HOUSEHOLD CARE- GIVING PRACTICES TO THE PHASE THREE OLDER PERSONS IN KIRINYAGA COUNTY, KENYA.

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DECLARATION

This thesis is my original work prepared and has not been presented for a degree in any other university.

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DEDICATION

I dedicate this study to my grandparents among other older persons who inspired this study. Further dedication goes to my parents and family for their moral support. Much appreciation goes to my dear husband Julius, my lovely children Ashlyn, Jayden and Abigael for their continuous prayers, financial and moral support. God bless you. Further dedication goes to Kenyatta University and Kirinyaga County.

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ABBREVIATION & ACRONYM

AAM	American Alliance of Museums
BMI	Body Mass Index
CC	Calf Circumference
CDC	Centers for Disease Control and Prevention
CHR	China Health and Retirement
FCA	Family Care giver Alliance
FCOA	Family Care Giving for Older Adults
HAI	Help Age International
KHSSP	Kenya Health Sector Strategic and Investment Plan
KLSSS	Kenya Labor, Social Security and Service
KNA	Kenya News Agency
KNBS	Kenya National Bureau of Statistics
LTSS	Long – Term Services and Support
MIPAA	Madrid International Plan of Action on Ageing
MNA	Mini Nutritional Assessment
MUAC	Mid Upper Arm Circumference
NCD	Non-communicable Diseases
NSPS	National Social Protection Secretariat
OPCT	The Older Person Cash Transfer
SAGE	Study on global Ageing and adult health
SDGs	Sustainable Development Goals
SPSS	Statistical Package for Social Science
U.S	United States
UNDP	United Nation Development Program
WHO	World Health Organization

OPERATIONAL DEFINITION OF TERMS

Care giver	A person assisting those people who are either sick, physically challenged or are unable to do activities of daily living.
Care – giving	The acts of assisting older persons do activities of daily living.
Critical illness	A life- threatening condition
Energetic older-Persons	Older persons who are capable of carrying out activities of daily living alone with minimal support.
Fall	Accidental injurious fall due to loss of muscle strength and osteoporosis with old age.
Family structure	Structural organization of the old person's home
Geriatrics	Medical specialty dealing with older persons person's health
Geriatrics window	A room in a health facility set aside to serve the older persons
Health	State of being physically, mentally, spiritually and psychologically well and not mere absence of disease.
Middle-old	Persons who are 75–84 years old
Multi stage sampling	Sampling in stages using smaller sampling units at each stage
Older – person	A person aged 65 years and above
Old-old	Persons who are over 85 years old
Phase	This is stage of care for the older persons
Phase three	Stage when older becomes dependent on the care giver(75 +years)
Well up older person	Wealthy older persons
Young-old	Persons who are 65–74 year old

ABSTRACT

The population of the older persons is increasing steadily worldwide. This is secondary to lower fertility rate and increasing longer life. With the increased older person's population, societies get challenges taking care of the health function of older people. The growth in older person's population comes with the challenges of taking care of the older persons. As old age sets in, quality of life goes down. With reduced income generation, most of the older persons lack power to access basic needs resulting to poor health status. This study was meant to establish house hold care-giving practices to the phase three older persons in Kirinyaga County. Phase three (75 years and above) is a stage of older persons care when the older person's function starts going down and becomes partially dependent on the care giver. This is because the old is trying to cope with multiple disabilities and chronic pain and at this point, they accept outside care givers and relatives to assist them with activities of daily living. Population Based cross-sectional descriptive study was used. Multi-stage sampling method was applied to select participating units starting with Sub County, wards, and then villages. Households with an older person(s) were selected and formed a sampling frame. Systematic random sampling using the sampling frame formed was used at household level to select 333 participating respondents. Where a household had more than one older person, the head of the household or the oldest one was selected. A questionnaire with details of house hold care- giving practices and socio- demographic information was used. Statistical package for social sciences (SPSS) version 25 was used for data analysis. Descriptive analysis was used for social –demographic characteristics. Testing the association between independent variables and dependent variables was done using Chi-square and Odds Ratio was used. The respondents were aged between 75 years to 99 years, the mode was 75 years, median 78.00 years and the mean age was 79.64 ± 2.28. Age of the older persons respondents (p=0.0001), education (p=0.046), walking with support (p=0.001) and occupation (p=0.020) were significantly associated with caregiving in personal hygiene practices. Most of respondents 100 (30.0%) carried out daily activity by themselves, equally by the relative especially on bathing 182(54.7%) and attending medical appointments 107(32.1%). Slightly more than half 187 (56.2%) of older persons received monthly social cash transfer from the government and older persons who walked with support had strong significant association (p=0.0001) and were 0.4 times more likely to receive government support. Care-giving practices and interventions in place to support older person's well-being play a significant role in enhancing the well-being of older persons in Kirinyaga County. Thus, there is need for stakeholders including the government through Nutrition and Health promotion division, community and family members to ensure that the older persons feed well; care givers including spouse, children, relatives, friends and volunteers need to start taking care of the older persons.

CHAPTER ONE: INTRODUCTION

1.1 Background Information

Older persons refer to 65 and above years old persons (WHO, 2010). Older person's population is divided into three groups. These are young old 65–74 years, the middle-old aged 75–84 years and the old-old aged 85 years and above. There are four phases of care for older persons. In phase one the old has just retired. Loneliness is the issue hence regular contact with loved ones is important to prevent depression. In phase two physical decline and loss of energy is the problem and domestic support to prolong independence is important. In Phase three (75 years and above) the older person's function starts going down and becomes partially dependent on the care giver. This is because the old is trying to cope with multiple disabilities and chronic pain and at this point, they accept outside care givers and relatives to assist them with activities of daily living. Phase four is palliative care which is the last stage. This is the stage where calmness, soothing and pain free care is important (William et al., 2013). Caregiving is the act of assisting those people who are either sick, physically challenged or are unable do daily activities on their own (Mathiu et al., 2012).

The worldwide population for the old is projected to reach 1.4 billion by 2030 and 2.1 billion by 2050. This could increase to 3.2 billion in 2100 (WHO, 2015, UNPD, 2015). The population of the older persons in sub–Saharan Africa was estimated at 43 million in the year 2010. This was projected to reach 67 million by 2025 and 163 million by 2050. African continent and Sub – Saharan Africa too is facing increase in ageing population amidst challenges of increasing budget constrain, changes in environment

and poor healthcare accessibility. The older population has status disparities ranging from those living in poverty while a small fraction enjoys wealth (SAGE 2013).

In Kenya an older person is one aged 60 years old similar to the stipulated official retirement age in 2019 census, Kenya had a population of 1.5 million persons who were 60 years old or more and the number was projected to reach 2.2 million in 10 years' time. Modern Kenyans begins admitting their ageing parents to retirement homes. Health problems are one of the major challenges that face older persons as age sets in. The older persons lack consistent access to enough source of income for example employment, older person's support system or even pension. This makes it difficult for them to cater for their health needs. Lack of specialized geriatric doctors and other health workers worsen the situation further (HAI, 2010).Elder abuse is an act or lack of required act which could be done once or repeatedly, occurring in an expected trustworthy relationship and causes the older person harm or distress. The violence constitutes a violation of human rights. Elder abuse includes physical, psychological, emotional and sexual, abuse. It also includes financial and material abuse. Another one is abandonment, neglect, loss of dignity and respect (Baker *et al.*, 2016, Lancet 2017, WHO 2019). The older population is a key wealth to nations and hence their welfare needs to be looked after by all the policy makers in all nations (SAGE 2013, HAI 2012).

1.2 Problem Statement

Globally the aged population is expected to increase nearly fourfold from 2005 to 2050 which demand more attention among the developing countries. With the increasing

older person's population, increased number of people requires care due to functional limitation needs. The other problem is lack of public support to formal and informal home care**.** This leads to more burdens on the older person's institutions and health care facilities. Developing countries are further facing challenges of urbanization, industrialization, changing family structures, and shifts in living arrangements. These changes lead to increased number of older persons being left alone without care leading to older persons neglect and abuse.

Kenyan population for the older persons is 4.7% of the total population which is expected to reach 10.4 % by 2050 and 26.4 % by 2100 (WHO, 2013). The current 2.6 million populations of the older persons represent 4% annual growth rate which is far below the annual birthrate of two births per woman to replace the rapid older person's growth. Kenyans needs to take care of the increasing older persons' population since there aren't enough local social economic programs to support this group. For example, the 2000 monthly Older persons Cash Transfer does not reach all the older persons. Further this money is too little to sustain the older person's basic needs.

Kenya's older person's dependency rate stands at 4.6% which means increased budgetary allocation to pension, healthcare, institutions of care and other old age services. On the contrary, the old faces major challenges including high level of poverty, poor health, and insecurity. Lack of care, neglect and poor housing are other challenges facing the old. Older persons are also discriminated and marginalized in accessing medical treatment. Kenya lacks public health insurance scheme for older

person. There is also limited accessibility to private health insurance scheme which results to greater challenges in health access by the aged persons. Lack of specialized geriatric doctors and other health workers worsen the situation further. Family members are left to care for the chronically ill and disabled older persons. Kenya has about 16 facilities for residential care. Most of these institutions are run by religious organizations. The other important gap is lack of intervention involving public support for formal and informal home care**.** Clearly there is a huge gap in Kenya for both long-term and short-term older persons care (WHO, 2017, Lancet 2017).

Currently there are changes in family set up, poverty, urbanization and mortality from HIV and other chronic diseases. This has led to loss of family care and neglect leading to the older persons being left alone with little energy to take care of themselves in poor living conditions. This further leads to poor health as a result of hunger, malnutrition, and inaccessibility to clean water, sanitation and health. The older persons may suffer from the following vulnerability: physical, emotional, psychological, financial, discrimination and neglect by both nuclear family and the community at large and older person's abuse. Globally, older persons' abuse knowledge is very little. Similarly knowledge of older person's abuse in developing countries is little, with the nature and magnitude of the same being clearly portrayed. The risk factors to older person' abuse remains contested and prevention interventions are limited.

Kenya is among the nations where older person's abuse/neglect is on increase especially in counties like Kirinyaga, Kisii, Kilifi, Kwale and Nyamira. Help age international

reported that 85 percent of older persons are abused with 261 having been murdered between 2013 and 2014; hence a great problem exists among the older persons. Kirinyaga County is among the leading counties with a high old age dependency/ parent support ratio of 13.6%(KLSSS, 2015, HAI, 2013; KDP, 2009). This is against the national's older person's dependency ratio which is at 4.6%.

Kirinyaga County's older person population has increased from 9,778 in 2009 to 29,842 in 2019. This means increased demand for healthcare, care givers, institutions of care, old age services and increased budgetary allocation to pension. Kirinyaga County is also characterized by NCDs which has a prevalence of 14-17% against 11% national prevalence. In Kirinyaga County, the older person's populations have poor health seeking behavior partly contributed by lack of medical insurance schemes where only 10% against 14% nationally have medical insurance cover. There is also lack of specialized geriatric doctors, enough institutions of care and other old age services. High level of poverty at 45% against 40% national poverty level among the phase three older persons in Kirinyaga County leads to poor housing, poor hygiene and poor diet leading to poor health.

Older persons in Kirinyaga County also face the problem of neglect and abuse due to loss of family structure with changes in family set up and poverty, urbanization and mortality from HIV and other chronic diseases.

This study meets the following contributions: - Awareness creation in roles of care-giving in promoting age- friendly environment, nutritional and hygiene status among the older persons hence improve health status of the aged population in Kenya.

1.3 Justification

The study aimed to examine phase three household care- giving practices to the older persons in Kirinyaga County. There's a gap in research on phase three older persons care in promoting well-being and health status of the older persons, which creates a vacuum in the older person's health policy in Kenya.

Increased population growth in Kenya will impact the older person's social well-being negatively. This is due to urbanization of young people leaving the older persons alone to struggle with the grandchildren leading to strain on quality of life. This opposes the ancient culture of the older persons being taken care of by the young. With the increasing older persons population in Kenya, increased number of people requires care due to functional limitation needs. Without household care there's more burden on the few older person's institutions and already strained health care facilities (lancet 2017).

Kirinyaga County has increased old age population. Aged population increase means increased demand for healthcare, care givers, institutions of care, old age services and increased budgetary allocation to pension (NCPD, 2016). Disease burden impact negatively on the health of older persons resulting to increased dependency on caregivers, the need for caregivers and interventions by National and County

governments as well as other partners in order to improve on household care-giving to older persons. Care- giving ensures healthy nutrition; proper hygiene, environmental safety and healthy aging will prevent diseases and disabilities thereby reducing the escalating demand for healthcare, dependency on care givers and need for admission to institutions of older persons.

Very little is known on household care giving practices to the phase three older persons in Kirinyaga County. This is because few studies available have only focused on care-giving in the institutions of older persons. The study findings will contribute to the attainment of SDGs 1, 3& 5 and the Kenyan Constitution 2010 article 57 that requires the family and state to take care and assist the older persons.

1.4 Significance of the Study

This study meets the following contributions: - Awareness creation in roles of care-giving in promoting age- friendly environment, nutritional and hygiene status among the older persons hence improve health status of the aged population in Kenya. The study will be useful to health research and generating interventions relating to older persons health. For example: awareness creation on importance of older persons care, training and capacity building on proper handling of the old, protecting older persons against abuse and neglect. Another important thing is introduction of feeding programs for the older person and provision of geriatric clinics/windows in health facilities.

The study findings will inform the local authority on the environmental challenges among the older persons which will help in proper planning for example a policy on the

age friendly environment. Information generated will also inform the County administration on older person's abuse and neglect which will help in planning for empowerment of the seniors. Study findings will raise awareness on need for the older persons care-giving hence improve quality of life among the older persons.

1.5 Research Questions

1. What is the role of care- giving in the well-being of the older persons in Kirinyaga County?
2. What are the types of care-givers among the older persons in Kirinyaga County?
3. What are the interventions in place to support the well-being the older persons in Kirinyaga County?

1.6 Objectives

1.6.1 Main Objective

To examine phase three household care- giving practices among the older persons in Kirinyaga County.

1.6.2 Specific Objectives

1. To establish the role of care- giving in the well-being of the older persons in Kirinyaga County, Kenya.
2. To determine the types of care- givers for the older persons in Kirinyaga County, Kenya.
3. To identify the interventions in place to support the well-being of the older persons in Kirinyaga County, Kenya.

1.7 Limitation

Low level of illiteracy among the respondents was a challenge, however to overcome this questionnaire in local language was constructed.

Confounders like critical illness, wealth and physical strength/stamina.

1.8 Delimitation

The study was delimited to older persons at Kirinyaga County.

1.9 Theoretical Framework: Social Network Theory:

The study was grounded on Social Network Theory. The theory credited to Jacob Moreno in 1980's proposes that individual's social interactions leads to heterogeneous relationships with different levels of supportiveness (Cho, 2007). This theory emphasizes the existence of older person's various needs, necessitating both family and community to take care of the older persons (Rashmi *et al*., 2013). In addition, the type of care provided differs across different relationships. These relationships include primary groups such as spouses, offspring, relatives, and non-relatives. For example, spouses living together have a close contact and hence a longer period of time to provide social care. On the other hand community living close by can provide primary contact but unlike spouses, they have no long term social care commitments (Carlton 2012).

Caregiving has various roles in the well-being of the older persons like improving quality of life. Care giving can be achieved through emphasizing the benefits of receiving social support. Social identity, social control, or loneliness is the bases to the

social support theory (Yon *et al.*, 2019). Social identity is achieved through social support in that when an older person is in a social network it has some positive effects on health. It also gives them meaningful roles that provide self-esteem thereby increasing the meaning of life. This in turn affects their health positively (Baker *et al.*, 2012). Secondly, social support brings social control which in turn affects health positively. For example, if an older person being in a social network places pressure on a caregiver to provide his/her obligation roles towards the older person (Enid & Janet, 2015). Thirdly, loneliness as a basis for social support in that an older person without a social system is prone to poor health outcomes. This is because it affects the older person's self-esteem, loses meaning of life, and lacks obligation to life (Baker et al., 2016). Consequently, negative health behaviors like depression, negligence, loss of appetite and grooming sets in thereby affecting the older person's overall health outcomes.

Lack of support to informal care-givers leaves older persons to struggle taking care of themselves. This leads to poor health due to poor nutrition, poor personal and environmental hygiene, and poor psychological problems. Older persons without medical insurance cover have poor health seeking behavior which negatively affects their physical health. For example, they lack healthcare accessibility such as physiotherapy (Gillick, 2013). Due to poverty the care givers of the older persons faces burden in that they handle the older persons' physical health problems alone with limited resources available. Government intervention such as social support and Cash Transfer for Older Persons can alleviate the care-giving burden.

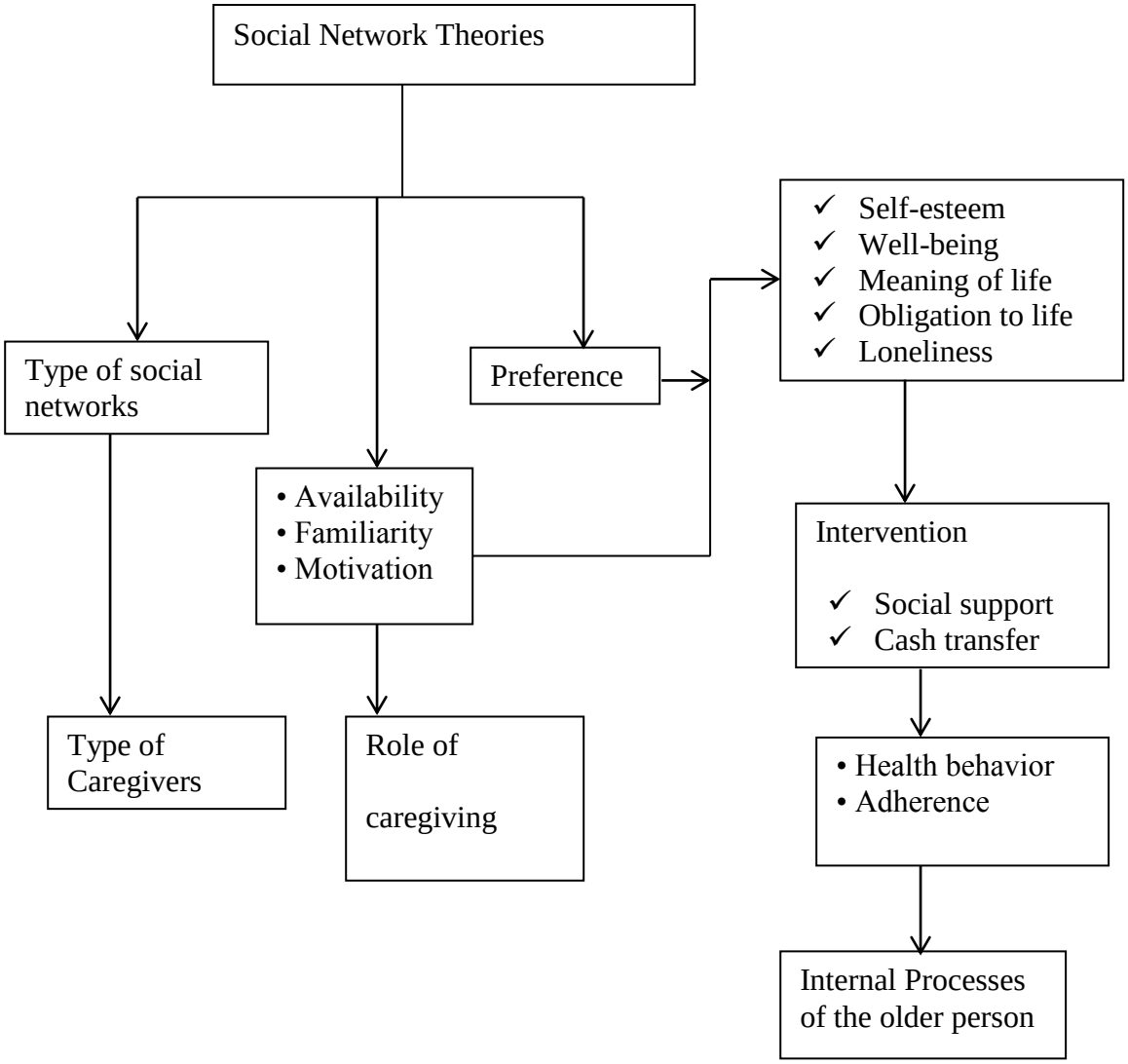


Figure 1. 1: Theoretical Framework

Adopted from Chao, 2007-TF and Chapman, 2010-CF

1.10 Conceptual Frame Work

This is the concise description of the phenomena under study accompanied by visual depiction of the variables under study (Mugenda and Mugenda, 2003).

The socio-economic factors affect the caregiving practices in that if the older person is financially stable, he or she has the capability to employ a paid caregiver. This means that he/she can't suffer in case there are no other alternative caregivers such as family caregivers. An older person with a good education background has a better understanding of the need for proper hygiene, good nutrition and reason for having a care giver. The higher number of children for the older person provides a variety of caregivers. On the other hand, religious group positively influence the social life of the older persons.

