieved from: http://www.hsnp.or.ke/index.php/highlights/146-launch-of-inua-jamii-70years-and-above-cash-transfer-programme

HelpAge International Africa Regional Development Centre and African Union. (2002). *African Union Policy Framework and Plan of Action on Ageing*. Nairobi, Kenya: HelpAge International Africa Regional Development Centre

HelpAge International. (2001). *Elder abuse in the health care services in Kenya*. Nairobi, Kenya: HelpAge International

Institute for Health Metrics and Evaluation. (2018). Measuring performance on the Healthcare Access and Quality Index for 195 countries and territories and selected subnational locations: a systematic analysis from the Global Burden of Disease Study 2016. *The Lancet*, Vol.0 No.0

Institute for Health Metrics and Evaluation. (2018). Trends in future health financing and coverage: future health spending and universal health coverage in 188 countries, 2016-40. *The Lancet.* Vol.391, No.10132, pp. 1783-1798

IntraHealth International. (2017). *FUNZOKenya Helps Train 15,864 Health Workers, Improves Health Worker Education for the Long Haul*. Retrieved from: https://www.intrahealth.org/news/funzokenya-helps-train-15864-health-workers-improves-health-worker-education-long-haul

Institute for Health Metrics and Evaluation (IHME) and the International Centre for Humanitarian Affairs. (2016). *The Global Burden of Disease: Generating Burden of Disease: Generating Evidence, Guiding Policy in Kenya.* Nairobi, Kenya: IHME

Institute for Health Metrics and Evaluation. (2014). *Health Service Provision in Kenya: Assessing Facility Capacity, Costs of Care, and Patient Perspectives*. Seattle, WA: IHME lkv9ff

Institute of Medicine, Committee on Monitoring Access to Personal Health Care Services. (1993). *Access to healthcare in America*. Millman M., editor. Washington: National Academies Press

Kenya National Commission on Human Rights. (2016). *The Contestation of Rights in the Health Sector in Kenya: The Right to Health Vis Avis Labour Rights.* Retrieved from http://knchr.org/Blogs/tabid/1256/ArticleID/5/The-Contestation-of-Rights-In-The-Health-Sector-In-Kenya-The-Right-To-Health-Vis-A-Vis-Labour-Rights.aspx#_ftn23

Kenya National Bureau of Statistics (KNBS) and World Health Organisation (WHO). (2015). *Kenya STEPwise Survey for Non-communicable Disease and Risk Factors*. Nairobi, Kenya: KNBS and WHO

Kenya National Bureau of Statistics. (2015). *Kenya Demographic and Health Survey 2014.* Nairobi, Kenya: Government Printers

Kenya Ministry of Medical Services (MOMS) and Ministry of Public Health and Sanitation (MOPHS). (2010). *Kenya Essential Medicines List*. Nairobi, Kenya: MOMS and MOPHS

Kenya National Bureau of Statistics. (2010). *Kenya Demographic and Health Survey 2008-09.* Nairobi, Kenya: Government Printers

Kenya National Bureau of Statistics. (2010). 2009 *Kenya Population and Housing Census.* Nairobi, Kenya: Government Printers

Kleinman, A., (2010). Four Social theories of Global health. *The Lancet* Vol. 375, No. 9725, pp. 1518-1519

Kenya National Commission on Human Rights (KNHCR). (2009). *Growing Old in Kenya: Making it a Positive Experience.* Nairobi, Kenya: KNHCR

Kombo, D.K. and Tromp, D.L. (2006). *Proposal and Thesis Writing*. Nairobi, Kenya: Pauline Publishers

Kakwani, N. and Subbarao, K. (2005). *Ageing and Poverty in Africa and the Role of Social Pensions.* Washington, DC: World Bank

Muga, R., Kizito, P., Mbayah, M., Gakuruh, T., (2015). *Overview of the health system in Kenya.* Rockville, MD: Demographic and Health Surveys Program

Ministry of Health. (2015). *Demystifying the Managed Equipment Service Project in Kenya.* Retrieved from http://publications.universalhealth2030.org/uploads/MES-BROCHURE.pdf

Ministry of Health. (2012). *The Kenya Health Sector Strategic and Investment Plan (KHSSPI) 2013-2017.* Nairobi: Ministry of Health

Ministry of Gender, Children and Social Development and Help Age International. (2011). *The Old Persons Cash Transfer Programme Operations Manual.* Nairobi, Kenya: Government Printers

National Council for Population and Development. (2013). *Kenya Population Situation Analysis.* Nairobi: Government of Kenya

Nabalamba, A. and Chikoko, M. (2011). Ageing Population Challenges. *Chief Economist Complex,* Vol. 1., No. 1, pp.1-19

National Economic and Social Council of Kenya. (2007). *Kenya Vision 2030.*Kenya: Government of the Republic of Kenya

Norland-Tilburg, E.V. (1990). Controlling error in evaluation instruments. *Journal of Extension,* Vol. 28, No. 2, pp. 1-5

Ouma P.O., Maina, J., Thuranira P. (2018). Access to emergency hospital care provided by the public sector in sub-Saharan Africa in 2015: a geocoded inventory and spatial analysis. *The Lancet.* Vol. 6, No.3, pp. 342- 350

Penchasky, R. and Thomas, J.W. (1981). The Concept of Access: Definition and relationshisito consumer satisfaction. *Medical care* Vol. 19, No. 2, pp. 127-140

Republic of Kenya, Ministry of Labour, Social Security and Services. (2014). *National Policy on Older Persons and Ageing.* Nairobi: The Government Printer

Retirement Benefits Authority (RBA). (2012). *Report on the pension Industry.* Nairobi, Kenya: RBA

Republic of Kenya. (2011). *Kenya National Social Protection Policy*. Nairobi, Kenya: Government Printers

Republic of Kenya. (2010). *The New Constitution.* Nairobi, Kenya: Government Printers

Retirement Benefits Authority (RBA). (2007). *Individual retirement benefits schemes in Kenya*. Nairobi, Kenya: RBA

Standard Digital. (2018). *Why we should prioritise needs of older persons*. Retrieved from: https://www.standardmedia.co.ke/article/2001271715/why-we-should-prioritise-needs-of-older-persons

Senate Bills. (2014). *The Senior Citizens Care and Protection Bills*. Nairobi: The Government Printer

Skinner, C. S., Arfken, C. L., and Sykes, R. K. (1998). Knowledge, Perceptions, and Mammography Stage of Adoption among Older Urban Women. *American Journal of Preventive Medicine*, Vol. 14, No.1, pp. 54–63.

Task Force for Global Health. (2017). *With a Full Picture of Its Healthcare Workforce, Kenya Looks to Fill the Gaps.* Retrieved from: https://www.taskforce.org/newsroom/full-picture-healthcare-workforce-kenya-looks-fill-gaps

United Nations General Assembly. (2015). *Transforming our World: the 2030 Agenda for Sustainable Development.* New York : United Nations

UNAIDS and World Health Organisation. (2006). *2006 Report on the Global AIDS Epidemic.* Geneva: UNAIDS and WHO

United Nations. (2002). *Political Declaration and Madrid International Plan of Action on Ageing. (2nd).* Madrid, Spain: Second World Assembly on Ageing.

United Nations General Assembly. (1966). *International Covenant on Economic, Social and Cultural Rights.* New York : United Nations, Treaty Series, vol. 993

United Nations. (1948). *Universal Declaration of Human Rights*. Paris, France: General Assembly of the United Nations, third session.

World Health Organisation. (2018). *Ageing and Health*. Retrieved from http://www.who.int/en/news-room/fact-sheets/detail/ageing-and-health

World Health Organisation. (2018). *Elder Abuse.* Retrieved from http://www.who.int/news-room/fact-sheets/detail/elder-abuse

World Health Organisation. (2018). *Progress towards the SDGs: A selection of data from World Health Statistics.* Geneva, Switzerland: WHO

World Health Statistics. (2018). *Monitoring Health for the SDGs, Sustainable Development Goals.* Geneva, Switzerland: World Health Organisation.

World Health Organisation. (2017). *Global strategy and action plan on ageing and health*. Geneva, Switzerland: World Health Organisation.