The well-being of older persons determines the type of care to be given. For example a bedridden older person would require close and regular monitoring. Family caregivers would be more dedicated than volunteers who don't provide long-term commitments. Provision of Older Persons Cash Transfer and social support improves the caregiving practices and health seeking behavior which in turn positively affects the health of the older persons.

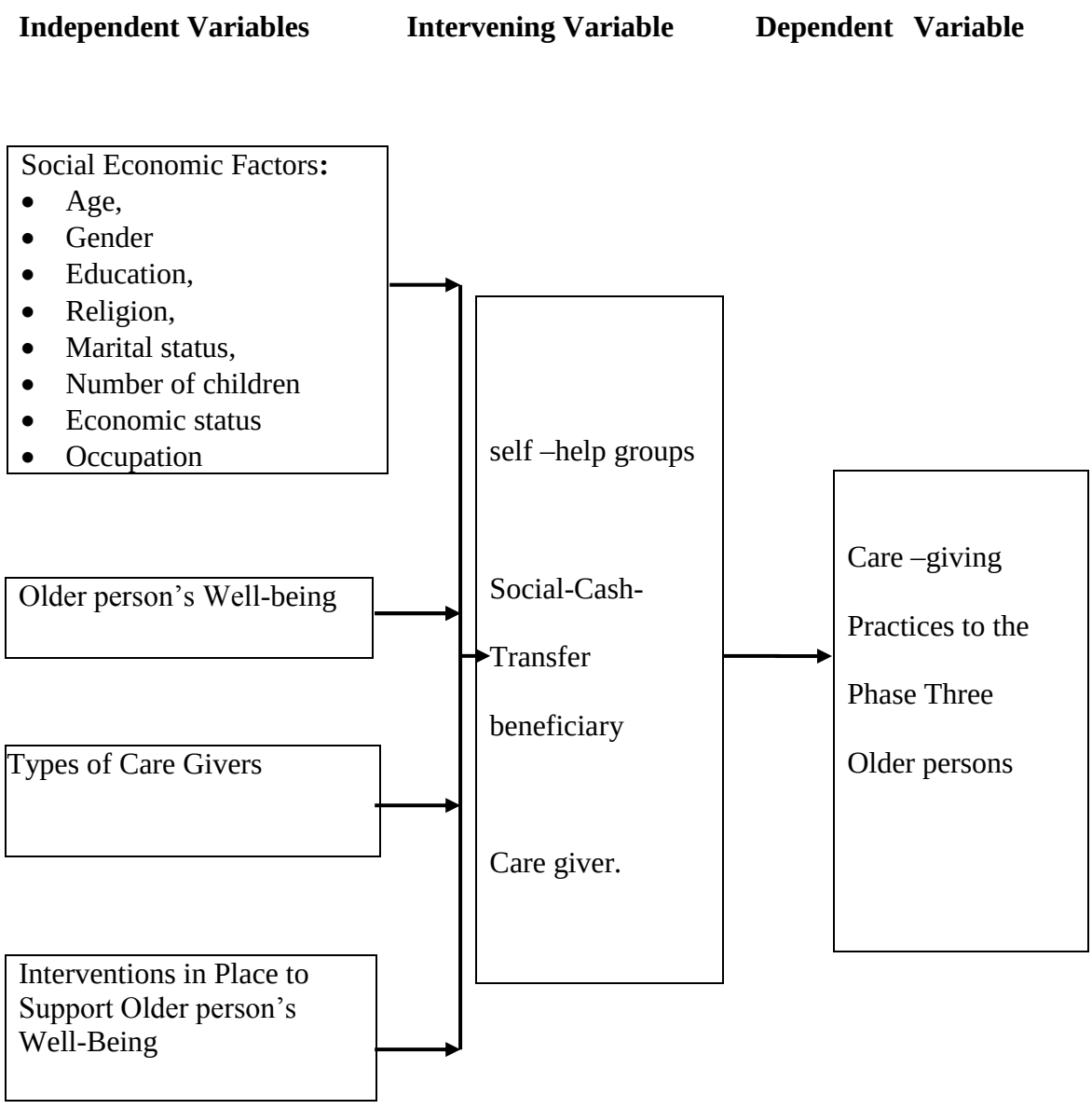


Figure 1. 2: Conceptual Frame Work

Adopted from literature review

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The chapter reviewed different literatures in relation to the study obtained from published findings such as thesis, Journals and books**.**

2.1.1 Current Trend in Older persons

Older persons refer to 65 and above years old (WHO, 2012). Phase three (75 years and above) is when the older person's function starts going down and becomes partially dependent on the care giver. This is because the old is trying to cope with multiple disabilities and chronic pain and at this point, they accept outside care givers and relatives to assist them with activities of daily living.

Worldwide Population is ageing at very high rate. Aged population will double from 11% to 22% between 2000 and 2050. The unprecedented increase in ageing has serious implications on social, disease burden and health care system. Worldwide, the current older persons care systems are unable to cope with the increasing numbers of the aged persons both in developed and developing countries. The older persons receiving help from public and private sector agencies has greatly decreased. This is placing the needy older persons at risk and overburdening the family of the older persons. For example, about 800,000 persons who are 65 years old and above in UK do not receive support from the government or private agencies (Age UK, 2014).

In USA the number of unpaid family care givers for older persons is increasing. In contrast North American people view caring of the older persons as a burden. Sixty percent of care givers are outside the home even when there is a family member able

and willing to take care of their aging parent. However even the 60 percent of the out sourced care givers labor is inadequate for the increasing older persons population. On the other hand, the many middle-class families are struggling meeting the cost of paid professional care givers leading to care giving gaps(Bookman *et al,* 2011).Most Americans are unwilling to place their aging parents in older persons homes especially the Latinos, African Americans, and Asians (Bookman et al., 2011).

Chinese portrays a higher related responsibility and are perceived taking care of their family older persons. However, China is also facing crisis in older persons care due to the aging population growing rapidly and overwhelmingly to the families and the government (Funk *et al.,* 2013, Bookman *et al.,* 2011).

African continent and Sub – Saharan Africa too are facing increase in ageing population amidst challenges of increasing budget constrain, challenges in the environment and poor access to healthcare. The aging population goals set in Madrid (Madrid Plan of Action on Ageing) seems difficult to achieve in Africa due to high poverty in Africa. Developing countries face challenges of financial insecurity, poor and inadequate health services, unemployment and environmental degradation. Stronger pension schemes and proper national welfare schemes could address income security but none or inadequate schemes are available in most of African countries (Lancet, 2014; UNDP 2015).

The major concern among the older persons is health. This is because it determines the ability to take care of their daily activities. Inaccessibility to health-care services among the older persons contributes to poor health among the older persons (HAI ,2013).

Africa faces a burden of infectious diseases with more mortality from non-communicable diseases (cancer, diabetes, cardiovascular diseases) being most prevalent. This comes amidst ill-prepared health care systems to attend to the increased health demands from older persons. These include services like preventive and curative health services from the older persons. Long term care plans for the increasing older persons is ill-prepared in African countries. Most of them lack comprehensive long term care plans neither at family, community nor at the National level.

Much of infection prevention is focused on children and youths forgetting the older person's population (WHO, 2012). Discrimination against age and gender especially on female older persons leads to disempowerment which affects their health negatively. Variations in countries, cultures and politics bring about different views on older person's care. However, to ensure healthy and dignifying aging requires a more age-friendly approach. It calls for more financial and human resources investment on the older person's care. On the other hand, more emphasis on healthy aging through healthy eating, exercising, and regular medical checkups is also important (Lancet, 2014; HAI, 2013).

Kenyan older person's population is about 1.2 million which is about 3.8% of the total population. The population is projected to double by 2050. The situation in Kenya is similar. The Older Persons Cash Transfer Program currently covers only 203,011 households leaving the unsupported households in financial crisis. Kenya lacks a legislative policy on the older persons and relies only on the Kenyan constitution article

57. The article mandates state and family to ensure that older persons participate in the society affairs. The law too mandates pursuance of older person's personal development. It also ensures that the old live in dignity and respect. Another important thing is that the older persons must be free from abuse. Lastly the law requires the family and state to provide reasonable care and assistance to the older persons. Like other developing countries Kenyan health system is inadequate to cater for the increasing aged population. Firstly, there is lack of public health insurance scheme for the older persons. Accessibility to the private health insurance scheme too is limited leading to greater challenges in health access by the aged persons. Lack of specialized geriatric doctors and health and other workers worsen the situation further. Family members are left to care of older persons with disabilities and chronic health problems. Kenya has only about 16 facilities meant for residential care which are mostly run by religious organizations. Clearly there is a huge gap for both long- and short-term care for older persons in the country (WHO, 2017; Lancet, 2017).

Education on healthy aging is required. This includes eating healthy, exercising, regular medical checkups, avoiding tobacco and excess alcohol intake (WHO, 2012). Caring of the older persons by both the government and the family is also a key factor in healthy aging. However due to increased population of aging population, mortality from HIV and urbanization, care giving among older persons especially by the family members lacks leading to more admissions at older persons homes (WHO, 2013).

Older population has very important roles to pray in the communities. For example, in Africa older persons engage in small scale farming where they constitute a significant share of labor force. The older persons have intergenerational connection with children and adolescents within households and families impacting them through education and healthy behavior. They also have significant role in the community in that they presents as ‘elders” among the civic, political and religious leaders. They also act as role models in the business and professional elites. They actively or passively shape the younger generations attitudes towards political, entrepreneurship, societal stability and good governance. From these roles it’s evident that the older population is a key wealth to nations and hence their welfare needs to be looked after by all the policy makers in all nations (SAGE, 2013; HAI 2012).

2.1.2 Phases of Older Persons Care Giving

There are four phases of family care giving for older persons. Every phase has got its own challenges, opportunities and costs. In phase one the old does not need any help. For example, today’s phase one age group is happier, healthier, and financially better off than the phase ones of previous generation. Due to wider availability of resources, preparation for aging is better in North America as opposed to African countries. Several people are making better life decisions concerning their old age life while still at young age. Previous decision about the older person’s care life at health crisis was being done by the family members. Little choice about what happens, who takes care of the older person and where to receive the care from was given to the older person. Currently the older persons are able to make decisions such as better housing friendly

and which allows independence to the old age. They are also able to make retirement planning, living wills, medical insurance cover and power of attorney while still in young old age (William *et al.,* 2013).

In phase one age group, the children perceive the need for help but the older person doesn't accept any help especially on the daily living activities. However, the older person at this stage is lonely hence prone to depression, anxiety and lack of self-confidence. They may also be suffering from ailments that comes along with aging such as diabetes, hypertension. Regular contact with the old often becomes critical care in this phase. Financial planning, legal advice on future and living will, power of attorney and hospital insurance cover is important. However, this is not being practiced especially by the young older persons in developing countries. This is partly due to poverty, lack of support by the family and the state. Some older persons age when already in financial crisis for example servicing loans taken during working period (William *et al.,* 2013).

In phase two physical decline starts showing with little less motility, anxiety of becoming old, little signs of confusion among others. Domestic support to give preventive care geared to prolonging independence is necessary in this phase. However, the older persons in this phase are resistant of having a hired care giver citing cost, denying the need or both. Meals preparation by the family member, assistance with driving to see a doctor or shopping is usually accepted. Communication devises and alarm gadgets to enable getting in touch with the older person is important at this stage (William *et al.,* 2013).

In Phase three (75 years and above) the older person's function starts going down and becomes partially dependent on the care giver. In this phase, the old are trying to cope with multiple disabilities and chronic pain. At this point the older persons accept outside care givers and relatives to assist them with activities of daily living. The family caregivers may get community intake services, referral services, home care and healthcare agencies. A psychogeriatric assessment of the older persons from public or private geriatric center is important. Many old parents desire to remain at their homes despite the challenges they are facing. However, at this stage some older persons will accept admissions at assisting living residence. Others will accept to live with the family of their grown-up children where they can be taken care of. Phase four is palliative care which is the last stage where calmness, soothing and pain free care is important (William *et al.,* 2013).

2.2 Care-Giving among Older Persons

Care-giving is the act of assisting those people who are either sick, physically challenged or are unable do daily activities on their own (Mathiu *et al.,* 2012). Care-giving is assisting persons unable to do activities of daily living due to physical disability illness or old age. It focuses on physical, mental, social, and psychological needs. With care-giving older spouses and parents can live at home longer (William et al., 2013). Globally care-giving has increased due to increased life expectancy and a subsequent growth in the aging population. In U.S. the fastest growing segment is the 65 years and above old (U.S. Census Bureau, 2011). Families account for the highest

number of care givers to older person's relatives providing about 80-90% of all personal and medical-related care (AAM 2016, FCA 2012).

Care-giving especially to older persons is increasing steadily and will require assistance by the government. Most Caregivers are females who largely fulfill an important societal role. Female care givers should be assisted through funding legislation and flexible duties at work place. Crisis in care giving globally is being experienced. In 2014 social care for older people's funding was in crisis and the trend seems to get falling yearly (Age UK, 2014).Similarly, in America, unpaid family care-givers provide the most assistance. The 60-plus aged population in sub-Saharan Africa is around 58 million and this number is projected to reach 215 million by 2050 (Enid & Janet 2015). In Africa the older persons care is even much worse and problematic bearing in mind the low-income level. For example, China is becoming old before it gets rich. Out of 185 million older persons in china in year 2011, 23% of the older persons lived below poverty level, 32% reported poor health and 38% reported difficulties with activities of daily living. Due to one child policy and massive urbanization it's difficult for the older persons to live with the family care givers hence adopts western type of care which is expensive and not achievable (CHR, 2011).

East and central African countries have fewer formal systems for older persons care hence families provide care (APT2012, Thrush & Hyder 2014, GPH2014). The increased older persons population and partially due to HIV has led to informal care deficit (Mokomane, 2013). In Kenya the situation of older persons care deficit is similar

to other African countries. Most Kenyans are placing ageing parents in retirement homes. Another problem is that many older persons in Africans are neglected and are being abused due to lack of a social safety net (Mathiu *et al.,* 2012). In developing countries older person abuse is posing as a major public health issue.

Although not well documented information, around 1 in 10 older persons experience abuse monthly (WHO, 2016). Older person's abuse commonly referred to as neglect is an act of commission or omission. It's usually done through failure to take required obligation in an expected trustworthy relationship. This causes harm or distress to the old. The older person may suffer from the following vulnerability: physical, emotional, psychological, financial, discrimination and neglect by both nuclear family and the community at large. Older person's abuse is a serious violation of human rights which may include injury, pain loss, decreased quality of life or premature death (WHO, 2016).

2.3 Roles of Caregiving in Well-being of the Older Persons

Caregiving is the act of assisting those people who are either sick, physically challenged or are unable do daily activities on their own (Mathiu *et al.,* 2012).

2.3.1 Personal Hygiene

Personal hygiene is the basic things that one does daily including getting up bathing, brushing teeth, combing your hair, nails care, dressing etc. To the older persons these things may seem difficult leading to agitation, frustration and depression. Other

challenges faced by the older persons in their personal hygiene practices include lack of water, design of bathroom, inability to get sustainable care practices etc. To avoid this, they should be assisted. They should also be encouraged to carry out these routines as it promotes independence and sense of purpose. Good personal hygiene will not only promote psychological well-being among the older persons, but also good physical health (Mangiola 2016).

In case the older person has urine and fecal incontinence the older person should be encouraged to change and bath regularly to maintain personal hygiene. In case of a bed ridden older persons, marking tosh should be used on mattresses or use of adult diapers. To overcome the challenges faced by the older persons in their personal hygiene practices consistent water supply should be supplied. A proper bathroom with rough floor finish and support frames should be provided. Care givers either hired or from the family should be provided to enhance sustainable care practices among the older persons. On the contrary increased population leads to urbanization in search for greener pastures leaving the older persons alone struggling to take care of themselves leading to strain on quality of their personal hygiene (Mkhizer *et al*., 2013, Waudo 2018).

2.3.2 Nutritional Status of the Older Persons

Malnutrition among the older persons is common and negatively affects them (WHO 2013, Waudo 2018). This is due to changes in physiology and functions that occur with old age. Inadequate access to food among the older persons is mainly caused by

poverty. Inaccessibility to food is a key factor to malnutrition among older persons. Inability to perform activities such as food preparation and food intake further leads to malnutrition. Poor nutrition diet together with diseases (communicable and non-communicable diseases) further affects the general nutritional status of the older persons. Dental issues such as gum diseases, tooth decay, tooth mobility and missing teeth in older persons are the risk factors to malnutrition. Addressing dental health is also important in improving the older person's welfare. Older persons living alone are heavily affected mentally, emotionally and physically which further affects their nutrition negatively (Waudo, 2018). Malnutrition and morbidity create a vicious cycle.

Most of the nutritional interventions targets pregnant and lactating mothers, children and adolescents leaving out the older persons. Older persons should also be given nutritional interventions such as food and nutrient supplements which would reduce weight loss and malnutrition. Unfortunately, not much information of under-nutrition in this age group in research is available to help in initiation of important older persons nutritional programs. The care-givers should assist in food preparation, ensuring quality, quantity and frequency of food intake of older persons. Demographic changes geared towards improving malnutrition among the old should be observed by both the health care workers and the older persons care givers. Another important method is training the older persons and their care givers about nutrition. Community diagnosis involving routine screening of more vulnerable groups should be done and a proper corrective nutritional action taken. Screening of the poor older persons living in underprivileged regions for nutritional intervention should be done. Similarly the older

persons suffering from multiple comorbidities should be screened for nutritional interventions. Recommendation on development of Nutritional guidelines for older persons should be done (WHO 2010).

A cross-sectional study done by Rashmi *et al.*in India in 2013 noted that out of 360 older persons, 15% were malnourished and 555 at risk of malnutrition. According to researcher factors like financial dependency, functional dependency status, inadequate food intake and female gender was associated with malnutrition. This calls for awareness creation about quality, quantity and food intake frequency among older persons and their care givers. Similarly, in 2014 Monoarul Haque *et al.*, found the health status of Bangladesh older persons not satisfactory hence recommended nutritional related interventional programs meant to improve their nutritional status.

In Kenya nutritional needs of the older persons are neither documented clearly nor understood. Older persons are acknowledged as vulnerable to malnutrition yet their nutritional needs are not adequately met. High prevalence of malnutrition among the older persons in Kenya is associated with poverty which affects quality and quantity of food. Others are diseases like HIV/AIDS pandemic, dentation issues and change in family structure. Impaired physical mobility and lack of assistance are also associated with malnutrition among the older persons (HAI, 2010).

The older person's nutritional status is affected by ageing process, health status and economic status. These factors are attributed to changes in eating patterns due to muscle

loss, decreased sensitivity to smell and taste, sense of thirst, cognitive function, medication and social support (Waudo 2018). Various causes attributed to poor nutritional status among the older persons in Kenya includes eating too much of the wrong variety of foods, eating monotonous foods, not eating enough fibres, loss of appetite, loneliness, forgetting to eat due to poor memory, psychological stress and poor preparation methods (Waudo, 2011). Nutritional problems affecting the older persons include malnutrition and undernutrition. Undernutrition leads to reduced immune system, impaired wound healing, reduced muscle strength, fatigue, depression and longer hospital stay (Carlton 2012, Mohamed 2013, Waudo, 2018). Most of institutionalized elders suffer undernutrition mainly due to decreased physical, psychological, and social factor. Difficulties in chewing, mouth ulcers and dry mouth are other factors affecting them (Mugo, 2015).

Nutritional status correlates with educational level of the older person, availability of a care giver and living independency. An older person's living alone has a tendency of taking few and monotonous foods, one staple food such as arrowroots, green cooked potatoes or sweet potatoes. The tendency of preference of sweet foods and meat shunning vegetables among the aging further affects their nutritional status (Waudo, 2018).

As the human body age all the body system slow down and there is increased risk of nutrition related/chronic diseases. Among them is sarcopenia which affects over 80% older persons worldwide resulting to loss of lean muscle leading to reduced muscle

strength, frailty, fatigue and imbalances among other problems (Waudo, 2018; WHO, 2015). Reduction in bone density or osteoporosis common among older women leads to increased bone fractures. Taste perception changes, reduced smell power and eye sight too affects nutrition status among the older persons. Bioavailability as a result of decreased gastric acid with aging too affects their nutritional status. Osteoarthritis resulting from accumulated wear and tear is another painful condition affecting the older persons which further affects their nutritional status (HAI, 2015; Waudo, 2018). Menopause among the older women which is a major cause to osteoporosis affects the older person's nutrition status. In view of the above nutritional related diseases, it is important to consider older persons nutritional interventions such as supplementation with important vitamins and ions such as vitamin D, vitamin A, calcium, fluoride, calcitonin, sex hormone replacement (oestrogen or testosterone therapy) among other therapies (Waudo, 2018; HAI, 2015).

2.3.3 Age-Friendly Environment

Age-friendly environments help with welfare and participation of older people as they age. The age friendly environment should be accessible, equitable, inclusive, safe, secure, and supportive. This is important in promoting health and prevention/delaying disease onset. Functional decline is also delayed hence older people continue with their important duties. The environment determines how we age and respond to disease. It also determines how we deal with losses in function and adversity occurring as we age.

In 2011 was launched by WHO in the year 2011 launched Global network of age friendly cities and communities. This was to enhance importance of age friendly environment. Several cities in developed countries have embraced the initiatives to make the positive changes. Much of these changes are yet to be adopted in developing countries. According to NARI 2015 environment can be physical or social.

Physical environment indicators: This is about the neighborhood walkability, ability to access public spaces, accessing buildings and transport easily. It also entails affordable and accessible housing. Safety is also paramount in a good physical environment. Another important indicator is availability of older persons feeding tables and good sanitation. Similarly, toilet and bathroom should be non-slippery and having supporting handles/ rails for the older persons. The care giver should ensure/assist the older persons in navigating the physical environment (WHO, 2011).

Social environment indicators: positive social attitude should be shown by care givers, family and state towards older persons. Another important ways is engaging older persons in volunteer activity, socio-cultural activity and spending leisure-time in physical activity in a group. Older persons should be involvement in local decision-making. Another important thing is availability of information, services and economic security among the older persons (WHO, 2011).

2.3.4 Older persons Abuse

The number of elder abuse cases is projected to increase globally. This is in line with the rapid increase in aging populations amidst resource constraints leading to older person's needs not fully met. In the year 2017, around 15.7% of older persons were subjected to some form of abuse globally. As the population of ageing continues to increase elder abuse cases will reach 320 victims by 2050 (WHO, 2017, Yon *et al.*, 2019).

One in six elders is abused globally. Sparse information on elder abuse prevalence is available. For example, among the 24 cases of elder abuse occurring, only 1 case is reported. This is because older persons are often afraid of reporting the case to their family, friends or authority. The fear could be that, the perpetrators may be their care takers (family, friend or relative) and may suffer the consequences of reporting them. This calls for social protection of the older persons. A systematic review and meta-analysis study on elder abuse prevalence in community settings published by lancet global health in 2017 revealed that 57% of elders are abused globally. Out of this 11.6% were psychological abuse, 6.8% financial abuse, 4.2% neglect, 2.6% physical abuse and 0.9% sexual abuse. Similarly, older person's abuse prevalence rate in institutions of care is high. There is a need to scale surveillance and monitoring of elder persons abuse in the institutions of care globally. This will inform on policy against elder abuse (WHO, 2019; Lancet 2017).

Elder abuse commonly referred to as neglect is an act of commission or omission. It's usually done through failure to take required obligation in an expected trustworthy relationship. This causes harm or distress to the old. This violence disregards human rights. Older persons abuse includes physical, sexual, psychological, and emotional abuse; financial and material abuse; abandonment; neglect; and serious loss of dignity and respect (Baker *et al.,* 2012, Lancet 2017, WHO 2019). Consequences of older person's abuse include physical injuries such as minor abrasions, bruises, fractured bones or even injuries causing permanent disability. It can also lead to anxiety or even lead to depression or even death. Globally, elder abuse knowledge is very little. This situation is worse in developing countries (Lancet, 2017).

The risk factors to elder abuse remains contested and prevention interventions are limited. Risk factors to older person's abuse may be at individual, relationship, community and socio-cultural level. At individual level the risk of abuse could be due to poor physical and mental status, alcohol and substance abuse. Female gender is another risk factor to elder abuse. This happen mostly in cultures where women are disregarded and accorded inferior social status. This leads to the higher risk of neglect and financial abuse especially when they are widowed. At the relationship level the old may be abused by the spouse or children mainly due to dependency, poor family relationship or even work overload. Older persons face abuse at community level through isolation and lack of social support by care givers. Social isolation among the older person may occur if the old is incapacitated physically or mentally leading to loss of friends and family members at the community level. Socio-cultural factors leading to

elder abuse includes ageist stereotypes, poor family bonds, inheritance and land rights issues that affects distribution of power and material in families. Another reason to neglect is urbanization and migration of grown-up children. This leaves older parents alone without finances to care for them (WHO 2017, Lancet 2017).

High- income countries have adopted interventions to prevent elder abuse. These include public and professional awareness campaigns. Another intervention is on school-based intergeneration programs to decrease negative societal attitudes and stereotypes towards older people. Care-giver support too is an important intervention adopted. Others includes mandatory reporting of abuse to authorities, self-help groups, safe-houses and emergency shelters, psychological programs for abused, helplines to provide information and referrals and caregiver support interventions. Inter-sectoral and interdisciplinary collaboration can contribute to reducing elder abuse. This includes the social welfare sector which can help in provision of legal, financial, and housing support. The education sector helps through provision of public education and awareness campaigns. The health sector helps in detecting and treating victims by the primary health care workers (WHO, 2017).

On May 2016, WHO adopted a global strategy and action plan on healthy ageing and prevention of elder abuse in line with Sustainable Development Plans. This includes partners' collaboration to help identify, quantify and respond to the problem. Another approach is through obtaining evidence scope and types of elder abuse in different

settings. Collecting evidence and disseminating information to member countries and supporting nation efforts to prevent elder abuse.

In 2014 around 261 older persons were murdered in Kenya. Another 85 percent were reported to have been abused in the same year. Kirinyaga County is among the leading Counties with increased older person's abuse hence a great problem exists (HAI, 2016). Witchcraft allegation is the leading reason for older person's murder especially in Kilifi and Nyamira. Another reason is family resources and inheritance disputes (UN DESA, 2017). In fact, 24 counties are yet to establish institutions to help reduce the high rate of older persons abuse (LSS, 2015).

Global older person's abuse awareness day was set by United Nation to be held on 15th, June yearly worldwide although not many older persons are aware of the day especially in Kenya. This calls for government and community leaders to increase awareness to the older persons and the whole nation about the day. Strategic plans and intervention programs to prevent older persons abuse includes: increasing clinical detection practice and community settings, supporting abuse victims, raising awareness of older persons abuse and capacity building among care providers. Increase in knowledge about older persons abuse and change of attitudes towards the older persons is also key intervention to older persons abuse *(*Baker *et al.,* 2016, WHO 2015).

Another approach is embracing the important roles the older population plays. Older population has very important roles to play in the communities. For example, in Africa

older persons engage in small scale farming where they constitute a significant share of labour force. The older persons have intergenerational connection with children and adolescents within households and families impacting them through education and healthy behavior. They also have significant role and represents as ‘elders” among the civic, political and religious leaders in the community. They also are role models in the business and professional elites. They actively or passively shape the younger generations attitudes towards political, entrepreneurship, societal stability and good governance (SAGE, 2013).

2.4 Types of Care-givers for the Older Persons

Older persons experience difficulties in carrying out household and personal care due to cognitive, physical impairments or both (WHO, 2010, Mangiola, 2016). Due to these difficulties, they usually embrace an option of a care giver in the house. Caregiving is assisting older persons with activities of daily living. Mostly its unpaid services especially with the family care givers. It’s presumed that the care- giving comes naturally when you’re a spouse, a child or a family member to the older person. Older parents are able to live longer at home with the help of care givers (AAMFT, 2016).

Older persons care givers assist them with personal care or activities of daily living involving bathing, eating, dressing, toileting. They also assist with Household care or instrumental activities of living which entails cooking, cleaning, laundry, shopping and buying necessities, managing finances. Health care involves medication management, physician’s appointment, physical therapy while emotional care involves companionship, meaningful activities, and conversation (CDC, 2010; Gillick, 2013).

Globally there is unexpected increased number of older adults living at homes with physical disabilities and major cognitive impairments. Major challenge facing societies includes taking adequate care of these older persons. The strained health care system assumes that close family members should provide the day-to-day assistance and address major challenges facing the older persons with disabilities. There is lack of education, engaging or even supporting family or informal caregivers. Despite the increased demand for care givers for the aging adults the availability of family care givers is decreasing due to smaller families, as a result of decreased fertility rate, lower marriage rate and higher divorce rates (Gillick, 2013; CDC, 2010).

There are several types of older persons care givers namely: unpaid care givers. They provide care for 1-24 hours and may not have an education back ground. Unpaid care giver is often the family member like the spouse or grown-up children. Currently with the growing number of aged populations, families have taken the role of long –term care givers. This comes with limitations in meeting the necessary tasks for independent living. In America, about 25% households are taking care of their older persons. This is partly due to the stressed healthcare system forcing the families' do what healthcare professionals are meant to do (AAMFT, 2016).

Increasing numbers of Kenyans are caring for aging family members. In the light of the growing aged population, the government should emphasize on home care to the older persons (Enid & Janet, 2015; WHO, 2012). Family and friends care givers are the first people involved in the older person's life. It could be a spouse, a grown child or a

relative (Baker *et al.,* 2012*).*Caring for the older person by family members is crucial but the growing demands and the strain on the family is becoming a major problem. Care givers experience health risks such as stress, anxiety, depression, physical health problems, reduced immunity, infections, risk of death, isolation, financial strain. Financial strain sets in as a result of high expenses of illness, declining promotions and work commitments reduction as a result of caring for a loved one. (Lancet, 2014, AAMFT, 2016).

Volunteers care givers are people from churches or local organizations who volunteer to do some house cleaning, transporting the older person and grocery shopping or visiting the older persons (WHO, 2012). However, the volunteer care givers may not be a sustainable source of older persons care giver. Live-in care givers are needed if an older person depends on a care giver totally and doesn't like to go to an older person's home. The live- in care giver could be a family person, a hired care giver trained or untrained (Baker *et al.,* 2016*).*

Professional health care givers are people trained like nurse aid, nurses, physiotherapist, and occupation therapist. They may be engaged on call basis or live-in basis depending on the older person's health status (Baker *et al*., 2016).Formal care giver is a paid care giver who may be a professional or not. Informal care givers are occasional family members or friends (Baker et al., 2016).

Other than living in home, older persons may get cared for in different settings. Independent living communities; this is suited mostly to active seniors who rents or buy

homes/ apartments or mobile home in a community with other seniors. Common social amenities are provided, housekeeping, yard maintenance, security, transportation, laundry and group meals are provided. However medical support is not provided and outside medical services is sort by the older person when necessary. The family is relieved the burden of care-giving. However, the old misses the family love and companionship (Lancet, 2014).

Assisted living communities; this is suitable for partially independent seniors who may require help with activities such as bathing, dressing, feeding and with medication. Arrangement for caregivers to assist with such is provided. In addition, security, housekeeping, laundry group meals, transportation and social activities is provided (AAMFT, 2016, Lancet, 2014). Nursing homes; this is for seniors who require medical assistance and care giving but not necessarily hospital stay. These are either the older persons with chronic conditions or needs short- term rehabilitative care. Living with a relative/family; these are seniors who need assistance with activities of daily living and some non-skilled health care support while enjoying companionship and care provided by living with a family member (AAMFT, 2016, Lancet, 2014).

2.5 Interventions in Place to Support the Well-being of the Older Persons

Healthy aging is a key component to well- being of the older persons. The three priority areas by the 2002 Madrid International Plan of Action on Ageing (MIPAA) includes; Social protection of older persons and development, advancing the old's health and their well-being, ensuring friendly and supportive environments. The 2002 MIPAA

started well as the only older person's international policy framework but fifteen years later, there isn't much progress. Major constraints on the MIPPA agendas includes lack of resources, data and political.

The way forward proposed during the 2017 MIPAA review of plan on active ageing conference is adopting the Sustainable Development Goals. The SGD have incorporated the ageing on international development agenda and in all its policies. The SDG have pledged not to leave anyone behind and promised to reach the furthest behind first. This will promote the quality of life of vulnerable groups, including older people, and where the older population's participation makes them key contributors to the development process. The UN Economic Commission for Europe in 2015 used active aging index tool to assess the outcomes of ageing policies among the European countries. The ranking was done with the leading being Sweden, Norway, Switzerland and Iceland at the top of the ranking, followed closely by Denmark, the Netherlands, Finland, the UK and Ireland. (AGE2015; UN, 2015).

Developing effective interventions to maintain health and well-being of older persons is very important. To achieve this, a strategy must be put in place: Ensuring physical fitness of the aging, proper nutrition, avoiding smoking and other behaviors that affects health adversely. Another important thing is avoiding bad lifestyle choices which may affect health. Increased quality of life and function at older ages can be achieved through improved health habits which in turn postpone the onset of disability. Prevention of non-communicable diseases, making health system fit for ageing.

Ensuring proper physical and supportive environmental factors is a key to healthy and proper functioning of older persons (WHO, 2012).

In developed countries especially America and UK the following are the interventions available in supporting older adult's health and well-being; First intervention is promotion of healthy and safe behaviors by the older adults. This can be achieved through various strategies. For example, weight-bearing exercises. This helps build bone strength which protects against osteoporosis thereby preventing subsequent fragility fractures. Another strategy is researching on effects of hormonal changes in older adults. This will help in addressing these changes by developing interventions without unwanted side effects.

Another important strategy is supporting and conducting research on chronic health conditions. This will bring about intervention of people with multiple chronic illnesses. Safe use of medication among older persons is paramount. Another strategy is exploring new ways to improve safety in the home and community. This can be done through ergonomics studies and the built environment. Develop strategies to reduce falls and their consequences. (WHO, 2012; CDC, 2013).

The second intervention is to understand the older persons' needs well. This will in turn help in developing appropriate interventions thereby improving the safety of older persons. This can be achieved through early detection of older persons debilitating health conditions. Early detection can be achieved through early screening, annual

medical checkups, improved biomedical imaging and techniques to detect and measure the older person's well-being (CDC, 2013; WHO, 2012).The third important interventions are treating old age illness. Prevention or delay of onset of age- related diseases and conditions. This can be achieved through conducting research on mechanisms in which lifestyle affect aging-related changes. This will in turn determine how aged individuals can maintain their function. It can also inform on how to regain the function lost due to immobility, illness or trauma. For example, advancing age leads to loss of tissues function. This leads to risks of developing cardiovascular diseases and cancer thereby causing declined health and quality of life. Another important way is identifying, characterizing and developing interventions addressing physiological changes. This will in turn prevent age-related diseases across the human lifespan (NIA, 2013).

Another important intervention is finding improved and cost-friendly ways to lesser caregiver, family and patient stress. This leads to improved ability to cope with chronic disease among older adults. This can be achieved through evaluating strategies to improve social support. Another strategy is through training care givers for older persons and assisting them and the old cope with chronic disease (CDC, 2013).

The other intervention is on improved interaction between the older adults and the health care system. This involves ensuring good and effective communication between the health care professionals and the older persons and their families. Only 40 % of older persons with heart, circulatory, musculoskeletal symptoms seek medical care.

Similarly, women with urinary incontinence avoid seeking medical care. Good relationship with healthcare professional and the older persons can address the above problem. Health promotion among the aging and their families will also be of good help. Another important intervention is to promote societal role and interpersonal support for older persons. This will in turn reduce social isolation thereby promoting positive caregiving outcomes. Older persons can be productive to the society. This can be achieved through valuing of retaining their capability. To avoid negative stereotypes older persons should be involved in social support. Another way is involving them in useful activities continuously. This will in turn help the old bring out positive effects physically and mentally well-being. This enables them to engage fully in the world around them. This can be done through identifying and valuing the older person's roles thereby maintaining their independence. Another strategy is through caring for older persons in families and community settings (CDC, 2013).

Another important intervention is helping older persons and their families in preparing and managing age-associated changes in health. Dealing with changes in income, functions and roles is important too. Complexity with making decisions on medical treatment of the aging by the family members can be very tough. Dealing with retirement aspect and the changes in finances worsened by long-term care affects the independence and well-being of the older persons. The out-of-pocket costs in managing acute and long-term care are a major issue of concern. This can be handled by enabling healthcare system through national insurance Scheme or waiving medical bills for older persons and other assistance required for maintaining optimal health.

Another strategy is by conducting research on long-term and end-of-life care. This will assist in coming up with strategies to fill the gap on decision making pertaining long-term and end-of-life care. This will ensure quality and affordable long-term care. In turn the older person will be optimally healthy (WHO, 2012).

Another important intervention is to understand what neglect is and come up with ways to deal with it. Understanding and dealing with unhealthy social relationships among the older persons. Another important thing is to address financial abuse occurring among the older persons. This can be achieved through proper financial fraud detection. Another way is by promoting adaptive self-care and supporting the vulnerable older persons in the communities (CDC, 2013).

Prevention of falls is another important intervention. Women become more vulnerable to falls than men. This risk increases with aging. This is due to loss of muscle strength and osteoporosis. Older persons usually are likely to stay longer in hospital following an injury hence falls should be prevented. Environmental hazards are responsible of the highest number of falls hence age friendly environment should be implemented. Exercises, raising awareness of risk factors, balance training and therapy can reduce the falls (WHO, 2012).

Another intervention is the prevention of communicable diseases. Older person's immunity decreases with age making them vulnerable to diseases. Through disease prevention the medical cost burden can be reduced and also enhance healthy aging

(WHO, 2015). The other important intervention involves public support for formal and informal home care**.** With the increasing older person's population, increased number of people requires care due to functional limitation needs. With home care there's less burden on the older persons institutions. Older persons prefer aging at home as long as possible and being independent. Public participation is required to support the older persons care givers (WHO, 2012).

Supportive interventions such as preventing older person's maltreatment, social isolation and social exclusion should also be put in place to support healthy ageing (WHO, 2013). In Kenya Policy/societal interventions which are targeted towards the older persons include insurance reimbursements, patient protection, affordable care and protection from abuse. However, the implementation framework for the same is either weak or unavailable (FCOA, 2016; HAI, 2013).

The Older person Cash Transfer (OPCT) is another intervention by government to address poverty among the older persons. The Government has really tried in investing in social protection programs. This includes social insurance schemes like NHIF and safety net programs which addresses poverty among the older persons. The Older person Cash Transfer (OPCT) program in Kenya was introduced in 2006 to improve livelihoods of older persons. The program targets extremely poor households that include a member aged 65 years or older who does not receive a pension. The program currently covers 203,011 households. Each household under the program is given 2000 Kenyan Shillings every two months. The money is paid through the appointed payment

agent (NSPS, 2016). This is however inadequate to meet the older person's household needs. This needs to be reviewed upwards and to include all the deserving older persons.

Kenya needs to borrow lessons from developed and middle-income countries on caring for the aging. For example, South Africa care system which is culturally sensitive, observes personal needs like home safety, healthy nutrition and access to health care. Another important thing is passing and implementation of a legislation frame work that tackles aging population needs and protection against elder abuse. A universal healthcare including long- term care for the older persons is also important. The state should support in research on older persons, planning, partnering and subsidizing cost for care enabling older person's free access. It is important for the state to lessen older persons care burden which is unsustainable and impractical on families. Kenya should also fill the gap of specialized geriatric care. This is by educating and training caregivers and medical staff especially on illnesses like dementia. There is also a need to pass legislation that will tackle the needs of older people and develop an implementation framework (HAI, 2013).

2.6 Synopsis of Gaps in the Literature Review.

Most of the studies have concentrated on elderly care giving practices in institutions for the older persons and overlooked care giving practices to older persons in their households. The current study will establish household care-giving practices to the older persons.

Few studies were available on phases of the older person's care. As such no enough data was available on the care given to the phase three older persons. The study will highlight on the gaps on care giving to the phase three older persons. As such the results will inform on developing policy on caring for the older persons in phase three of care.

There was little data available on statistics on older person's abuse especially at household level. The study will establish the existence and types of older persons' abuse among the phase three older persons. Most of interventions in place to support the well - being of the older persons were missing and those available were not adequate and were not benefiting all the older persons. The study seeks to identify the plight of the older persons and their challenges which will inform on some policy development towards the older person's well-being.

CHAPTER THREE: MATERIALS AND METHODS

3.0 Introduction

This chapter presents the research materials and methods used to conduct this study. These include research design. It also presents the population of the study. The sample frame and method of collecting data are presented too. Data collection instrument used in the survey has been captured in this chapter. Finally, the data analysis method used in the study has been presented in this chapter. It also presents the statistics generated from the study.

3.1 Study Design

A Community based Cross-sectional study design was used. Mixed method approach including qualitative and quantitative methods was used. This was because the researcher needed to analyze data from a population of older persons aged 75 years and above from Kirinyaga County at a specified point in time.

3.2 Variables

The dependent variable was Care –giving Practices to the Phase Three Older persons.

Independent variables were social economic factors, role of care giving in well-being of older persons, types of older person's care givers, interventions in place to support older person's well-being.

3.3 Study Area

The research was conducted in Kirinyaga East; Kirinyaga County. Kirinyaga County is located in the former central province. It borders Meru County to the North. To the

North East and South is Embu County. Murang'a County is to the South West, while Nyeri is to the west. It's 112 kilometers from Nairobi, and covers 1479.09 square kilometers.

In 2019, Kirinyaga County had a population of 610,411. It had a population density of 357 persons per kilometer square. The growth rate was 1.5%. The age distribution was as follows; 0-14 years 33.2%, 15-64 years 61.5% and 65+ years 5.4%. Kirinyaga County is located just below Mount Kenya. This explains why Kirinyaga is one of the wettest counties. Most of the social economic activities of the older persons include peasant farming, small scale dairy farming and a few are involved in small scale businesses. Kirinyaga County has got only one home for the older persons called Sagana Home for The Aged. Recently a Rescue centre for neglected and abused older persons was established at Ngurubani town in Mwea, Kirinyaga County.