Wandera S.O., Kwagala B., Ntozi, J., (2015). Factors of access to healthcare by older persons in Uganda: a cross-sectional study. *International Journal for Equity in Health,* Vol. 14, No. 26, pp. 1-10

World Health Organisation. (2013). *Service Availability and Readiness Assessment (SARA) Survey: Core Questionnaire*. Geneva, Switzerland: WHO

World Health Organisation. (2011). *Global Health and Ageing.* United States: NIH Publication no. 11-7737

World Health Organisation. (2000). *The World Health Report 2000- Health Systems: improving performance*. Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK144006/

World Health Organisation. (1948). *Frequently Asked Questions*. Retrieved from http://www.who.int/kobe_centre/about/faq/en/

APPENDICES

Appendix I Letter of Introduction (English)

The name of the researcher is Beatrice Njoroge. She is a graduate student at University of Nairobi, undertaking a Masters of Art in Project Planning and Management. The purpose of the research is to determine the factors that influence access of healthcare services among the ageing population.

You are among the sample population, if you don't mind you will be interviewed for 30 minutes on different aspects on your healthcare services access. Any records relating to you and your participation in this study will be treated with utmost confidentiality and privacy safeguarded. The presentations of the results will not display the participants name or any other characteristic that would make one identifiable. This study poses no risk to the participant. The information collected in this study will only be used for the purpose of this study.

The following are the conditions in which you are being requested to participate in this study: participation is entirely voluntary; you may withdraw from participating in any part of the study at any time; you are free to ask any questions pertaining to this study which is not clear to you. By participating in this study, you are not entitled to any payment nor are you expected to make any payment. However, the study may generate information that may be used by the Government, communities and other partners in formulating and implementing health policy and programmes to ease access to healthcare services among the ageing population.

Would you like to participate in this study? The Appropriate response:

Yes ☐ No ☐

Please indicate your willingness to participate in this study by appending your signature or impressing your thumb print, below.

Name of respondent…… (Optional) Signature ……..

Thumb print ☐ Date……..

Contacts:

In case of any Questions, please contact:

The Researcher	**Supervisor**	**Supervisor**
Beatrice Njoroge	Dr. Peter Keiyoro	Dr. Josephine W. Ngunjiri
P.O. Box 467-00516	P.O. Box 30197-00100	P.O. Box 30197-00100
Mobile No.-0725007629	Mobile No.-0736493903	Mobile No.-

Appendix I Letter of Introduction (Swahili)

Jina la mtafiti ni Beatrice Njoroge. Yeye ni mwanafunzi wahitimu katika Chuo Kikuu cha Nairobi, akifanya Master of Art katika Mipango na Usimamizi wa Miradi. Madhumuni ya utafiti ni kuamua mambo ambayo yanayoathiri upatikanaji wa huduma za afya wakati wa kuzeeka kwa watu.

Wewe ni miongoni wa sampuli, ikiwa hujali kuwa katika sampuli, utaulizwa maswali tofauti kwa dakika thelathini katika shughuli zako za huduma za afya. Kumbukumbu yoyote zinazohusiana na wewe na ushiriki wako katika utafiti huu utaatibiwa kwa usiri mkubwa na faragha inalindwa. Uwasilishaji wa matokeo hautaonyesha jina la washiriki au tabia nyingine yoyote ambayo ingeweza kufanya watambulike.Utafiti huu hauna hatari kwa mshiriki. Taarifa zilizokusanywa katika utafiti huu zitatumiwa tu kwa madhumuni ya utafiti huu.

Yafuatayo ni masharti ambayo unatakiwa kushiriki katika utafiti huu: ushiriki ni kwa hiari; unaweza kujiondoa kushiriki katika sehemu yoyote ya utafiti wakati wowote; wewe ni huru kuuliza maswali yoyote kuhusiana na somo hili. Kwa kushiriki katika utafiti huu, huna haki ya malipo yoyote wala hutarajiwi kufanya malipo yoyote. Hata hivyo, utafiti huu unaweza kuzalisha taarifa ambayo inaweza kutumika na Serikali, jamii na washirika wengine katika kuandaa na kutekeleza sera na mipango ya afya ili kuendeleza huduma za afya kati ya kuzeeka kwa watu.