Gichugu Constituency is a Kenyan's Electoral Constituency. It's one of the four constituencies in Kirinyaga County. It was constituted for the purpose of the 1963 elections after which it was named **kirinyaga East Constituency** between 1966 and 1983. After devolution it became **kirinyaga East Sub- County**. It has six locations namely Baragwi, Kabare, Karumandi, Kirima, Ngariama and Njukiini. It has a population of 135,550 (Baragwi 21,711, Kabare 16,392, Karumandi 26,898, Kirima 23,696, Ngariama 20,253 and Njukiini 26,266). Kirinyaga East is situated in the upper part of Kirinyaga County. Most of the land is ancestral land passed from one generation to the next over past years. The residents grow coffee and tea as cash crops, food crops

and some irrigation farming. The area was selected because it has a good representation of older persons in phase three of older persons care.

3.4 Study Population

The study population consisted of older women and men aged 75 years and above. The phase three of older persons care is when the older person's physical function starts going down and becomes partially dependent on the care giver. The older persons are trying to cope with multiple disabilities and chronic pains and at this point they accept outside care givers and relatives to assist them with activities of daily living. Phase three of older persons care starts from age 75 years ((William *et al.,* 2013).

3.4.1 Inclusion Criteria

All older persons aged 75 years and above who gave an informed consent to participate in the study and have lived in the area over one year.

3.4.2 Exclusion Criteria

All those who met the inclusion criteria, but were mentally unsound. Those on palliative care and end of life care.

3.5 Sample Size Determination and Sampling Technique

3.5.1 Sample Size Determination

Mane *et al.,* formula guided the sample size Formula proposed by Mane *et al*. (2007):

Determination of sample size (n)

$$n = \frac{NZ^2pq}{e^2(N-1) + Z^2pq}$$

Where:

N= N is the number of older persons in Baragwi, Njuki-ini and Ngariama wards which was 4639.

n= sample size,

Z= 1.96 for 95% confidence level.

p= 0.136 (proportion of older persons persons).

q= 0.864; total probability minus p

$$n = \frac{NZ^2pq}{e^2(N-1) + Z^2pq}$$

$$n = \frac{4639 \times 1.96^2 \times 0.136 \times 0.864}{0.05^2(4639-1) + 1.96^2 \times 0.136 \times 0.864}$$

n = 323.66= 324

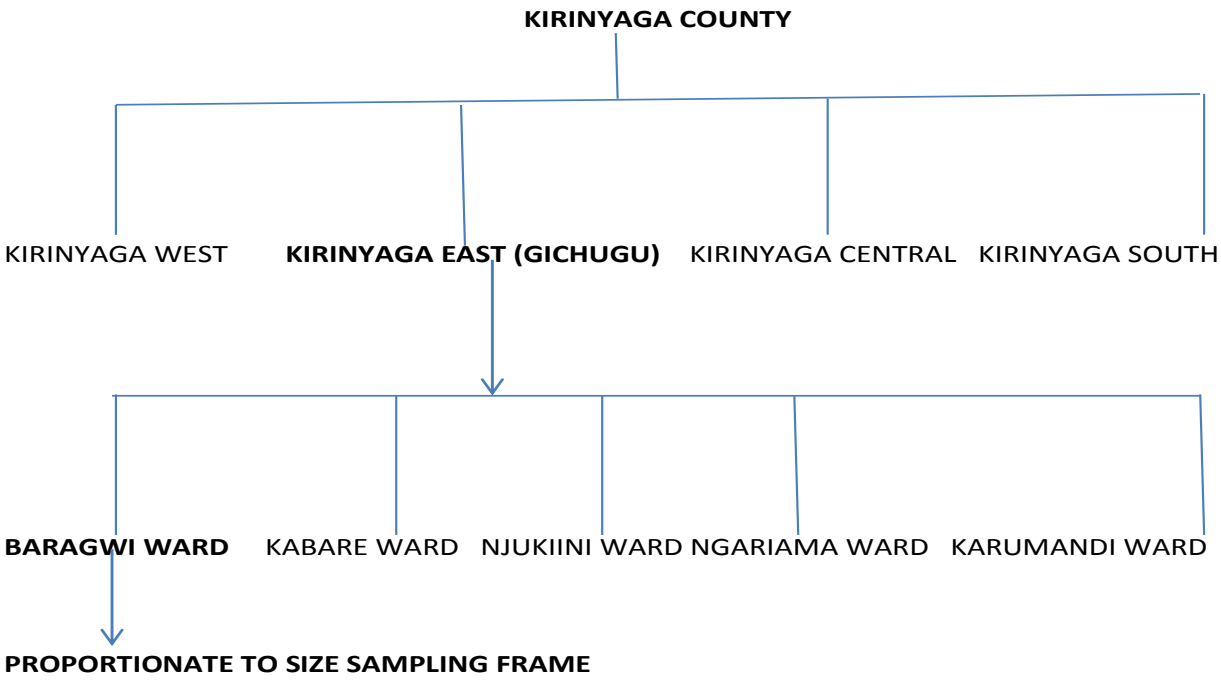
+ 10% non-response = 355

Total sample size = **355 respondents**

3.5.2 Sampling Technique

Multi-stage sampling method was applied to select participating units starting with Sub County, wards then villages. Households with an older person(s) were selected and formed the sampling frame. Systematic random sampling using the sampling frame formed was used at household level to select participating respondents. First household

was identified and then the fourth household where K=4. One older person per household was selected. Where a household had more than one older person the head of the family or the oldest one was selected. In case of a polygamous family with several wives and the household head was not alive, the first wife was selected.



Ward	Baragwi	Njukiini	Ngariama	Total
Population	1476	1786	1377	4639
Sample	113	137	105	355

Multi stage sampling

3.6 Data Collection Instruments

Interviewer-structured Questionnaires (appendix ii), semi structured interview adopted from WHO-SAGE, focus group discussions were used to collect data. The research assistants gave questionnaires to all older persons strictly following the inclusion criteria. To ensure reliability the questions were systematically presented. They were pre-determined, presented using similar words and similar order to all respondents.

3.7 Data Collection Procedures

3.7.1 Pretest of Data Collection Instruments

Pretesting of questionnaire was done at Kithimu ward, Manyatta Sub County, Embu County to improve on the degree of measurement of efficiency, appropriateness, effectiveness and acceptability. 10 % of the sample size was used where 36 respondents were interviewed.

3.7.2 Validity

Validity of the questionnaire was ensured by training research assistants on how to collect data, use of valid questions and pretesting of the questionnaire. The research assistants were diploma holders in community health and had some experience in conducting similar studies hence only orientation to the said questionnaires was done. Each Research Assistance interviewed 71 respondents.

3.7.3 Reliability

Data reliability was ensured through use of reliable questionnaires, pretest of the questionnaire and appropriate sampling technique.

3.8 Participants' Recruitment and Data Collection

The participants who meet the inclusion criteria were recruited. Age was confirmed through the identity cards of participants. Season of birth was used for those participants without identity cards. The respondents selected were then given time to fill questionnaire with the help of research assistants. Socio-demographic and research objectives information from participants was obtained by the Research Assistants using the structured questionnaire and by the personal interview method. The quality of information obtained/abstracted was checked by the researcher. Finally, the data collected by the Research Assistants was checked for its completeness and consistency and coding of data was performed by the researcher.

For semi structured Interview, interviewer had a list of questions to be asked. The researcher used a key informant interview guide to get information from the chiefs, ward administrators, community health workers and the older person's representatives purposively selected. All the discussions were tape recorded. This was to make sure that the researcher remained attentive, interactive and was able to capture emotions from the respondents during the interview. Tape recorder, writing materials and notebooks were used to collect data.

3.9 Data Management

3.9.1 Data Storage

The data was entered and kept in a research workbook. Computer Microsoft Word and Excel software was also used. For back up reasons flash/external disc or rewritable CD was used.

3.9.2 Data Analysis and Presentation

After data collection, the data was edited to ensure consistency across the respondents and location of any omissions, it was then summarized, coded and entered into a MS Excel and transferred for statistical analyses using the SPSS (Statistical Package for Social Sciences). Data analysis was done using statistical package for social sciences (SPSS) version 25. Descriptive analysis was used for socio-demographic characteristics. Descriptive statistics such as frequencies, standard deviation and means were used to summarize, organize and simplify the data collected. Correlation analysis was used to test the relationship between dependent and independent variables. A significance level of <0.05 was used. On bivariate analysis, all independent variables were associated with the dependent variable to determine which ones have significant association. Odds Ratio (OR) and 95% Confidence Interval (CI) were used to estimate the strength of association between independent variables and the dependent variable. The threshold for statistical significance was set at $\alpha = 0.05$ and a two-sided p value at 95% confidence intervals (CI) reported for corresponding analysis. Tables and figures were used for presentation of results.

3.10 Ethical Considerations

Clearance to conduct this study was sought from Kenyatta University School of graduate. Ethical issues approval was sought from Kenyatta University Ethical Review Committee (KU-ERC). Permission to conduct this study was sought from NACOSTI (National Council for Science Technology and Innovation). Permission to conduct this research was also sought from Regional Administrative Secretary Kirinyaga East Sub-County who communicated with County Administrative secretary. The right to participate in the study or not rested with the respondents and this was respected at all times during the study. Respondents were informed that it is their right to choose whether to participate in the study or not and even withdraw from the study at any time. No inducements or rewards were given to participants to join the study. Confidentiality and anonymity were maintained at all times. No identifying data was recorded and all information given were used strictly for research purposes only and data collected was stored, analyzed and reported in formats that won't allow identification of the individual participant. There were no invasive procedures carried out on the participants, so no physical risks were encountered. Study codes in place of respondent's name were used on the data collection tools. The questionnaires were kept in a locked cabinet for safe keeping by the researcher.

CHAPTER FOUR: RESULTS

4.1 Introduction

The chapter presents the findings, interpretations together with the discussions. The purpose of the study was to examine Household Care- giving Practices to the Phase Three Older Persons in Kirinyaga County. The findings of the study are presented in tables, charts, and graphs.

4.2 Response Rate

A total of 355 structured questionnaires were administered in tandem with the calculated sample size, of which 10 questionnaires were incompletely filled and therefore, the response rate was 93.8% of the required sample size as shown in table 4.1 below. This is statistically correct since it's higher than the minimum sample size. Moreover the 10% increment catered for the 22 (10 incompletely filled and 12 non-response) hence with 323 respondents, the response rate was 100%.

Table 4. 1: Response Rate

Ward	Proportionate to size sampling	Sample size	Response rate
Baragwi	113	106	93.8%
Njukiini	137	128	93.4%
Ngariama	105	99	94.3%
TOTAL	**355**	**333**	**93.8%**

4.3 Demographic Characteristics of the Respondents

4.3.1 Socio-Demographic Characteristics

The respondents' age ranged from 75 years to 99 years, the mode was 75 years, median 78.00 years and the mean age was 79.64 ± 2.28. The findings showed that 212 (63.7%) were between 75-79 years, 22 (6.6%) 90 years and above and 128 (38.4%) were from Njukii-ini ward. More than half of the respondents 203 (61.0%) were married with 5 (1.5%) being single at the time of the study as illustrated in table 4.2.

Table 4. 2: Socio-Demographic Characteristics

Characteristics	Male		Female		Total	
	Freq	P (%)	Freq	P (%)	Freq	P (%)
Study area						
Baragwi	61	31.6	45	32.1	106	31.8
Njukiini	75	38.9	53	37.9	128	38.4
Ngariama	57	29.5	42	30.0	99	29.7
Age group						
75-79 years	114	59.1	98	70.0	212	63.7
80-84 years	55	28.5	22	15.7	77	23.1
85-89 years	6	3.1	16	11.4	22	6.6
90 years and above	18	9.3	4	2.9	22	6.6
Marital Status						
Single	2	1.0	3	2.1	5	1.5
Married	143	74.1	60	42.9	203	61.0
Widow(er)	47	1.0	77	55.0	124	37.2
Divorced	1	0.5	0	0.0	1	0.3
Religion						
Christian	191	99.0	140	100.0	331	99.4
Muslim	2	1.0	0	0.0	2	0.6

4.3.2 Socio-Economic Characteristics

Slightly less than half 162 (48.6%) of respondents had no formal education with a third of the respondents 116(35.0%) having between 6-8 living children. On terms of occupation (this was occupation before and after reaching the phase three), more than three-quarter 254(76.3%) of the respondents were farmers, 39(11.7%) had no occupation while 8(2.4%)were casual laborers. In terms of living arrangement of the older persons, slightly less than three-quarter 241(72.4%) of the participants responded that they lived with family members, 68(20.4%) lived alone while only 10(3.0%) lived with an employed care giver. On their health status, 220(66.1%) of the respondents noted that they walk with support, 228(68.5%) were unwell while 147(44.1%) had chronic illness.

Table 4. 3: Socio-Economic Characteristics

Characteristics	Male		Female		Total	
Occupation	**Freq**	**P (%)**	**Freq**	**P (%)**	**Freq**	**P (%)**
None	18	9.3	21	15.0	39	11.7
Farming	149	77.2	105	75.0	254	76.3
Business	24	12.4	8	5.7	32	9.6
Casual laborers	2	1.0	6	4.3	8	2.4
Education						
No formal education	71	36.8	91	65.0	162	48.6
Primary incomplete	52	26.9	16	11.4	68	20.4
Primary complete	55	28.5	16	11.4	71	21.3
O level	12	6.2	14	10.0	26	7.8
Tertiary	3	1.6	3	2.1	6	1.8
Living arrangement						
Alone	25	13.0	43	30.7	68	20.4
Family member	148	76.7	93	66.4	241	72.4
Employed caregiver	9	4.7	1	0.7	10	3.0
Bread winner	11	5.7	3	2.1	14	4.2
Walk with support						
Yes	126	65.3	94	67.1	220	66.1
No	67	34.7	46	32.9	113	33.9
Ailing						
Yes	132	68.4	96	68.6	228	68.5
No	61	31.6	44	31.4	105	31.5
Chronically ill						
Yes	88	45.6	59	42.1	147	44.1
No	105	54.4	81	57.9	186	55.9
Number of living children						
Less than 3 children	23	11.9	40	29.0	63	19.0
3-5 children	52	26.9	59	42.8	111	33.5
6-8 children	87	45.1	29	21.0	116	35.0
More than 8 children	31	16.1	10	7.2	41	12.4

4.4 Role of Care-Giving in the Well-Being of the Older Persons

4.4.1 Personal Hygiene Care-giving Practices

Majority of older persons respondents 208(84.1%) were practicing personal hygiene by themselves during the time of the study (Figure 4.1).

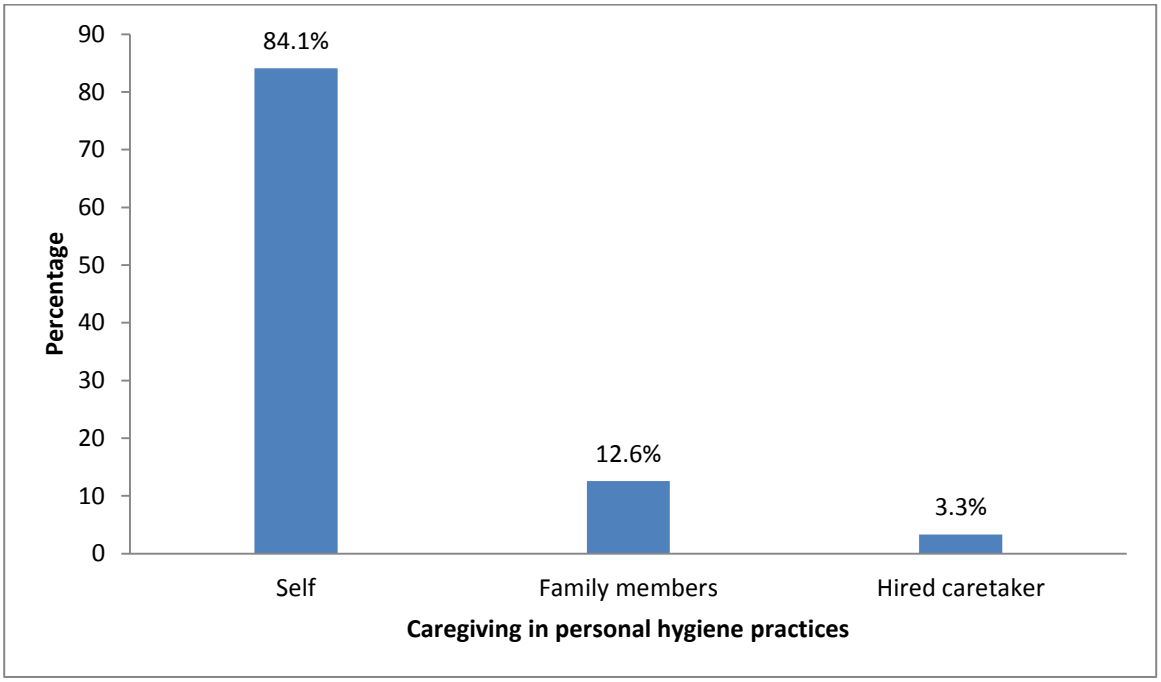


Figure 4. 1: Personal Hygiene Care-giving Practices

4.4.2 Socio-Demographic Characteristics in Personal Hygiene Care-giving Practices

Socio-demographic characteristics and their association with caregiving in personal hygiene practices were investigated. The social demographic factors were gender, age, education level, marital status and occupation. The rate of practicing personal hygiene reduced with increase in chronological age and age was significantly associated with personal hygiene care giving practices ($p=0.0001$). The study results were not

significantly associated with gender (p=0.489), marital status (p=0.604) and number of living children(p=0.092)with caregiving in personal hygiene practices. Age of the older persons respondents (p=0.0001), education (p=0.046), and occupation (p=0.020) were found to have a significant association with caregiving in personal hygiene practices.

Table 4.4.2: Socio-Demographic Characteristics in Personal Hygiene Care-giving Practices

Variables		Self		Others		p-value
		Freq	P (%)	Freq	P (%)	
Age group	75-79 years	191	90.1	21	9.9	p=0.0001
	80-84 years	62	80.5	15	19.5	
	85-89 years	14	63.6	8	36.4	
	90 years and above	13	59.1	9	40.9	
Gender	Male	160	82.9	33	17.1	p=0.489
	Female	120	85.7	20	14.3	
Number of living children	Less than 3 children	59	92.2	5	7.8	p=0.092
	3-5 children	89	79.5	23	20.5	
	6-8 children	100	86.2	16	13.8	
	More than 8 children	32	78	9	22	
Marital status	Married	169	83.3	34	16.7	p=0.604
	Others	111	85.4	19	14.6	
Level of education	No formal education	129	79.6	33	20.4	p=0.046
	Primary education	125	89.9	14	10.1	
	O level and above	26	81.3	6	18.8	
Occupation (at the time)	None	33	84.6	6	15.4	p=0.020
	Farming	219	86.2	35	13.8	
	Business	24	75	8	25	
	Casual laborers	4	50	4	50	

4.4.3 Health Status and Personal Hygiene Care-giving Practices

Figure 4.2 shows that 68.5%, 66.1%, and 44.1% of respondents were unwell, walked with support and were chronically ill respectively.

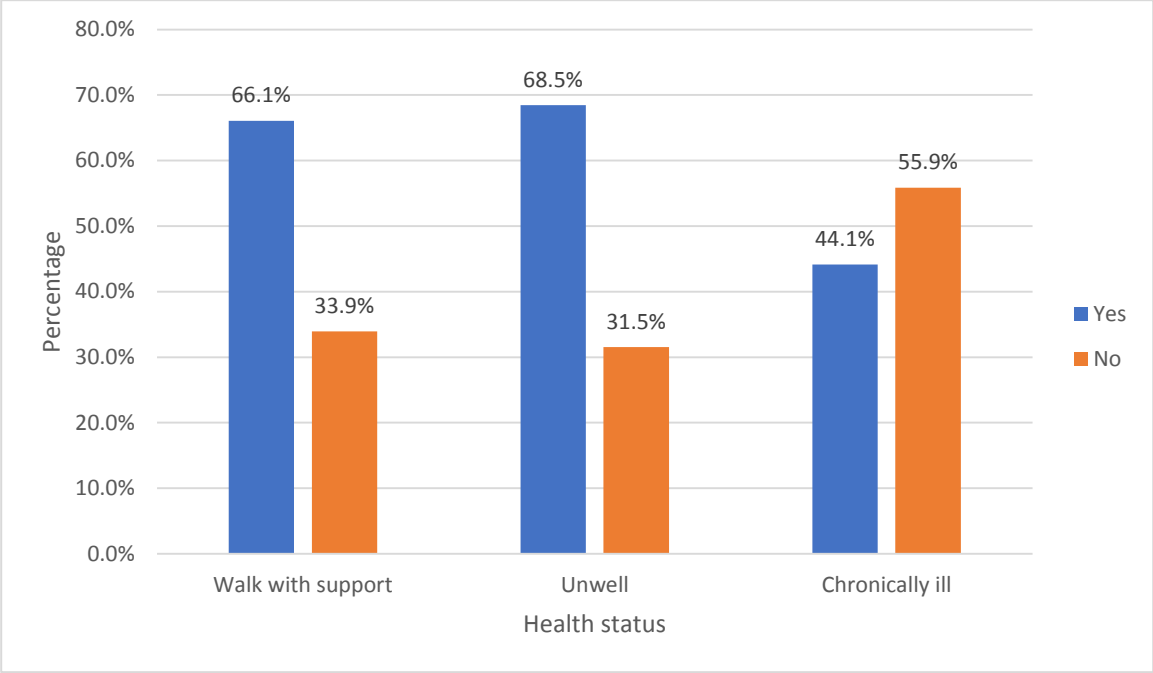


Figure 4. 2: Health Status and Personal Hygiene Care-giving Practices

4.4.4 Association of Health Status with Personal Hygiene Care-giving Practices

Assessment of health status influencing caregiving in personal hygiene practices indicates that walking with support (p=0.001) had strong influence on care-giving in personal hygiene practices (significantly associated). However, being unwell or with chronic illness was not associated with care-giving in personal hygiene practices at p=0.231 and p=0.165 respectively (Table 4.5).

Table 4. 5: Association between Health Status and Personal Hygiene Care-giving Practices

Variable		Self		Others		p-value
		Freq	P (%)	Freq	P (%)	
Walk with support	Yes	196	89.1	24	10.9	p=0.001
	No	84	74.3	29	25.7	
Unwell	Yes	188	82.5	40	17.5	p=0.231
	No	92	87.6	13	12.4	
Chronically ill	Yes	119	81.0	28	19.0	p=0.165
	No	161	86.6	25	13.4	

4.4.5 Daily Personal Hygiene Activities with Care-giving Practices

Personal hygiene is the basic things that one does daily such as feeding, bathing, dressing, grooming, brushing, toileting etc. To the older persons these things may seem difficult and calls for assistance. Majority of older persons 79(92.9%), 84(92.3%) and 80(94.1%) who practiced personal hygiene by themselves perceived their bathing, feeding and grooming was better and this was significantly associated with caregiving in personal hygiene practices. Bladder control (p=0.213), bowel control (p=0.374) and toileting (p=0.216) were not significantly associated with caregiving in personal hygiene practices (Table 4.6).

Table 4.6: Daily Personal Hygiene Activities with Care-giving Practices

		Self		Others		
Variable		**Freq**	**P (%)**	**Freq**	**P (%)**	**p-value**
Bathing	Poor	51	79.7	13	20.3	p=0.033
	Good	150	81.5	34	18.5	
	Very good	79	92.9	6	7.1	
Feeding	Poor	48	82.8	10	17.2	p=0.039
	Good	148	80.4	36	19.6	
	Very good	84	92.3	7	7.7	
Grooming	Poor	58	82.9	12	17.1	
	Good	142	79.8	36	20.2	p=0.011
	Very good	80	94.1	5	5.9	
Dressing	Poor	48	80.0	12	20.0	
	Good	152	81.7	34	18.3	p=0.062
	Very good	80	92.0	7	8.0	
Bladder control	Poor	38	79.2	10	20.8	
	Good	158	82.7	33	17.3	p=0.213
	Very good	84	89.4	10	10.6	
Bowel control	Poor	38	80.9	9	19.1	p=0.374
	Good	158	82.7	33	17.3	
	Very good	84	88.4	11	11.6	
Toileting	Poor	44	84.6	8	15.4	
	Good	152	81.3	35	18.7	p=0.216
	Very good	84	89.4	10	10.6	

4.4.6 Care-giving in Cooking or Feeding Practices to the Older Persons

More than half of respondents 214 (64.3%) cooked or fed by themselves, only 10 (3.0%) had hired caretakers to cook or feed them as shown in figure 4.3.

"I live alone and so I prepare food, cook and feed by myself. To avoid a lot of work I cook enough food to last me supper breakfast and lunch, no much stress, in that i don't need to hire a care taker to cook or feed me," (Participant 1).

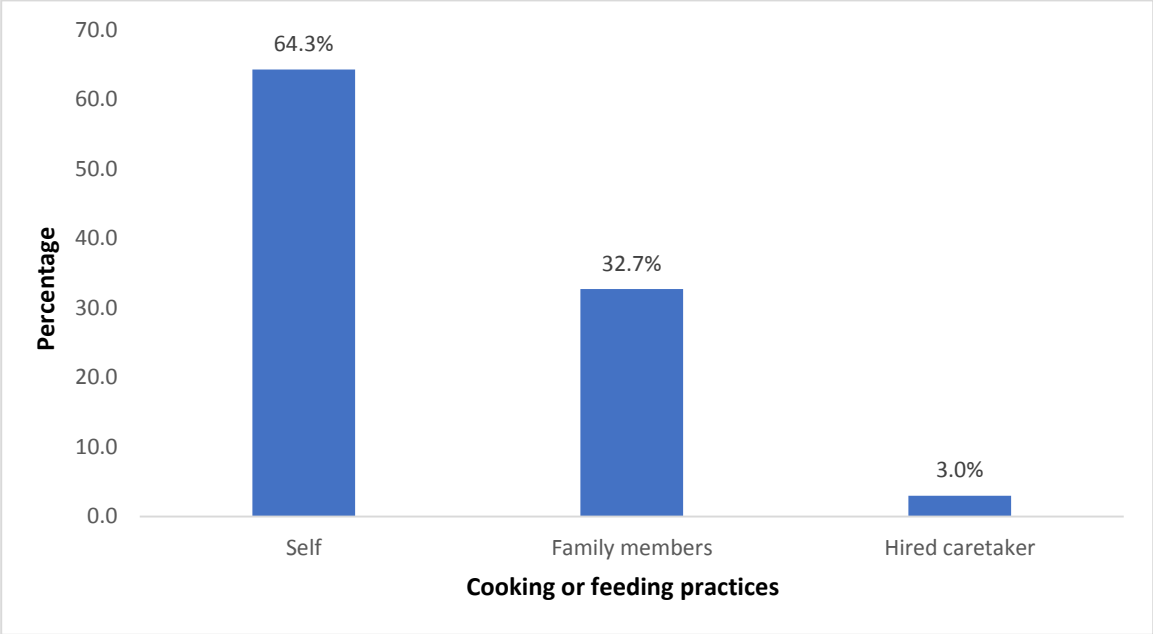


Figure 4. 3: Care-giving in Cooking or Feeding Practices of the Older persons

4.4.7 Socio-Demographic Characteristics with Care-giving in Cooking or Feeding of the Older persons

Among 116(60.1%) of males and 123(60.6%) married respondents said they cooked or feed themselves, and this was not significantly associated with caregiving in cooking or feeding practices at p=0.063 and p=0.080 respectively. A slightly higher than half 143(67.5%) of respondents between 75-79 years reported that the provision of cooking or feeding practices was done by themselves and age was significantly associated with caregiving in cooking or feeding practices (p=0.038) (Table 4.7).

Table 4.7: Socio-Demographic Characteristics with Care-giving in Cooking or Feeding of the Older Persons

Variables		Self		Others		p-value
		Freq	P (%)	Freq	P (%)	
Gender	Male	116	60.1	77	39.9	p=0.063
	Female	98	70.0	42	30.0	
Age group	75-79 years	143	67.5	69	32.5	p=0.038
	80-84 years	49	63.6	28	36.4	
	85-89 years	8	36.4	14	63.6	
	90 years and above	14	63.6	8	36.4	
Number of living children	Less than 3 children	49	76.6	15	23.4	p=0.148
	3-5 children	69	61.6	43	38.4	
	6-8 children	70	60.3	46	39.7	
	More than 8 children	26	63.4	15	36.6	
Marital status	Married	123	60.6	80	39.4	p=0.080
	Others	91	70.0	39	30.0	
Level of education	No formal education	104	64.2	58	35.8	p=0.571
	Primary education	92	66.2	47	33.8	
	O level and above	18	56.3	14	43.8	

4.4.8 Nutritional Activities with Care-giving in Cooking or Feeding Practices of the Older persons

Slightly more than half 132(61.7%) of older persons who had three meals per day cooked by themselves and 68(57.1%) who reported that their food intake had moderately decreased had a care giver giving the services. This was not significantly

associated with care-giving in cooking or feeding practices at p=0.109 and p=0.614 respectively (Table 4.8). In addition, assisted feeding of older persons influenced care-giving in cooking or feeding practices (p=0.029).

"Nowadays I become angry very quickly. For example, if my children don't come over to visit me often i feel very bad. I don't even take food that day. Why should I cook and eat all alone? One stomach cannot stress me," (participant 1)

Table 4. 8: Nutritional Activities with Care-giving in Cooking or Feeding Practices of the Phase Three Older Persons

Variables	Self		Others		p-value
	Freq	P (%)	Freq	P (%)	
Feeding Pattern					
One meal a day	14	6.5	5	4.2	p=0.109
Two meals a day	54	25.2	45	37.8	
Three meals a day	132	61.7	62	52.1	
Three meals a day with a snack in between	14	6.5	7	5.9	
Feeding intake decline					p=0.614
Severe decrease in food intake	39	18.2	17	14.3	
Moderate decrease in food intake	113	52.8	68	57.1	
No decrease in food intake	62	29.0	34	28.6	
Water intake per day					p=0.563
No water intake at all	16	7.5	10	8.4	
One glass of water per day	83	38.8	53	44.5	
One glass of water after each meal	107	50.0	50	42.0	
Six to eight glasses of water	8	3.7	6	5.0	
Reassurance during doubt					p=0.779
Yes	51	23.8	30	25.2	
No	163	76.2	89	74.8	
Assisted feeding					p=0.029
Yes	58	27.1	46	38.7	
No	156	72.9	73	61.3	

4.4.9 Friendly Environment in the Older person's Home

Age friendly environment is physical and social aspects around the older persons that determine how they age and respond to diseases. Age friendly environment should be accessible, equitable, inclusive, save, secure and supportive. A significant number of females 58(41.4%) and males 112(58.0%) lived in a grass thatched, earthen walls and floor. Majority of male respondents 82(42.5%) and 53(37.9%) of females perceived their sanitation is very good (Table 4.9).

Table 4. 9: Friendly Environment in the Older person's Home

Characteristics		Male		Female	
		Freq	P (%)	Freq	P (%)
Type of housing	Grass thatched, earthen walls and floor	112	58.0	58	41.4
	Iron sheet roofed, earthen walls and floor	34	17.6	38	27.1
	Iron sheet roofed, timber walls and cemented floor	31	16.1	39	27.9
	Iron sheet roofed, stone walls and cemented floor	16	8.3	5	3.6
Sanitation	Poor	39	20.2	40	28.6
	Good	72	37.3	47	33.6
	Very good	82	42.5	53	37.9
Accessibility	Poor	43	22.3	40	28.6
	Good	80	41.5	68	48.6
	Very good	70	36.3	32	22.9
Type of toilet bathroom	Poor	73	37.8	52	37.1
	Good	63	32.6	62	44.3
	Very good	57	29.5	26	18.6
Positive social attitude	Poor	36	18.7	38	27.1
	Good	87	45.1	70	50.0
	Very good	70	36.3	32	22.9
Engage in social cultural activities	Poor	46	23.8	41	29.3
	Good	92	47.7	73	52.1
	Very good	55	28.5	26	18.6
Participate in local decision making	Poor	29	15.0	45	32.1
	Good	100	51.8	69	49.3
	Very good	64	33.2	26	18.6

Availability of info services	Poor	35	18.1	46	32.9
	Good	103	53.4	62	44.3
	Very good	55	28.5	32	22.9
Economic security	Poor	47	24.4	46	32.9
	Good	87	45.1	74	52.9
	Very good	59	30.6	20	14.3

4.4.10. Older persons Abuse

Elder abuse is an act of commission or omission. It's usually done through failure to take required obligation in an expected trustworthy relationship. This causes harm or distress to the old. This violence disregards human rights. Older person's abuse includes physical, sexual, psychological, and emotional abuse; financial and material abuse; abandonment; neglect; and serious loss of dignity and respect. Consequences of older persons abuse includes physical injuries such as minor abrasions, bruises, fractured bones or even injuries causing permanent disability (Baker *et al.,* 2016, Lancet 2017, WHO 2019). Some older persons' confessions concurred with the reported results as follows

"w*hen our father passed on ,his brother stole our share of ancestral land. It was very painful since even the village elders did not help us"* (participant 2).

"My son stole my title deed and sold the only piece of land that we used to farm and support ourselves. He has beaten me on several occasions demanding his share of piece of land. I reported the case to the police and he was arrested but since he is my son, I dropped the case anyway. Blood is thicker than water", (participant 3).

"My daughter in-law always steals my food stuff and firewood from my shamba leaving me with nothing. She hates me. My son does not support me anymore, this lady has bewitched him!"(Participant 4).

"When my husband passed away, I was left alone in this lonely house. My only son passed away too. Last year some thieves broke into my house and swept all my household items. One idiot strangled and raped me. It was very devastating and i felt

dirty. I had no one to help me. I kept quiet since it was shameful to report and I didn't recognize that devil!" (Participant 5).

At least 143 (42.9%) of older persons had experienced an abuse of which being robbed of property 103 (72.0%) and beating 96 (67.1%) being common abuse. More than three-quarter 111 (77.6%) kept quiet after the ordeal (Table 4.10).

Table 4. 10: Incidence of Older persons Abuse

Characteristic		Frequency	Percent
Ever abused	Yes	143	42.9
	No	190	57.1
Nature of abuse	Sexually abuse	68	47.6
	Beating	96	67.1
	Neglect by loved ones	47	32.9
	Robbed of your property	103	72.0
Lastly abused	Last year	54	37.8
	Two months ago,	25	17.5
	A month ago,	64	44.8
Action Taken	Reported to the authority	13	9.1
	Reported to my care giver	5	3.5
	Reported to a family member	14	9.8
	Kept quiet	111	77.6

4.5 Types of Care Givers for the Older Persons

A care giver is a person who assists an older person with activities of daily living. The care giver could be a spouse, grown up children, relative, volunteer/well-wishers, hired

or professional care givers. Older persons living alone are heavily affected mentally, emotionally and physically which further affects their nutrition, hygiene well-being.

4.5.1 Caregiver Assisting on Daily Activities

Most of respondents 100 (30.0%) carried out daily activities by themselves, equally by the relative and only 9 (2.7%) were assisted by a volunteer as shown in figure 4.4.

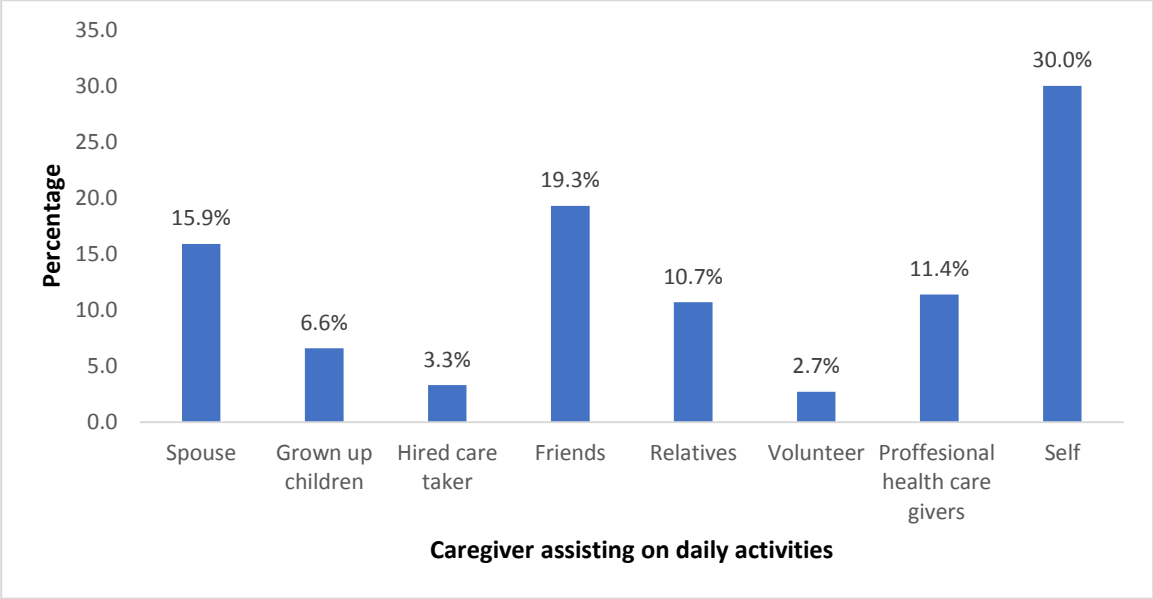


Figure 4. 3: Caregiver Assisting on Daily Activities

4.5.2 Daily Activities Assisted by Caregivers

Most of caregivers assisted the older persons on bathing 182(54.7%) and attending medical appointments 107(32.1%) as shown in figure 4.5

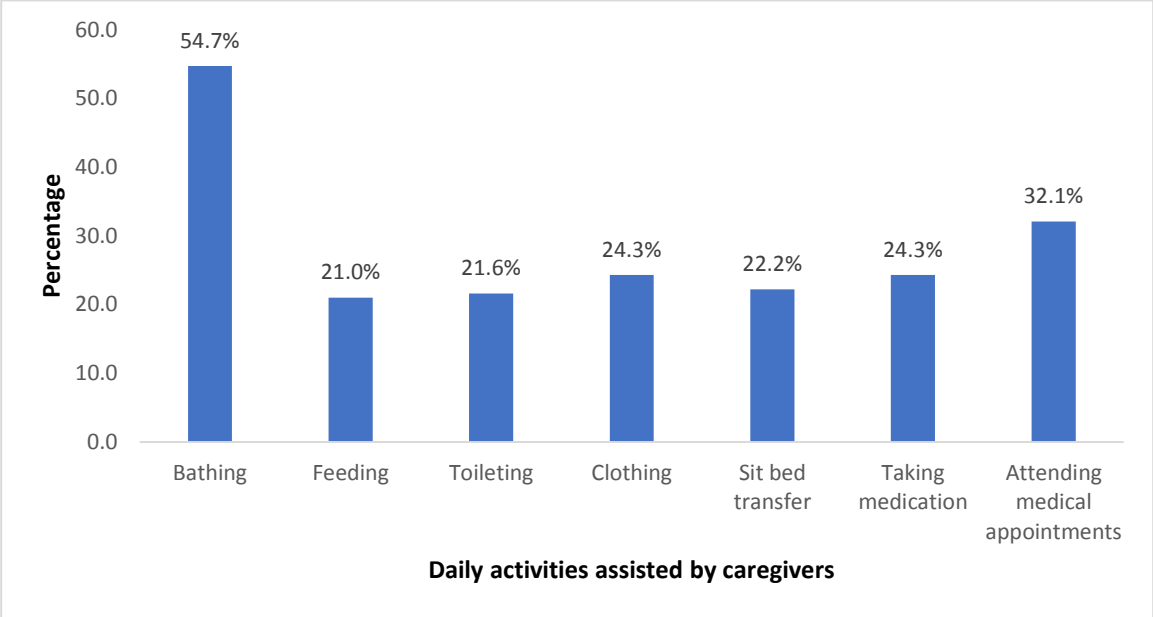


Figure 4. 5: Daily Activities Assisted by Caregivers

4.6 Interventions in Place to Support the Well-Being of the Older Persons

Developing effective interventions to maintain health and well-being of the older persons is important. Proper nutrition, personal hygiene, improved health habits; avoiding smoking can help older persons live longer. Prevention of communicable diseases, making health system fit for the ageing and supportive environment factors helps in good health and proper functioning of older persons. Universal health covers for the older persons, Old Person Cash Transfer (OPCT) and government pension are some of the important interventions by government to support the older persons.

4.6.1 Government Support the Well-Being of the Older Persons

Slightly more than half 187 (56.2%) of older persons receives monthly Older person Cash Transfer from the government with 123 (36.9%) said they don't get government

support. The Older person Cash Transfer (OPCT) program in Kenya was introduced in 2006 to improve livelihoods of older persons. The program targets extremely poor households that include a member aged 65 or older who does not receive a pension. The program currently covers 203,011 households. Each household under the program is given 2000 Kenyan Shillings every two months. The money is paid through the appointed payment agent (NSPS, 2016).