Ungependa kushiriki katika utafiti huu? Jibu sahihi:

Ndio ☐ La ☐

Tafadhali onyesha nia yako ya kushiriki katika sutafiti huu kwa kupitisha saini yako au kuvutia kuchapa kidole chako.

Jina la mhojiwa …… (sio lazima) Sahihi ……..

Alama ya Kidole ☐ Tarehe……..

Mawasiliano:

Katika maswali yoyote, tafadhali wasiliana na:

Mtafiti	**Msimamizi**	**Msimamizi**
Beatrice Njoroge Sanduku la Posta- 467-00516 Namba ya simu.-0725007629	Dr. Peter Keiyoro Sanduku - 30197-00100 Namba ya simu.-0736493903	Dr. Josephine W. Ngunjiri Sanduku - 30197-00100 Namba ya simu.-0723768653

Appendix II Research Instruments

Questionnaire 1

SURVEY INFORMATION		
S1	Interviewer ID	
S2	Respondent ID	
S3	Contact phone number of respondent where possible	
S4	Date of Interview	_ _/ _ _/ _ _ _ _ (dd/mm/yyyy)
SECTION 1: ACCESS OF HEALTHCARE SERVICES INFORMATION		
	Question	**Response**
AS1	To what extent were you satisfied with the **healthcare services** you received when you last visited a hospital?	Very satisfied----1 Satisfied----2 Dissatisfied----3 Very Dissatisfied----4 Neither satisfied nor dissatisfied----5
AS2	In your view, to what extent were you satisfied with the way the **healthcare givers** attended to you the last time you visited a hospital?	Very satisfied----1 Satisfied----2 Dissatisfied----3 Very Dissatisfied----4 Neither satisfied nor dissatisfied----5
AS3	When you are sick, where would do you **prefer** to seek treatment?	Self-medication-1 Pharmacy/ Chemist-2 Herbal/ alternative therapy-3 Health centre-4 District hospital-5 County/ referral hospital-6 Private clinic-7 Private hospital-8 Mission hospital-9 Diviners-10
AS4	Why would you seek treatment with the above provider?	Affordable cost of service----1 Availability of services----2 Availability of health workforce----3 Distance from home----4 Others specify--5 _____
AS5	How far is the nearest public health facility from your home?	More than 5 kilometres----1 3-5 kilometres----2 1-2 kilometres---3 Less than a kilometre----4
AS6	In the last 3 months, how often when you	None----1

	visited a heath facility, did you find special services for the elderly people?	Rarely----2 Regularly---3
SECTION 2: SOCIO-ECONOMIC INFORMATION		
	Question	**Response**
SE7	Sex(Record male or female as observed)	Male-1 Female-2 ___
SE8	What is your date of birth?	_ _/ _ _/ _ _ _ _ (dd/mm/yyyy)
SE9	How old are you?	Complete Years _ _ _
SE10	What is your marital status?	Single----1 Currently married----2 Separated----3 Divorced-----4 Widowed-----5 Declined to answer-----99
SE11	What is the highest level of education you have completed?	No formal schooling----1 Some Primary school-----2 Completed Primary School----3 Some Secondary school-----4 Completed Secondary school-----5 Some College level ----6 Completed College level ----7 Declined to answer ----99
SE12	Which of the following best describes your main work status and occupation over the past 12 months?	Government employee----1 Self-employed/ Business----2 Professional/ managerial----3 Homemaker (housewife/house husband)----4 Retired with pension-----5 Retired without pension----6 Unemployed----7 Unable to work----8 Receive cash transfer from Government----9 Declined to answer ----99
SE13	Do you receive the monthly cash transfer from the government to the elderly?	Yes-----1 No-----2
SE14	On average, how much money do you make in a month (Kenya Shillings)?	Less than 10,000----1 10,000-24,999----2 25,000-39,999----3 40,000-64,999----4 65,000-79,999----5 80,000-99,999----6 Above 100,000----7
SE15	Have you registered with NHIF or any other health insurance?	Private Insurance company----1 NHIF paid by self----2