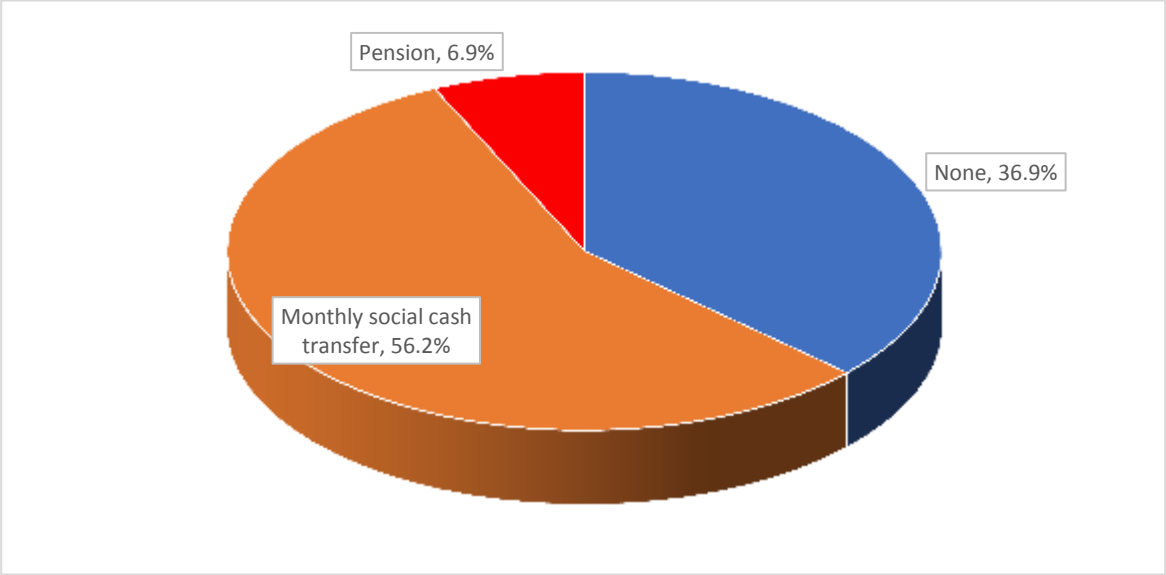


Figure 4. 6: Government Support the Well-Being of the Older Persons

However, the two thousand is inadequate and does not meet the basic needs of the older persons. On the other hand, it does not reach all the older persons. This concurs with the confessions from some older persons.

"I *live with my late daughter's children. I am the bread winner and have to look at the welfare of these children. The monthly 2000 shillings given cannot even buy enough food to last us for one month. Despite being unwell, I often seek some casual kibaruas*

to earn some little cash to take us through our basic needs for the month", (participant 5)

4.6.2 Older person had experienced an Injurious Fall

Risk of injurious falls increases with age and women are more vulnerable to falls than men. This is due to loss of muscle strength and osteoporosis. Environmental hazards are also responsible of the highest number of falls. These falls among the older persons leads to longer hospital stay hence should be prevented. Half of older persons in the study area 169(50.8%) had never had an injurious fall as shown in figure 4.7.

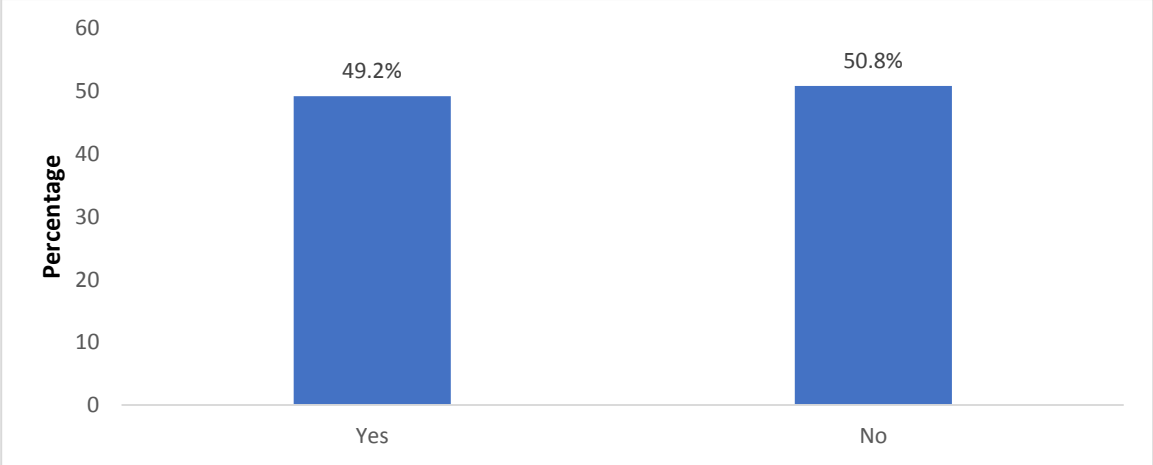


Figure 4.7: Older persons had Experienced an Injurious Fall

4.6.3 Occurrence of Injurious Fall

Out of 164 (49.2%) of older persons who had experienced injurious fall, slightly more than half 84 (51.2%) occurred few months preceding the study and 109 (66.5%) were hospitalized after injury (Table 4.11).

Table 4.11: Occurrence of Injurious Fall

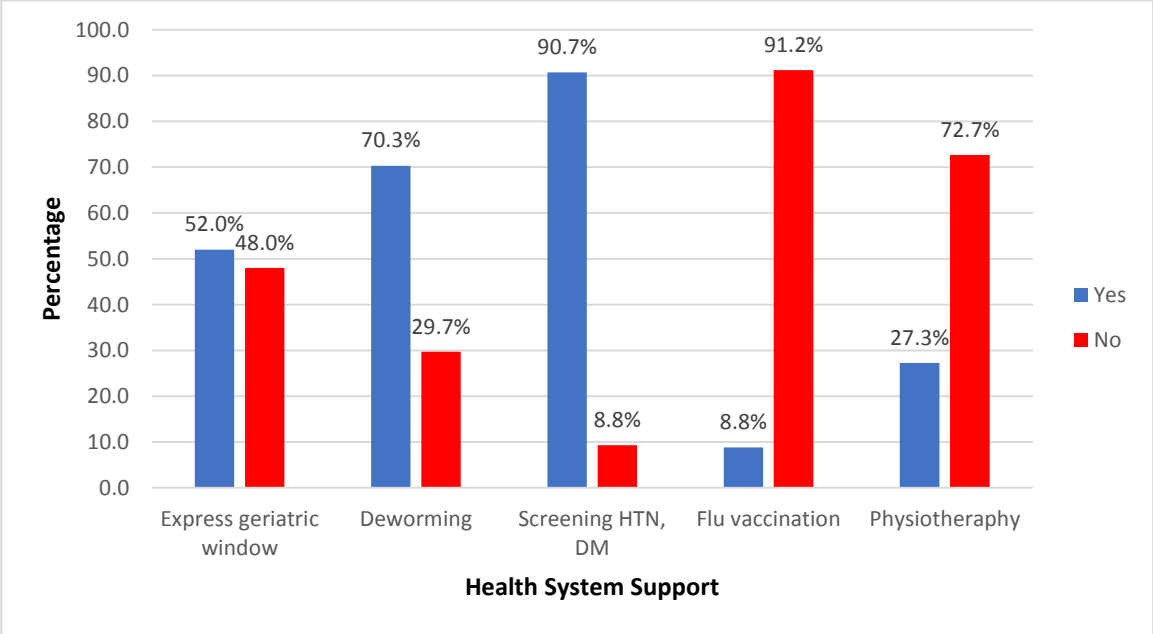
Characteristics	Frequency	Percent
Occurrence of injurious fall		
A few months ago,	84	51.2
A year ago,	57	34.8
Several years ago,	23	14.0
Caused Hospital Stay		
Yes	109	66.5
No	55	33.5
Precaution Taken		
Levelling the ground	91	55.5
Putting walking rails	55	33.5
Walking frame/stick	18	11.0

Some confession from an older person's female respondent further concurs with the occurrence of injurious fall due to environmental hazard.

"*I once had a very bad injurious fall two years ago outside here in my compound which led to a two months hospital stay. As you can see my home compound is very hilly and unlevelled. That time the rains were heavy and the ground was very slippery. I didn't have a walking stick and was rushing to the toilet. You know at my age I can't hold my bladder for long eeh. I slipped and fell down on the ground very hard which resulted to a fractured leg. I was lifted from there by my son who heard me shouting in pain. I even finished the peeing business on the spot!"* (Participant 6).

4.6.4 Health System Support to the Well-Being of the Older Persons

Health system supports the well-being of the older persons through health education, screening them for conditions such as hypertension, diabetes and malnutrition, giving them food supplements. Setting geriatric clinic for them and first tracking them in health facilities among others. Majority of older persons 302 (90.7%) had been screened for hypertension and diabetes as shown in figure 4.8.



A confession from one older gentleman concurred with the availability of geriatric fast tracking and screening services in health systems which is a plus towards the health of the older persons.

"Our health center has been upgraded to sub county level you know. Our Mheshimiwa Njogu (Member of Parliament) is really working hard. There are very good doctors who are treating the aged very well. The other day I went for my clinic and I was called mzee don't queue bring your card, and I was taken to see the doctor immediately. My pressure and blood sugar levels were taken. I was later sent to pick my medicine. I was very happy and thanked my doctors", (participant 3).

"In this clinic we give priority to the vulnerable persons like older persons. In fact we have an express window for their registration and one room with a nurse and a clinical officer allocated to see them. We can't let our parents and grandparents queue with the youths on the line…." (KII 2)

4.6.5 Social Activities that Support the Well-Being of the Older Persons

The older persons were involved in various social activities such as women/men social groups, sports. More than three-quarter 256 (90%) haven't been supported to attend recreation activity as shown in figure 4.9.

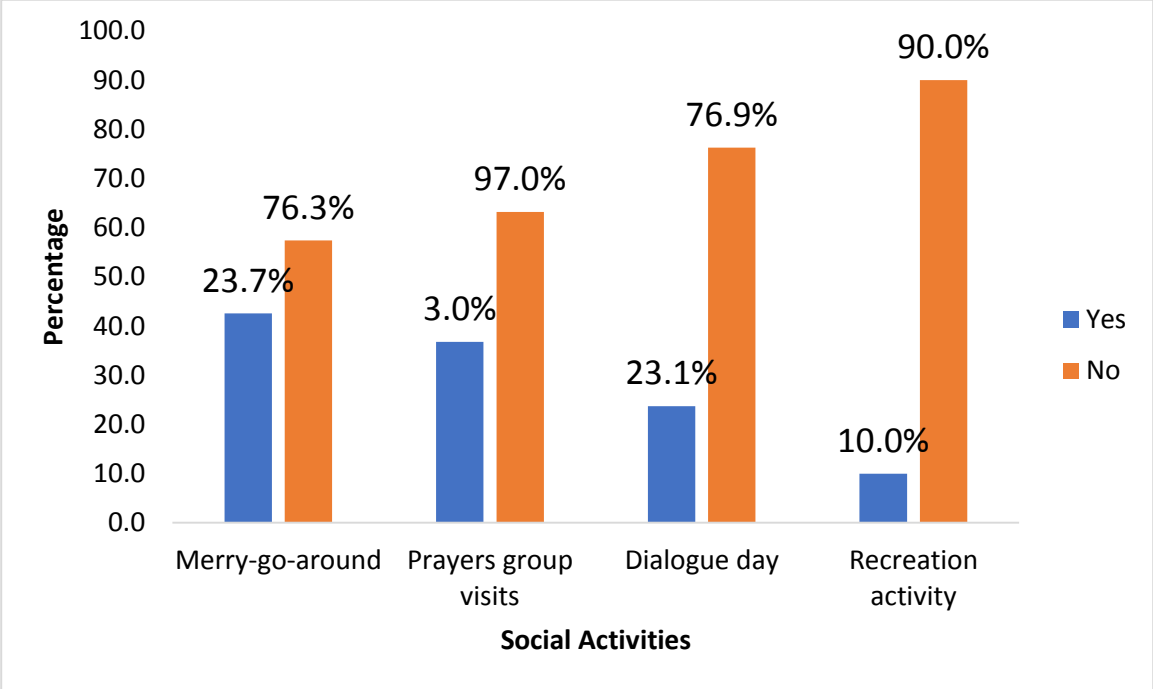


Figure 4. 4: Social Activities that Support the Well-Being of the Older Persons

"....I don't engage myself in any community activity....can't afford the registration and monthly contributions", (participant 10)

"Majority of the older persons don't engage in the social welfare groups siting lack of finances and others loss of physical energy to move around…" (KII participant 1)

CHAPTER FIVE: DISCUSSION, SUMMARY OF FINDINGS, CONCLUSIONSAND RECOMMENDATIONS

5.1 Introduction

The chapter summarizes the findings, conclusion and recommendations. The presentation has been as per the study objectives. Recommendations for further research are also suggested. The purpose of the study was to examine phase three household care- giving practices among the phase three older persons in Kirinyaga County.

5.2 Discussion

5.2.1 Role of Care Giving and well-being of the Phase Three Older Persons

In this study, most of older person's respondents (84.1%) were practicing self-personal hygiene activities. The rate of practicing personal hygiene among the older persons reduced with increase in chronological age. Age was significantly associated with care-giving in personal hygiene practices (p=0.0001). This concurs with a study done in Nairobi, Kenya by Waudo 2018. Personal hygiene and nutrition status of older persons correlates with educational level of the older person, availability of a care giver and living independency. An older person living alone has a tendency of taking few or no baths at all and taking few monotonous meals. In case of urine and fecal incontinence the older persons should be encouraged to change and bath regularly to maintain hygiene, which calls for a care giver. Mangiola (2016) unpublished research work done in Nairobi; Kenya concluded that good personal hygiene will not only promote physical health well-being among the older persons, but also good psychological health. Bladder

control, bowel control and toileting were not significantly associated with care-giving in personal hygiene practices.

Personal hygiene is the basic things that one does daily including getting up bathing, brushing teeth, combing your hair, nails care, dressing, etc. To the older persons these things may seem difficult leading to agitation, frustration and depression. Other challenges faced by the older persons in their personal hygiene practices include lack of water, design of bathroom, inability to get sustainable care practices etc. To avoid this, they should be assisted. They should also be encouraged to carry out these routines as it promotes independence and sense of purpose.

More than half of older persons cooked or fed by themselves and higher than half of respondents between 75-79 years said the provision of cooking or feeding practices was done by themselves and age was significantly associated with care-giving in cooking or feeding practices. This concurs with Waudo, 2018 that living alone affects negatively the older person's nutrition and their general well-being. A study done in Kenyan Nairobi County by Mugo 2015 too reported that undernutrition status among the older persons correlated with living independency and presence of a good care giver. Those living alone without a care giver are likely to have fewer and monotonous meals especially staple foods like sweet potatoes, arrowroot or mashed green potatoes. Rashmi 2013 found 15% out of 360 Indians older persons were malnourished. Monoarul Haque *et al.*, too found the health status of Bangladesh older persons not satisfactory hence

recommended Intervention programs related to health and nutritional status of older persons.

In Kenya nutritional needs of the older persons are neither documented clearly nor understood. Older people are acknowledged as vulnerable to malnutrition yet their nutritional needs are not adequately met. Efforts to improve the malnutrition should be made by both health professionals and care givers. This is more important especially for the demographic changes. In the study 68 % male and 44% female reported that they were ailing out of which 119% males and 28% females were chronically ill. This made it difficult for most of them taking care of cooking and feeding themselves leading to poor nutrition. Specific training should be done on knowledge about nutrition among the older persons and their care-givers should be done. Another important area of training is community-based diagnosis entailing screening of malnourished/vulnerable groups. Nutritional interventions for the poor and those living with multiple comorbidities should be done. Similarly, nutritional guidelines for older persons should be developed (WHO 2010, Waudo (2018).

In this study, a significant number of female (41.4%) and males (58.0%) lived in grass thatched houses with earthen walls and floor. These houses are prone to dust and the level of cleanliness is poor. This further affects the older persons' health negatively. Unfortunately, most of the older persons living in these houses get used to the poor hygiene status. For example, majority of male respondents (42.5%) and (37.9%) of females perceived their sanitation was better.

42.9% of older persons had experienced an abuse of which being robbed of property (72.0%) and beating (67.1%) being common abuse. This is similar to WHO (2017) and Yon *et al.,* (2019).Globally 15.7% of older persons were abused in the year 2017.As the population of ageing continues to increase elder abuse cases are projected to reach 320 victims by 2050. According to report published by lancet global health in 2017 revealed that 57% of older persons are abused globally. Out of this 11.6% were psychological abused, 6.8% financially abused, 4.2% neglected, 2.6% were physical abused and 0.9% sexually abused. Similarly, the rate of older persons' abuse prevalence in institutions is high. There is a need to scale up action in improving surveillance and monitoring elder abuse in the institutions of care globally. This is important in informing policy against older person's abuse.

5.2.2 Types and the role of Care-Givers for the Older Persons

Thirty percent of the older persons carried out activities of daily living by themselves with most of older persons (54.7%) and 32.1% assisted on bathing and attending medical appointments respectively. This differs with Mangiola (2016) and Waudo 2018 done at Nairobi county Kenya, which found that older person's experiences difficulties in carrying out household and personal care due to cognitive, physical impairments or both. Due to these difficulties, they usually embrace an option of a care giver in the house.

Caregiving is assisting older persons with activities of daily living. Mostly its unpaid services especially with the family care givers. At times it's viewed as what naturally

comes when you're a spouse, a child or a family member. This arrangement enables spouses and older parents to live longer at home (AAMFT 2016).

Further, this study differs with a study done in USA by Gillick (2013) study finding which illustrated that all the older persons care givers assist them with personal care or activities of daily living involving bathing, eating, dressing, toileting. They also assist with Household care or instrumental activities of living which entails cooking, cleaning, laundry, shopping and buying necessities, managing finances. Health care involves assisting with medical care and attending physician's appointment.it also involves physical therapy like massaging. Another important healthcare is emotional care. This entails companionship, engaging the older person in meaningful activities, and other occupational therapy activities like conversation.

From the study 30% of the care givers are friends and relatives followed by the spouses at 15.9% and the least being the hired care givers at 3.3%. Others included grown up children and volunteers. More health education to families on providing care to the older persons should be done. More over the older persons should be encouraged to embrace hired care givers when necessary.

From the study there is a clear gap in provision of older person's care givers which have a big role to play in the well- being of the older persons. As such the family and state should consider ensuring availability of home or institutional care givers for the older persons.

5.2.3 Interventions in Place to Support the Well-Being of the Older Persons

Findings from the study revealed that 56.2% of older persons receive monthly Older Person Cash Transfer (OPCT) from the government. The Older person Cash Transfer (OPCT) program is an intervention by government to address poverty among the older persons. The Government has come up with various programs geared towards addressing poverty among the older persons. These include social protection programs. Another important one is social insurance schemes like NHIF. Safety net programs in another important intervention to address poverty among the older persons. The Older person Cash Transfer (OPCT) program is one of the government supports to the older persons. This program by the Kenyan government was introduced in 2006. The aim of this program was to improve livelihoods of older persons. The program targets extremely poor households with a member aged 65 years old and over. The older person should not be receiving a pension. The program currently covers 203,011 households. Every two months a household on the program is paid 2000 Kenyan shillings. This money is paid through the appointed payment agent. However, the money does not cover all the older persons and is too little to take care of the older persons basic requirements.

Health system supports the well- being of the older persons through health education, screening them for conditions such as hypertension, diabetes and malnutrition, giving them food supplements. Setting geriatric clinic for them and first tracking them in health facilities among others. Majority of older persons 302(90.7%) had been screened for hypertension and diabetes. This concurs with (WHO 2015) that through disease

prevention the medical cost burden can be reduced and also enhance healthy aging (WHO 2015).

From the study 49.2% had experienced an injurious fall with 51.2% having occurred few months preceding the study and 66.5% were hospitalized after injury. Environmental hazards are responsible of the highest number of falls hence age friendly environment should be implemented. Exercises, raising awareness of risk factors, balance training and therapy can reduce the falls. Prevention of osteoporosis a major cause of injurious falls among women is another important intervention.

Another intervention is the prevention of communicable diseases. Older person's immunity decreases with age making them vulnerable to diseases. Through disease prevention the medical cost burden can be reduced and also enhance healthy aging (WHO 2015).

The other important intervention involves public support for formal and informal home care**.** With the increasing older population, increased number of people requires care due to functional limitation needs. With home care there's less burden on the older persons institutions.

5.3 Summary of the major findings

This section summarizes the findings obtained in chapter four in line with the study objectives

5.3.1 Care Giving and well-being of the Older Persons

Majority of the respondents reported that they were doing well and only needed minimal assistance when bathing, feeding, grooming, dressing, bladder control, bowel control and toileting. Further, majority of the respondents reported that they experience water shortage, had problems with the design of the bathroom and are unable to get sustainable care practices.

In addition, the study results showed a statistically significant association between feeding pattern and older persons care-giving. This implies that an improvement in feeding pattern is associated with improved older persons care-giving. The study results also revealed a statistically significant association between older persons' abuse and older persons care-giving. This implies that an increase in older person's abuse is associated with worsened well-being of the older persons.

5.3.2 Types and the role of Care giving and well-being of the Older Persons

The study results revealed that majority of the older persons were assisted by their spouses, friends and relatives in handling daily living activities. However, others got help from their children as well as volunteers. Further, majority of the respondents noted that their care givers did not assist them with bathing, feeding, toileting, clothing, sit-bed transfer, taking medication and attending medical appointments. In addition, the findings revealed non- significant association between types of care givers and older persons care-giving.

5.3.3 Interventions in Place and Well-being of the older persons

The majority of the older persons received monthly Older Person Cash Transfer (OPCT) or pension from the government. However, a third of the respondents noted that they were not beneficiaries of the government support. Further, majority of the respondents highlighted that there was a geriatric clinic/ window in the health center that served them.

5.4 Conclusions

The conclusions herein are derived from the findings of the study and are done as per each of the research objective.

i. The role of caregiving in enhancing well-being of the older persons was hygiene, nutrition, environment and older persons abuse whereby feeding and older persons abuse were the most significant.

ii. Friends, spouse, relatives, visiting healthcare professionals and children provided the care to older persons. Most of the older persons were responsible for bathing, feeding, toileting, and clothing, taking medication and attending medical appointments.

iii. The intervention in place to support the well-being of older person was governments relieve support, social activities and health related intervention. Establishment of Rescue Centre for neglected and abused older persons at Kirinyaga County. Monthly Older Persons Cash Transfers was significant.

5.5 Recommendations

5.5.1 Recommendations of the Study

In view of the foregoing conclusions, the study made several recommendations which are presented as per each research objectives.

i. The Role of Care- giving in enhancing the Well-being of the Older Persons: - The County Nutrition council, partnering NGO's should increase sensitization on the importance of older person's nutrition, hygiene and safe environment in their homes. The family members should ensure that the older persons are fed well. The County Government, community and family members should ensure reduction of abuse and unbiased treatment upon the older persons.

ii. The Type of Care Givers for Older Persons: - There is need for the County government of Kirinyaga through health promotion team, NGOs and community health volunteers to raise awareness on the importance of caring for the older persons.

iii. Interventions I Place To Support The Older Persons: - The National Government (NSPC) through the local administration needs to regularly check and update all deserving older persons benefit from the Older persons Cash Transfer (OPCT) program.

    - Awareness creation of the recently established Rescue Centre for neglected and abused older persons at Ngurubani town in Kirinyaga County.

5.5.2 Recommendations for Further Research

1. Further study focusing on comparison between older persons enjoying Health Insurance Cover versus the older persons without Health Insurance Cover.

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APPENDICES

Appendix I: Study Participation Consent

My name is ***Beth Murage****;* I am a postgraduate student at Kenyatta University, school of Public Health, in the Department of Community Health. I am planning to conduct a research study, which I invite you to take part in. I am conducting a study on **"Phase three house hold care-giving practices among the older persons in Gichugu Sub County, Kirinyaga County"** the information will be used to strengthen workable practices and effective care for the older persons.

Procedures to be followed

Participation in this study will require that I ask you some questions and no procedure will be performed on you. You have the right to refuse participation in this study. Please remember that participation in the study is voluntary. You may ask questions related to the study at any time.

You may refuse to respond to any questions and you may stop an interview at any time. You may also stop being in the study at any time without any consequences to the services you receive from researcher now or in the future.

Discomforts and risks

There are no questions you will be asked that may be embarrassing or make you uncomfortable. But, if this happens, you may refuse to answer these questions if you choose so. You may also stop the interview at any time. The interview may consume approximately half an hour of your time.

Benefits

If you participate in this study you will help us to learn how to provide effective information that administration is missing out that can improve the health of older persons and reduce the risk of neglect and abuse.

Reward

Participating in this study is absolutely voluntary and therefore no reward will be given whatsoever

Confidentiality

The interviews will be conducted within the home stead. Your name will not be recorded on the questionnaire. The questionnaire will be kept in a locked cabinet for safe keeping at Kenyatta University. Everything will be kept private.

Contact information

If you have any questions you may contact Beth Murage (principle investigator) on 0721575074 or Dr. Warutere (Supervisor) on 0721993833 or Dr. Judy (Supervisor) on 0720671286 or the Kenyatta University Ethical Review Committee Secretariat on chairman.kuerc@ku.ac.ke , secretary kuerc@ku.ac.ke, ercku2008@gmail.com

Participant's statement

The above information regarding my participation in the study is clear to me. I have been given a chance to ask questions and my questions have been answered to my satisfaction. My participation in this study is entirely voluntary. I understand that I will still get the same care whether I decide to leave the study or not and my decision will not change the care I will receive from the researcher today or any other time.

Code of participant…….

…… ……

Signature or thumb print Date

Investigator`s statement

I, the undersigned, I have explained to the volunteer in a language she/he understands, the procedures to be followed in the study and the risks and benefits involved.

Name of interviewer……..

……. ……

Interviewer signature Date

Appendix II: Interviewer -Administered Questionnaire

SECTION A. SOCIAL ECONOMIC STATUS OF THE OLDER PERSONS PERSON (TICK (√) THE MOST APPROPRIATE ANSWER)

1. Social economic status

   i) In what day, month and year were you born? ……..

   ii) What is your gender? ……..

   iii) What is your current marital status? ……..

   iv) What is the highest level of education that you have completed?…….

   v) Do you belong to a religious denomination?

   vi) If yes which one ……

   vii) What do you do for a living?.....

   viii) How many living children do you have? ……...

2. What is the living arrangement of the older person?

   i) Lives alone

   ii) Lives with family members

   iii) Lives with an employed care-giver

   iv) The older persons is the bread winner in the family

3. Are you currently; -

i) Able to walk without support ii) not able to walk without support

iii) Unwell iv) chronically ill

SECTION B. TO IDENTIFY THE ROLE OF THE CARE GIVING IN THE WEL-BEING OF THE OLDER PERSONS HISTORY (TICK (√) THE MOST APPROPRIATE RESPONSE).

(i)PERSONAL HYGIENE AMONG THE OLDER PERSONS HISTORY (TICK (√) THE MOST APPROPRIATE RESPONSE)

1. How well do you carry out the activities of daily living?

   a.) Alone

	Poor / requires assistance (1)	**Good / minimal assistance (2)**	**Very good / no assistance required (3)**
Bathing			
Feeding			
Grooming (face, hair, teeth, nails, shaving)			
Dressing			
Bladder control			
Bowel control			
Toileting			

2. Who is responsible for providing your personal hygiene?

   a).Myself b). Family members c).Hired care giver

3. What challenges do you face in carrying out your personal hygiene practices?

   a) Water shortage

b) Design of bathroom

c) In ability to get sustainable care practices

(II)NUTRITIONAL STATUS OF THE OLDER PERSONS HISTORY (TICK (√) THE MOST APPROPRIATE RESPONSE)

1. What is your feeding pattern?

i) One meal a day

ii) Two meals a day

iii) Three meals a day

iv) Three meals a day with a snack in between

v) No meal at all

2. Has food intake declined over the past 3 months due to loss of appetite, digestive problem, chewing or swallowing difficulties?

i) Severe decrease in food intake

ii) Moderate decrease in food intake

iii) No decrease in food intake

3. What kind of food do you feed on during?

i) Breakfast ……..

ii) Lunch time ……

iii) Supper time ……..

iv) Snacks /in between meals time…….

4. What are the main sources of your food or diet?

……..

5. Who is responsible for making your feeds/ feeding you?

   a) Myself b) Family members c) Hired care taker

6. How often do you take water?

   i) No water intake at all

   ii) One glass of water per day

   iii) One glass of water after each meal (approx. 3 glasses)

   iv) Six to eight glasses of water

7. Do you experience the following?

   i) Dizziness a)NO b) YES

   ii) Irritability a)NO b) YES

(III)AGE- FRIENDLY ENVIRONMENT IN THE OLDER PERSONS'S HOME HISTORY (TICK (√) THE MOST APPROPRIATE RESPONSE)

1. What type of housing does the older persons person lives in?

   i) Grass thatched, earthen walls and floor

   ii) Iron sheet roofed, earthen walls and floor

   iii) Iron sheet roofed, timber walls and cemented floor

   iv) Iron sheet roofed, stone walls and cemented floor

2. How is the physical environmental status of the older person home?

	Poor /need assistance (1)	**Good/minimal assistance (2)**	**Very good/ no need of assistance (3)**
Sanitation status			
Walkability to neighborhood			
Accessible to public places, building and transport			
Safety of the environment			
Type of toilet and bathroom			

3. How is the social environment status of the older person?

	Poor (1)	**Good (2)**	**Very good (3)**
Positive social attitude towards older people			
Engagement in socio-cultural activity			
Participation in local decision-making			
Availability of information and services			
Economic security			

4. OLDER PERSONS ABUSE (TICK THE MOST APPROPRIATE)

1. Have you ever heard about an older person who was abused?

a) Yes b) No

2. What do you understand about older persons abuse?

a) Sexually abuse b) Beating c) Neglect by loved ones

d) Robbed of your property e) All of the above

3. When were you abused last?

a) Last year b) Two months ago

c) A month ago d) Never been abused

4. What did you do when you were abused?

a) Reported to the authority b) Reported to my care giver

c) Reported to a family member d) Kept quiet

5. When did you last train on abuse and what to do in case you are abused?

a) Two year ago b) An year ago c) A month ago d) Never trained

SECTION C. TO INDENTIFY THE TYPES OF CARE GIVERS FOR THE OLDER PERSONS HISTORY (TICK (√) THE MOST APPROPRIATE RESPONSE)

1. Who usually assist you with activities of daily living?

a). Spouse b). Grown up children c). Hired care taker d). Relative

e). Friend f). Volunteering). Professional care giver

2. Does your care-giver assist you with the following activities?

i) Bathing ……..

ii) Feeding …….

iii) Toileting…….

iv) Clothing…….

v) Sit - bed transfer…….

vi) Taking medication…….

vii) Attending medical appointments /seeking health assistance ……

SECTION D. INTERVENTIONS IN PLACE TO SUPPORT THE WELL-BEING OF THE OLDER PERSONS HISTORY (TICK (√) THE MOST APPROPRIATE RESPONSE)

1. What type of help do you receive from the government?

……

2. Have you ever had an injurious fall?

i) a) Yes b) No

ii) If yes where and when did it happen?

a) A few months ago b) a year ago c) several years ago

iii) Did the injury caused by the fall lead to a hospital stay?

a) Yes b) No

v) What measures were taken to avoid future falls?

……

3.i)Is there a geriatric clinic/ window in the health center that serves you?

a) No b) Yes

ii) What preventive services are you given once you visit the health facility?

b) Deworming b) screening for hypertension, diabetes

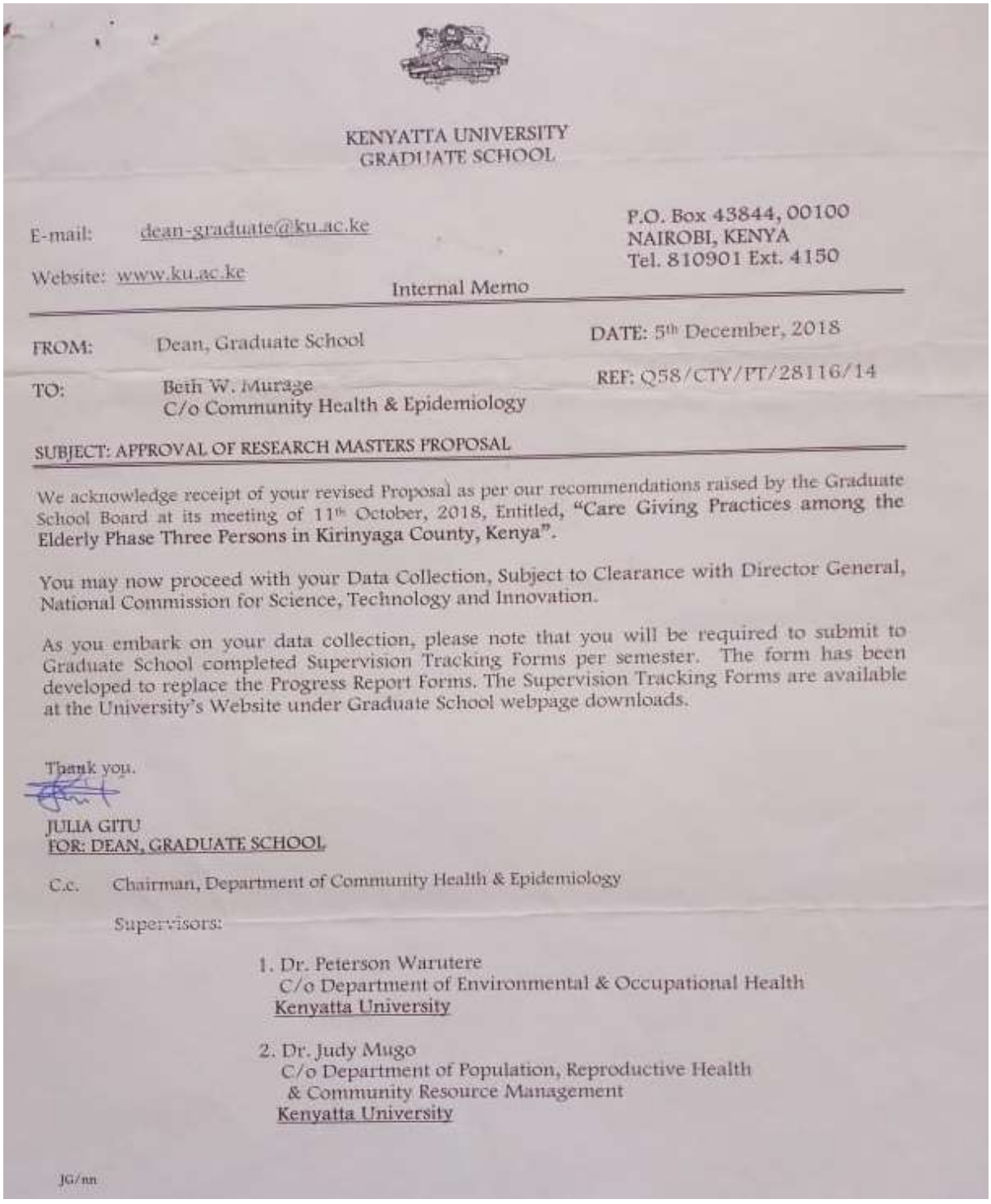
c) Flu vaccination

4. What social activities do you participate in?

a) Local women group b) sports

c) Physiotherapy d) none

Appendix III: Graduate School Approval of Research Proposal



KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 4150

Internal Memo

FROM: Dean, Graduate School

DATE: 5th December, 2018

REF: Q58/CTY/PT/28116/14

TO: Beth W. Murage
C/o Community Health & Epidemiology

SUBJECT: APPROVAL OF RESEARCH MASTERS PROPOSAL

We acknowledge receipt of your revised Proposal as per our recommendations raised by the Graduate School Board at its meeting of 11th October, 2018, Entitled, "Care Giving Practices among the Elderly Phase Three Persons in Kirinyaga County, Kenya".

You may now proceed with your Data Collection, Subject to Clearance with Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking Forms per semester. The form has been developed to replace the Progress Report Forms. The Supervision Tracking Forms are available at the University's Website under Graduate School webpage downloads.

Thank you.

JULIA GITU
FOR: DEAN, GRADUATE SCHOOL

C.c. Chairman, Department of Community Health & Epidemiology

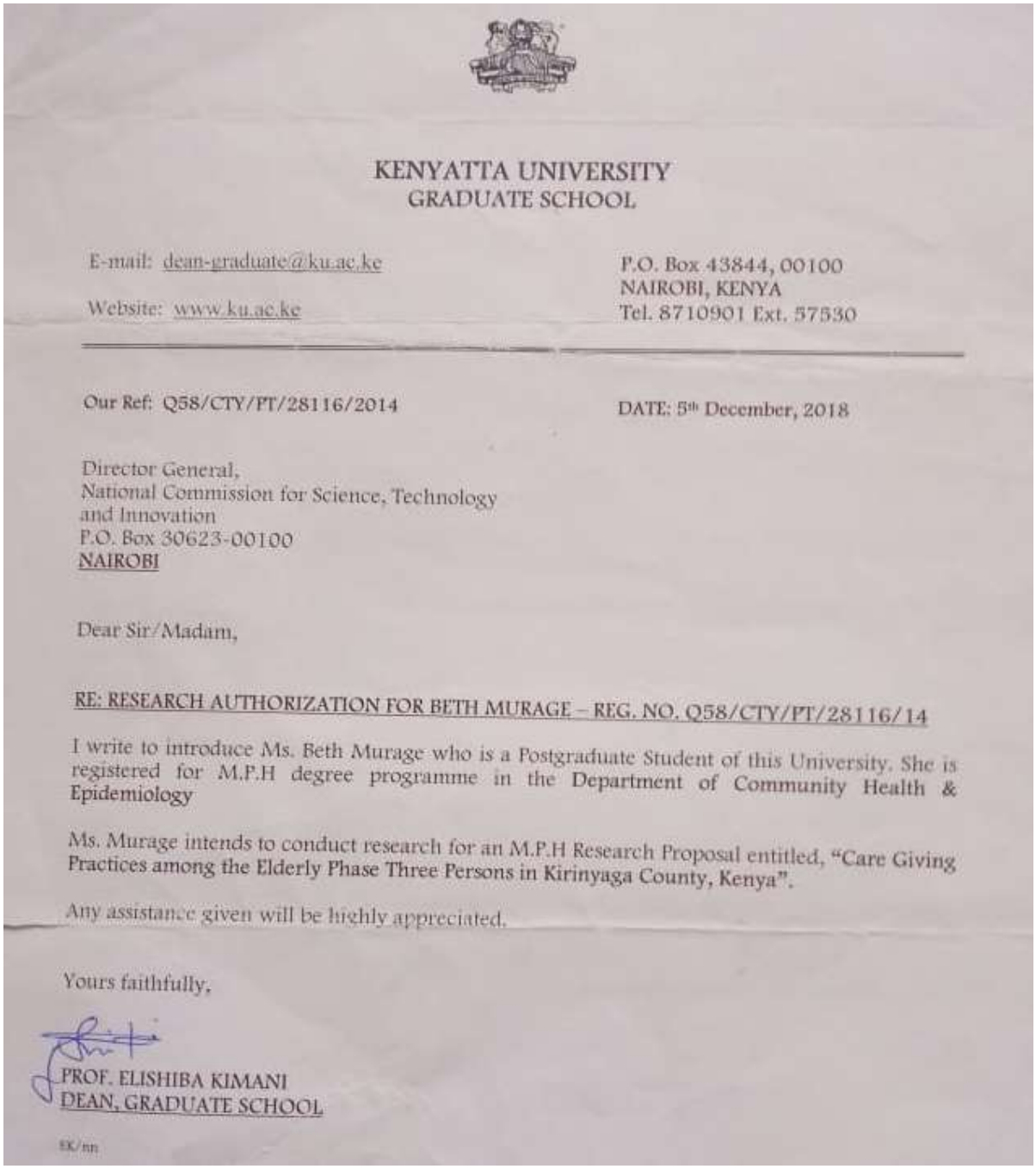
Supervisors:

1. Dr. Peterson Warutere
   C/o Department of Environmental & Occupational Health
   Kenyatta University

2. Dr. Judy Mugo
   C/o Department of Population, Reproductive Health
   & Community Resource Management
   Kenyatta University

JG/nn

Appendix IV: Graduate School Research Authorization



KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: Q58/CTY/PT/28116/2014

DATE: 5th December, 2018

Director General,
National Commission for Science, Technology
and Innovation
P.O. Box 30623-00100
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR BETH MURAGE – REG. NO. Q58/CTY/PT/28116/14

I write to introduce Ms. Beth Murage who is a Postgraduate Student of this University. She is registered for M.P.H degree programme in the Department of Community Health & Epidemiology

Ms. Murage intends to conduct research for an M.P.H Research Proposal entitled, "Care Giving Practices among the Elderly Phase Three Persons in Kirinyaga County, Kenya".