		NHIF sponsored by Government----3 None----4
SECTION 3: SOCIO-CULTURAL INFORMATION		
	Question	**Response**
SC16	What is your religion?	Catholic----1 Protestant----2 African-traditional churches-3 Muslim-4 Others specify--5 _____
SC17	How many children (living) do you have?	__ __ children
SC18	Whom do you live with?	Alone-----1 My spouse----2 My children----3 Extended family----4 Others specify----5 _____
SC19	How satisfied are you with the support you get from your family?	Very satisfied----1 Satisfied----2 Dissatisfied----3 Very Dissatisfied----4 Neither satisfied nor dissatisfied----5
SC20	When you are sick, where would do you **normally** seek treatment?	Self-medication-1 Pharmacy/ Chemist-2 Herbal/ alternative therapy-3 Health centre-4 District hospital-5 County/ referral hospital-6 Private clinic-7 Private hospital-8 Mission hospital-9 Diviners-10
SC21	Who advices you where to seek healthcare services?	Self----1 Spouse----2 Children----3 Others specify—4 _____
SC22	When you visit a healthcare facility, who often pays for your medical bills?	Self----1 Spouse----2 Children----3 Private Insurance company--4 NHIF paid by self----5 NHIF sponsored by Government----6 Others specify—7 _____
SC23	In the last three months, how frequent have you been sick but been unable to seek medical help because of financial constraints?	On a daily basis----1 On a weekly basis----2 On a monthly basis----3 None at all----4

SC24	What gender of healthcare giver would you prefer to attend to you?	Any----1 Same sex----2 Different sex----3 Others specify—4 _____

SECTION 4: INSTITUTIONAL CHARACTERISTICS INFORMATION		
	Question	**Response**
IC25	For the last 3 months, how often when you visited a health facility were you not treated due to lack of diagnostic equipment?	None----1 Rarely----2 Regularly----3
IC26	In the last three months, how often did you find drugs prescribed to you being unavailable?	None----1 Rarely----2 Regularly----3
IC27	In the last 3 months, how often have you been in need of healthcare services but have been unable to visit a healthcare facility due to lack of a means of transport?	On a daily basis----1 On a weekly basis----2 On a monthly basis----3 None at all----4
IC28	On a scale of 1-5, how would you rate the length of time that you **spent** with a healthcare provider?	Very Good----1 Good----2 Okay---3 Poor----4 Very Poor----5
IC29	On a scale of 1-5, how would you rate the length of time that you had had to **wait** to see a healthcare provider?	Very Good----1 Good----2 Okay---3 Poor----4 Very Poor----5
IC30	Where do you live?	Nairobi County----1 Kiambu County----2 Nakuru County----3 Kajiado County----4 Narok County-----5 Nyandarua County----6 Nakuru County----7 Machakos County---8 Other (Specify)-----9

SECTION 5: CLINICAL MANIFESTATION OF DISEASE INFORMATION		
	Question	**Response**
NC31	In the last 3 months, how frequent were you sick and in need of medical attention?	On a daily basis----1 On a weekly basis----2 On a monthly basis----3 None at all----4
NC32	When you are sick, what prompts that you seek medical attention?	Symptoms of illness----1 Frequency of illness----2 Seriousness of the illness----3 Previous experience with the

		illness----4 Others specify---5 _____
NC33	In the last one year, how often did you go for medical check-up even when you were not sick?	On a daily basis----1 On a weekly basis----2 On a monthly basis----3 On a yearly basis----4 None at all----4
NC34	Have you ever been diagnosed with a chronic condition (Non-communicable disease)?	Yes-1 No-2
NC35	If Yes, which one?	Diabetes----1 Hypertension----2 Cardiovascular----3 Arthritis----4 Cancer----5 Hearing loss-6 Vision loss-7 Depression-8 Others specify—9_____
NC36	Are you currently receiving treatment for the chronic condition?	Yes----1 No----2
NC37	Overall, in the last 3 months, how would you rate your health?	Very good----1 Good----2 Poor----3 Very poor----4 Neither poor nor good----5

Questionnaire 2

SURVEY INFORMATION		
Interviewer ID		
Respondent ID		
What is your current position?		
What is your current place of work or institution?		
Contact phone number of respondent where possible		
Date of Interview		_ _/ _ _/ _ _ _ _ (dd/mm/yyyy)
SECTION 1: INSTITUTIONAL CHARACTERISTICS INFORMATION		
	Question	**Response**
IC1	How is the quality of the healthcare services offered at the hospital?	Very Good----1 Good----2 Okay----3 Poor-----4 Very Poor---5
IC2	Is there a need to improve the healthcare services offered at the hospital?	Yes---1 No---2 I don't know---3
IC3	If Yes, What services would you want improved?	Inpatient Services----1 Outpatient Services----2 Emergency Services----3 Preventive Services----4 Laboratory and Radiology Services----5 Other (specify)----6
IC4	How is the quality of the healthcare givers attending at the hospital?	Very Good----1 Good----2 Okay----3 Poor-----4 Very Poor---5
IC5	Is there a need to improve the quality of the healthcare givers attending at the hospital?	Yes---1 No---2 I don't know---3
IC6	If Yes, what would you want improved on the quality of the healthcare givers attending at the hospital?	Good communication skills---1 Up to date Knowledge and skills---2 Other (specify)----3
IC7	What opportunities are available in the country for health workers to keep their knowledge and skills up-to-date?	Access to internet----1 Access to journals, textbooks and other scientific publications----2 Workshops----3 Training from professional institutions----4 In-service training courses---5 Scholarships---6 Other (Specify)---9
IC8	Is there a need to improve the continuing education of healthcare givers in the country?	Yes---1 No---2 I don't know---3

IC9	What is the quantity of diagnostic equipment at the hospital?	Too many----1 Sufficient----2 Too few----3
IC10	Is there a need to improve the quantity of diagnostic equipment at the hospital?	Yes---1 No---2 I don't know---3
IC11	If Yes, which diagnostic equipments would you want to be added?	Imaging Equipment(MRI, CT Scanners, ultrasound, x-ray)--1 Stethoscopes----2 Scales----3 Blood Pressure Monitor---4 Other (Specify)----5
IC12	What is your opinion on the quantity of availability of prescription medicine at the hospital?	Too many----1 Sufficient----2 Too few----3
IC13	Is there a need to improve the quantity of availability of prescription medicine at the hospital?	Yes---1 No---2 I don't know---3
IC14	Are there special services for the ageing population at the hospital?	Too many----1 Sufficient----2 Too few----3
IC15	Is there a need to improve the special services for the ageing population at the hospital?	Yes---1 No---2 I don't know---3
IC16	If Yes, which special services would you want to be improved?	Doctors specialised in geriatrics----1 Education and training of caregivers in geriatric medicine----2 Other (Specify)----3
IC17	Is there a geriatrics doctor at the hospital or a doctor undergoing training in geriatrics medicine?	Geriatric doctor----1 Doctor undergoing geriatric training----2 Doesn't know----3 None----4 Other (Specify)----5
IC18	On a scale of 1-5, how would you rate the length of time that patients spend with a healthcare provider at the hospital?	Very Good----1 Good----2 Okay----3 Poor-----4 Very Poor---5
IC19	On a scale of 1-5, how would you rate the length of time that patients have to wait to see a healthcare provider?	Very Good----1 Good----2 Okay----3 Poor-----4 Very Poor---5