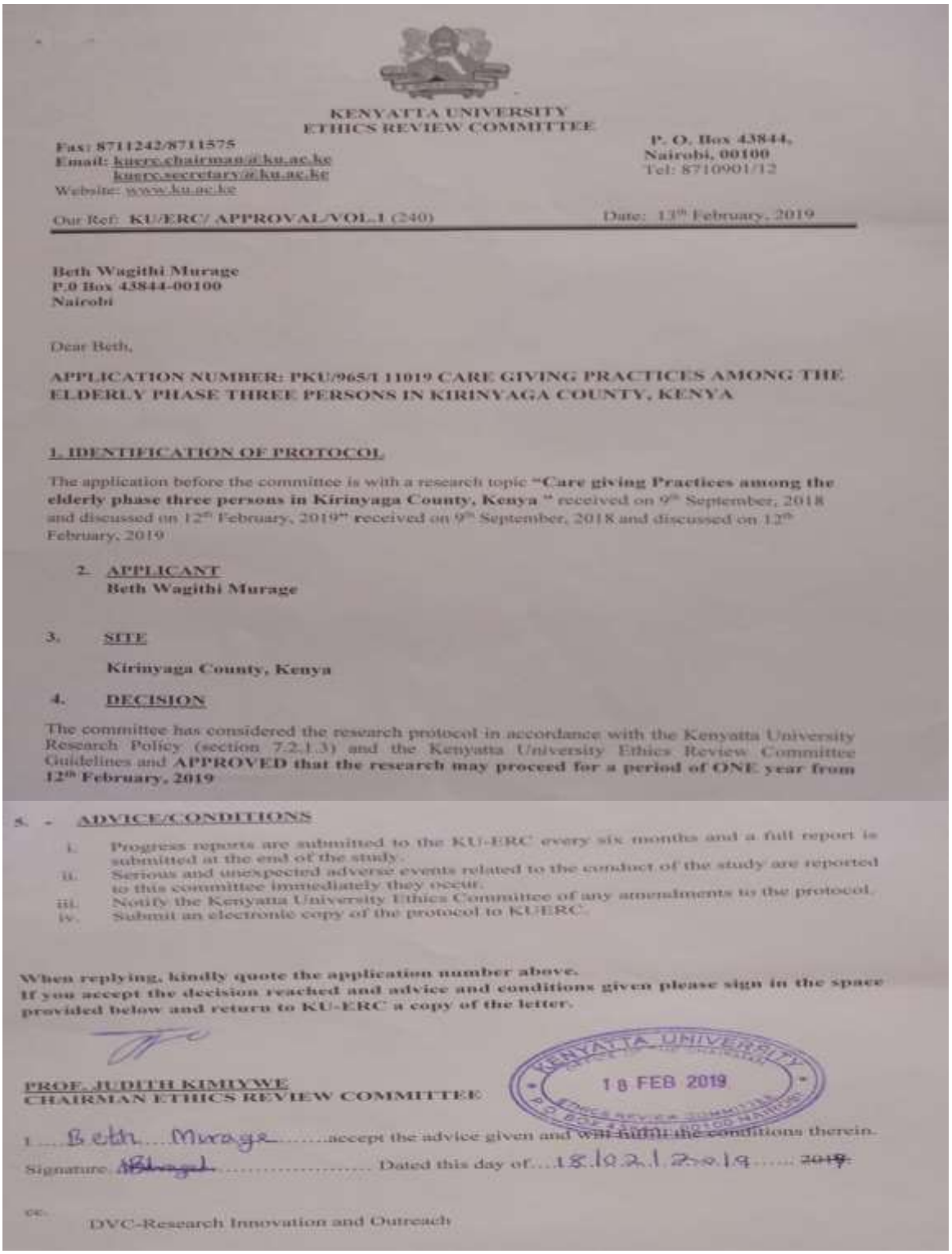
Any assistance given will be highly appreciated.

Yours faithfully,

PROF. ELISHIBA KIMANI
DEAN, GRADUATE SCHOOL

EK/nn

Appendix V: KU-ERC Approval



KENYATTA UNIVERSITY
ETHICS REVIEW COMMITTEE

Fax: 8711242/8711575
Email: kuerc.chairman@ku.ac.ke
kuerc.secretary@ku.ac.ke
Website: www.ku.ac.ke

P. O. Box 43844,
Nairobi, 00100
Tel: 8710901/12

Our Ref: KU/ERC/ APPROVAL/VOL.1 (240) Date: 13th February, 2019

Beth Wagithi Murage
P.0 Box 43844-00100
Nairobi

Dear Beth,

APPLICATION NUMBER: PKU/965/I 11019 CARE GIVING PRACTICES AMONG THE ELDERLY PHASE THREE PERSONS IN KIRINYAGA COUNTY, KENYA

1. IDENTIFICATION OF PROTOCOL

The application before the committee is with a research topic **"Care giving Practices among the elderly phase three persons in Kirinyaga County, Kenya "** received on 9th September, 2018 and discussed on 12th February, 2019" **received on** 9th September, 2018 and discussed on 12th February, 2019

2. APPLICANT
Beth Wagithi Murage

3. SITE

Kirinyaga County, Kenya

4. DECISION

The committee has considered the research protocol in accordance with the Kenyatta University Research Policy (section 7.2.1.3) and the Kenyatta University Ethics Review Committee Guidelines and **APPROVED that the research may proceed for a period of ONE year from 12th February, 2019**

5. - ADVICE/CONDITIONS

i. Progress reports are submitted to the KU-ERC every six months and a full report is submitted at the end of the study.
ii. Serious and unexpected adverse events related to the conduct of the study are reported to this committee immediately they occur.
iii. Notify the Kenyatta University Ethics Committee of any amendments to the protocol.
iv. Submit an electronic copy of the protocol to KU/ERC.

When replying, kindly quote the application number above.
If you accept the decision reached and advice and conditions given please sign in the space provided below and return to KU-ERC a copy of the letter.

PROF. JUDITH KIMIYWE
CHAIRMAN ETHICS REVIEW COMMITTEE

KENYATTA UNIVERSITY
18 FEB 2019
P.O. BOX 43844-00100 NAIROBI

I Beth Murage accept the advice given and will fulfil the conditions therein.

Signature ..... Dated this day of 18.02.2019 ~~2018~~

cc.
DVC-Research Innovation and Outreach

Appendix VI: NACOSTI Permit

THIS IS TO CERTIFY THAT:
MISS. BETH WANGITHI MURAGE
of KENYATTA UNIVERSITY, 9080-100
NAIROBI,has been permitted to conduct
research in *Kirinyaga County*

on the topic: *CARE GIVING PRACTICES AMONG THE ELDERLY PHASE THREE PERSONS IN KIRINYAGA COUNTY,KENYA.*

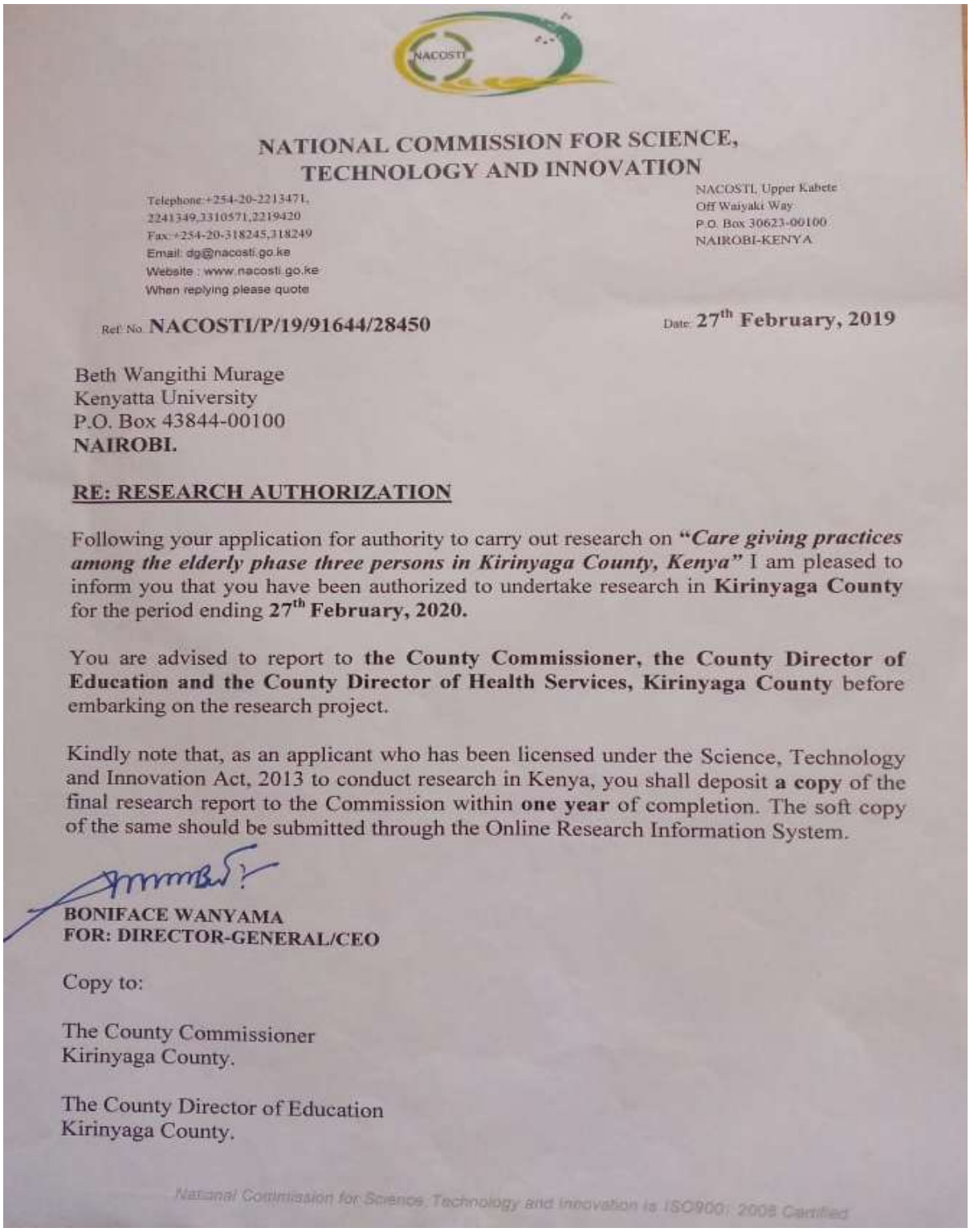
for the period ending:
27th February,2020

Permit No : NACOSTI/P/19/91644/28450
Date Of Issue : 27th February,2019
Fee Recieved :Ksh 1000

.....
Applicant's Signature

.....
Director General
National Commission for Science, Technology & Innovation

Appendix VII: NACOSTI Approval



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/19/91644/28450**

Date: **27th February, 2019**

Beth Wangithi Murage
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Care giving practices among the elderly phase three persons in Kirinyaga County, Kenya"*** I am pleased to inform you that you have been authorized to undertake research in **Kirinyaga County** for the period ending **27th February, 2020.**

You are advised to report to **the County Commissioner, the County Director of Education and the County Director of Health Services, Kirinyaga 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.

BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

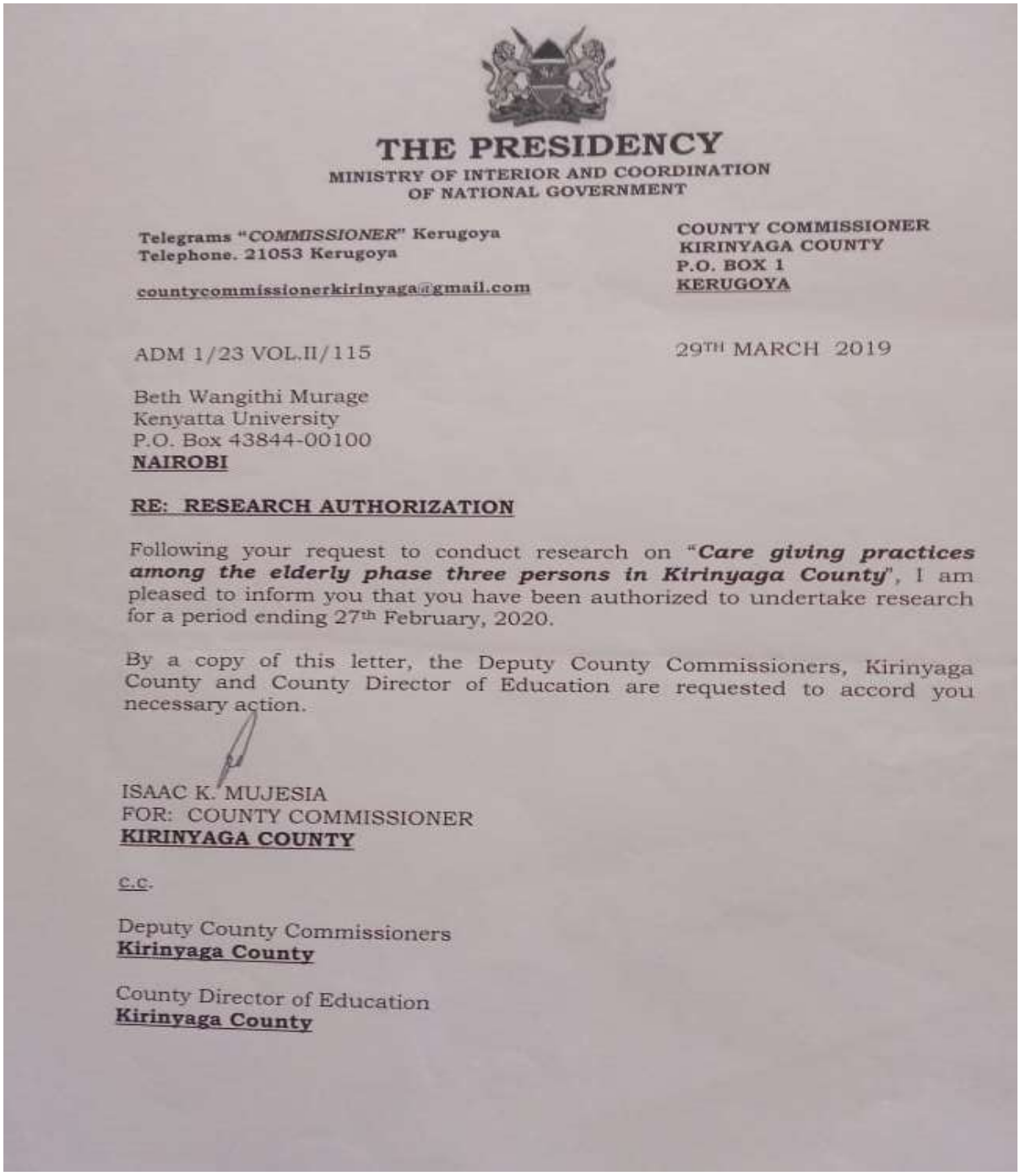
Copy to:

The County Commissioner
Kirinyaga County.

The County Director of Education
Kirinyaga County.

National Commission for Science, Technology and Innovation is ISO9001: 2008 Certified

Appendix VIII: Kirinyaga County Approval



THE PRESIDENCY
MINISTRY OF INTERIOR AND COORDINATION
OF NATIONAL GOVERNMENT

Telegrams "*COMMISSIONER*" Kerugoya
Telephone. 21053 Kerugoya

countycommissionerkirinyaga@gmail.com

COUNTY COMMISSIONER
KIRINYAGA COUNTY
P.O. BOX 1
KERUGOYA

ADM 1/23 VOL.II/115

29TH MARCH 2019

Beth Wangithi Murage
Kenyatta University
P.O. Box 43844-00100
NAIROBI

RE: RESEARCH AUTHORIZATION

Following your request to conduct research on "***Care giving practices among the elderly phase three persons in Kirinyaga County***", I am pleased to inform you that you have been authorized to undertake research for a period ending 27th February, 2020.

By a copy of this letter, the Deputy County Commissioners, Kirinyaga County and County Director of Education are requested to accord you necessary action.

ISAAC K. MUJESIA
FOR: COUNTY COMMISSIONER
KIRINYAGA COUNTY

c.c.

Deputy County Commissioners
Kirinyaga County

County Director of Education
Kirinyaga County

Appendix IX: Kirinyaga County Department of Health

KIRINYAGA COUNTY GOVERNMENT

COUNTY DEPARTMENT OF HEALTH

Telegrams: "MEDICAL", KERUGOYA
Telephone: (060) 21564, 21058
Fax (060) 21564
E- mail: dmohkirinyaga@gmail.com
When replying please quote:

COUNTY DIRECTOR OF HEALTH
KIRINYAGA.
P. O. BOX 24.
KERUGOYA

13th May 2019

REF; CDH/RES/VOL.II/88

TO

Beth Wangithi Murage
Kenyatta University
P O BOX 30197-00102

RE; APPROVAL TO CONDUCT A RESEARCH ON CARE GIVING PRACTICES AMONG THE ELEDERLY PHASE THREE PERSONS IN KIRINYAGA COUNTY, KENYA – BETH WANGITHI MURAGE REG. NO. Q58/CTY/PT/28116/14

We acknowledge the application for approval by the above named to conduct a research project on "**Care giving practices among the elderly phase three persons in Kirinyaga County, Kenya**".

The student is studying a Master's Degree in the Department of Community Health & Epidemiology at Kenyatta University.

You are hereby granted approval to conduct this project in the Hospital.

You are **Expected to Submit** the research findings to the County Department of Health on completion of the project.

G. N. KAROKI
COUNTY DIRECTOR OF HEALTH
KIRINYAGA COUNTY.

CC

- COH

DIRECTOR OF HEALTH
KIRINYAGA COUNTY
13 MAY 2019
Sign.....
P. O. Box 24 - 10300, KERUGOYA

Appendix X: Ministry of Education- Kirinyaga County

MINISTRY OF EDUCATION
STATE DEPARTMENT OF EARLY LEARNING & BASIC EDUCATION

Telephone: 060-21835/0202641217
Email kirinyagacde1@gmail.com
When replying please quote
Ref. No. and date

COUNTY DIRECTOR OF EDUCATION
KIRINYAGA COUNTY
P. O. BOX 96
KERUGOYA

REF.NO.MOE/CDE/KRG/GEN/09/85/18

29th March, 2019

Beth Wangithi Murage

Kenyatta University

P.O.Box 30197-00102

NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on, ***"Care giving practices among the elderly phase three persons in Kirinyaga County, Kenya."***

I am pleased to inform you that you have been authorized to undertake research in Kirinyaga County for a period ending **27th February, 2020.**

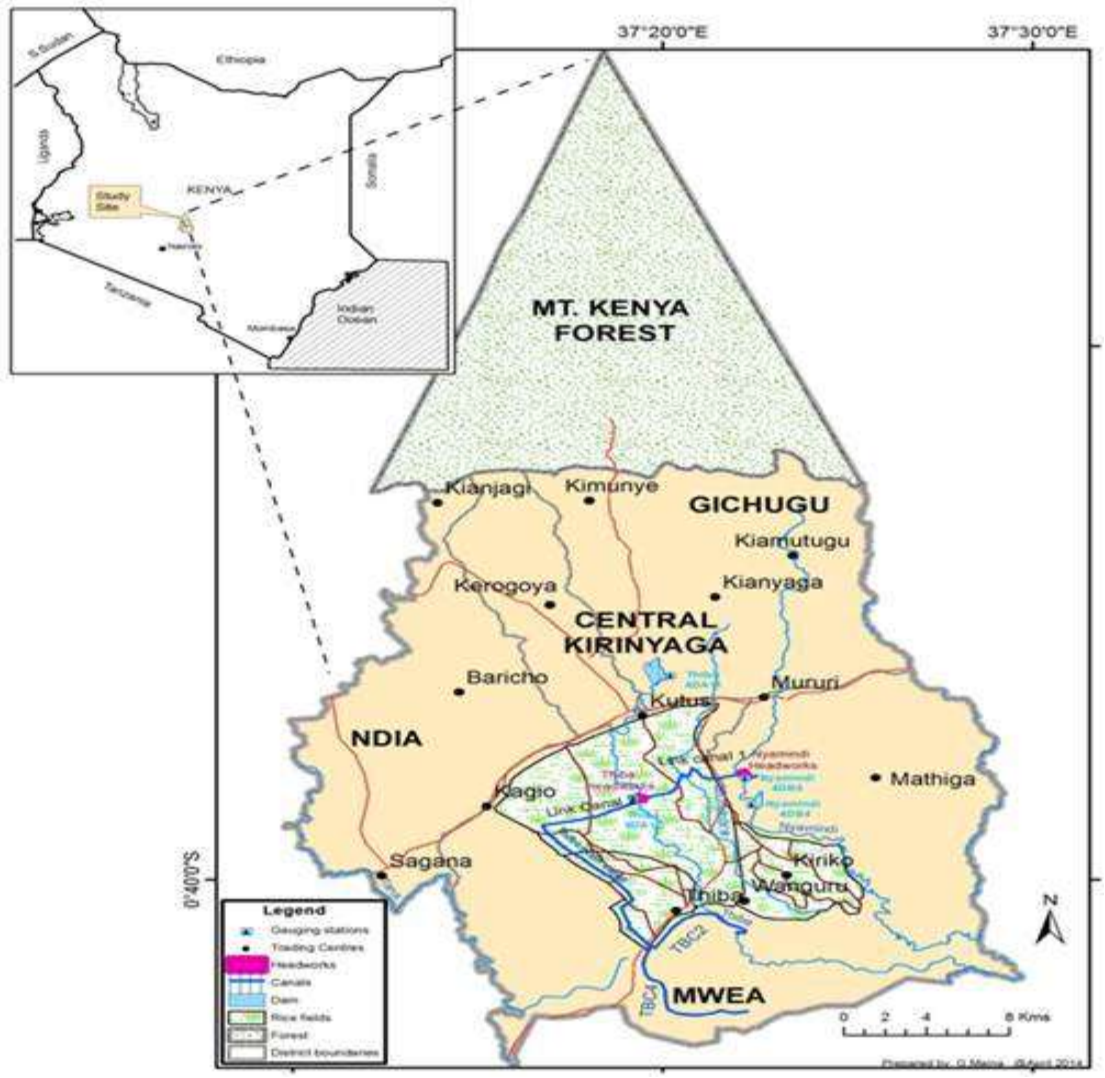
Kindly furnish this office with a copy of your findings at the end of the research.

MARGARET MWIRIGI
COUNTY DIRECTOR OF EDUCATION
KIRINYAGA

CC: PS MOE
REGIONAL COORDINATOR - CENTRAL

Vision: To have a globally competitive quality Education, Training and Research for Kenyans sustainable development.

Appendix XI: MAP of the Kirinyaga County



MAP OF KIRINYAGA COUNTY

(SOURCE: KIRINYAGA COUNTY WEBSITE)