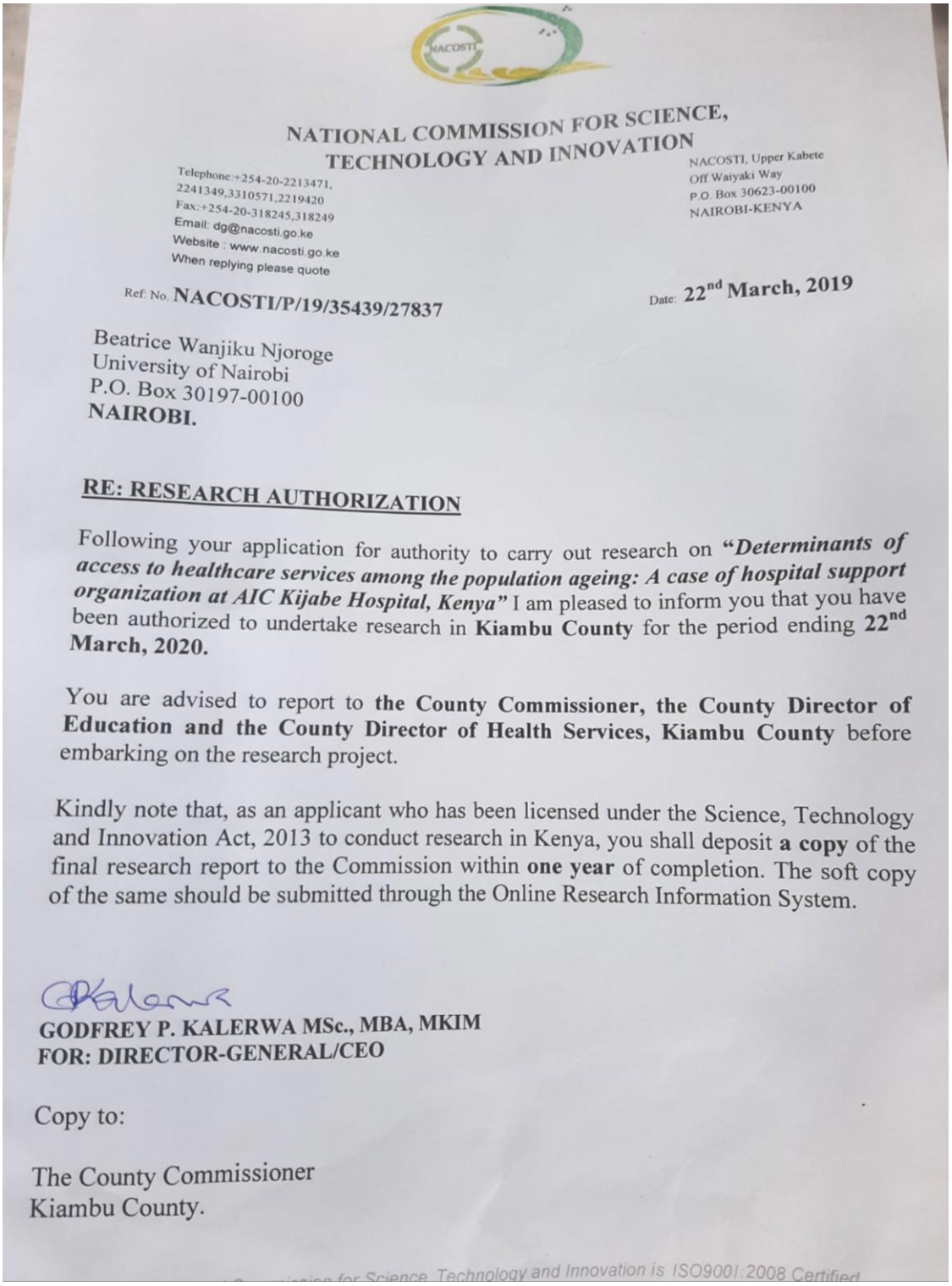
Appendix III Financial Budget

ITEM	**UNITS**	**UNIT PRICE (Kshs)**	**TOTAL COST (Kshs)**
Stationeries			
Pens	4	30	120
Pencils	4	40	160
Eraser	4	30	120
Notebooks	4	100	400
Clipboards	4	200	800
Travel expenses	For 3 weeks 5 days per week	500	7,500
Payment of Research Assistants	2 Research assistants For 3 weeks 5 days per week	1,500	45,000
Authorisation Bodies Fees	2 bodies	1,500	3,000
Printing questionnaires	380 * 7 pages	3Ksh per page	7,980
Contingency			5,000
TOTALS			**70,080**

Appendix IV Time Schedule

ACTIVITY	**2018**	**2019**	**2020**	
			Jan-May	**June-Sep**
Proposal Development	↔			
Formulation of data collection tools &tool pretesting	↔			
Preliminary Survey	↔			
Obtain Permits to go to the field	↔			
Data collection		↔		
Data Analysis		↔	↔	
Final Report				↔

Appendix V Approvals



NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION

Telephone:+254-20-2213471,
2241349,3310571,2219420
Fax:+254-20-318245,318249
Email: dg@nacosti.go.ke
Website : www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/19/35439/27837**

Date: **22nd March, 2019**

Beatrice Wanjiku Njoroge
University of Nairobi
P.O. Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Determinants of access to healthcare services among the population ageing: A case of hospital support organization at AIC Kijabe Hospital, Kenya"*** I am pleased to inform you that you have been authorized to undertake research in **Kiambu County** for the period ending **22nd March, 2020.**

You are advised to report to **the County Commissioner, the County Director of Education and the County Director of Health Services, Kiambu County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Kiambu County.

The County Director of Education
Kiambu County.

The County Director of Health Services
Kiambu County.

AIC Kijabe Hospital
Health Care to God's Glory

Medical Education and Research Division

Date: November 9, 2018

KIJABE HOSPITAL INSTITUTIONAL ETHICS AND RESEARCH REVIEW COMMITTEE
PO Box 20 Kijabe 00220, Kenya
Tel: 0709728200/637
Fax: 020-3246335
E-mail:researchcoord@kijabehospital.org
Website: www.kijabehospital.org

Reference : KH/IERC/2018
Formal Approval Number: KH IERC-02718/0024/2018

Beatrice Wanjiku Njoroge,
Hospital Support Organisation,

Tel No. 0731 350 352
Email: hsobeatrice@gmail.com

Dear Beatrice,

RE: RESEARCH PROTOCOL – DETERMINANTS OF ACCESS TO HEALTHCARE AMONG THE POPULATION AGEING: A CASE OF HOSPITAL SUPPORT ORGANISATION AT AIC KIJABE HOSPITAL, KENYA

The Institutional Ethics and Research review Committee having carefully reviewed your above title proposal grants you approval to conduct this study at kijabe hospital.

This approval is for a period of one year from 9 November 2018 to 10 Th November 2019. If your project extends beyond this timeframe then you will need to apply to the KH IERC for an extension.

This approval is subject to compliance with the following requirements:

a) Only approved documents (informed consents, study instruments, advertising materials etc.) will be used.
b) All changes (amendments, deviations, violations etc.) are submitted for review and approval by KH IERC before implementation.
c) Death and life threatening problems and severe adverse events (SAEs) or unexpected adverse events whether related or unrelated to the study must be reported to the KH IERC immediately.
d) Any changes, anticipated or otherwise that may increase the risks or affect safety or welfare of study participants and others or affect the integrity of the research must be reported to KH IERC immediately.

"Health Care to God's Glory"

e) For studies lasting more than one year an annual report must be submitted for ongoing approval to be valid.

f) Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period (attach a comprehensive progress report to support the renewal).

g) Clearance for export of biological specimen or any form of data must be obtained from KH IERC, NACOSTI and Ministry of Health for each batch of shipment /export.

h) Submission of an executive summary report within 90 days upon completion of the study. This information will form part of the database that will be consulted in future when processing related research studies so as to minimize chances of study duplication and/ or plagiarism.

Please do not hesitate to contact the AIC Kijabe Hospital IERC Coordinator (researchcoord@kijabehospital.org) for any clarification or query.

We wish you all the best in the study.
Thank you,

Yours Sincerely,

Peter Halestrap
BMBCh, MRCGP, DCH, DRCOG,MA (OXON)

Chair, AIC Kijabe Hospital IERC

Appendix VI Plagiarism Report

DETERMINANTS OF ACCESS TO HEALTHCARE SERVICES AMONG THE POPULATION AGEING: A CASE OF HOSPITAL SUPPORT ORGANISATION AT AFRICAN INLAND CHURCH KIJABE HOSPITAL, KENYA

ORIGINALITY REPORT

15%	12%	5%	7%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	erepository.uonbi.ac.ke Internet Source	2%
2	Submitted to Kenyatta University Student Paper	1%
3	www.healthdata.org Internet Source	1%
4	pdfs.semanticscholar.org Internet Source	1%
5	baadalsg.inflibnet.ac.in Internet Source	<1%
6	hdl.handle.net Internet Source	<1%
7	mafiadoc.com Internet Source	<1%
8	erepository.uonbi.ac.ke:8080 Internet Source	<1%