DETERMINANTS OF A CCESS AND UPTAKE OF UNIVERSAL HEALTH COVERAGE AMONG HOUSEHOLDS OF MWINGI WEST SUB-COUNTY, KITUI COUNTY, KENYA

BY

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DECLARATION

This thesis is my original work and has not been presented to any other university for a degree or any other award.

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Supervisor's Approval

This thesis has been submitted for examination with our approval as university supervisors

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DEDICATION

I dedicate this work to my late mother, my Sons Richard Mwathe, Bryan Kikuyu and King Victor together with their mother Alice Mutile for their patience and support during this study period

ABSTRACT

The focus towards the achievement of Universal health coverage (UHC) has been hampered by a number of challenges which includes inadequate sensitization and enforcement of set guidelines, more focus by counties on high-cost interventions rather than on Primary Health Care (PHC), inadequate staff at national and county levels to offer health care service, inadequate financing, poor reporting on the quality-of-service delivery among others. The aim of this study was determinants of access and uptake of universal health coverage among households of Mwingi West Sub-County- Kitui County. The specific objectives were; to determine the awareness levels of UHC, determine socio-economic factors influencing uptake of UHC and determine health systems factors influencing uptake of UHC. Descriptive cross-sectional study design was employed where quantitative and qualitative data was collected using a structured questionnaire and Key Informant Interviews. The study population was households and health workers of Mwingi west. Stratified random sampling was employed to sample wards while simple random sampling was used to sample 422 respondents in the study area using household registers. Data collection tools were piloted in Mwingi North of which was not included in the study. The data was managed using SPSS version 25. Descriptive data was analyzed using measures of central tendency i.e., means, percentages and standard deviation The chi-square test was carried out to establish association between social economic, health system factors and uptake of universal health care. While confidence interval was set at 95%, data was summarized and presented using graphs, tables and charts. Ethical clearance was obtained from Jaramogi Oginga Odinga Teaching and Referral Hospital Institutional and Ethics Research committee. The study targeted 422 participants; however, only 322 of them were accessible. Almost a half, 151 (46.9%) of the participants were aged between 26 to 35 years. More than average, 183 (56.8%) of the respondents were females. Self-employment was the primary mode of livelihood for a high proportion 194(60.2%) of the participants. Most of the study sample, 183 (56.8%) were aware of Universal Health Coverage (UHC). There was a significant association between occupation, educational level, belonging to a social welfare group and awareness of UHC at $\alpha \leq 0.05$ (Chi-square: p=0.001, p=0.001, p=0.725, and p=0.0.027) respectively. There was no association between adequate drug availability in health facilities, rating of health service received and awareness of UHC (Chi-square: p=0.800, p=0.120) respectively. An association was found to exist between treatment waiting time, rating of health care workers and awareness of UHC (Chi-square: p=0.001, p=0.002) respectively. There is a need to foster patient experiences at facilities offering UHC services through enhanced quality of service tenable through sustained health care education of health care workers on emerging disease trends. This will allow provision of adequate evidence-based care, which meets the patient's needs. The County Government of Kitui should develop adequate health promotion strategies aimed at enhancing the awareness of its populace on matters UHC.

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LIST OF ABBREVIATIONS AND ACRONYMS

ASAL:	Arid and Semi-Arid Land
CRF:	County Revenue Funds
CSDH:	Commission on the Social Determinants of Health
GoK:	Government of Kenya
KCHIS:	Kitui County Health Insurance Scheme
KHFS:	Kenya Health Financing System
KNBS:	Kenya National Bureau of Statistics
HH:	House Holds
HMIS:	Health Management Information Systems
HSS:	Health Service systems
NHA:	National Health Accounts
NHIF:	National Hospital Insurance Fund
OOP:	Out of Pocket
PHC:	Primary Health Care
SDG:	Sustainable Development Goals
SHIF:	Social Health Insurance Fund
UHC:	Universal Health Care
UN:	United Nations
UNDP:	United Nations Development Programme
WHO:	World Health Organization
YLL:	Years of Lost Lives

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

According to WHO, (2010), Universal Health Coverage (UHC) is a situation where the whole population of a country has access to good quality health services according to needs and preferences, regardless of income level, social status, or residency (WHO, 2020). The main goal of UHC is to create a system of protection which provides equality of opportunity for people to enjoy the highest attainable standard of health. Universal health care does not imply coverage for all cases for people, but only that all people have access to health care (WHO, 2020; Matherson, 2015). Most Universal health Coverage systems are government funded (WHO, 2010). Universal healthcare coverage is based on the principle that all individuals and communities should have access to quality essential health services without suffering financial hardship (WHO, 2017). The UHC is a critical component of Sustainable development goals (SDG) and poverty reduction, a cornerstone of any effort to reduce social and gender inequities, and a hallmark of a government's commitment to improve the well-being of all citizens and promote health security and social cohesion.

Achieving UHC requires that attention be paid not just to financial arrangements but also to addressing non-financial barriers to accessing services. These can include geographical and cultural barriers, as well as problems of quality of care, including provider behavior and attitudes, which can discourage access by certain population (Kieny, 2017).

Several factors influence the provision, access and utilization of UHC in the community. Some of these factors include: health service systems, social-economic factors and awareness. The Health service systems (HSS) involve investments in inputs in an integrated and systemic way, but also reforming the architecture that determine how different parts of

the health system operate and interact to meet priority health needs through people-centered integrated services. Overall, investments in HSS have yielded impressive returns (WHO, 2020). Yet, progress towards UHC has been highly variable, both across and within countries and across different dimensions of UHC. The WHO provides the overall guidance on health systems, including the focus on people-centered services, the health systems building blocks, and the focus on institutions building and transformation of the health system to respond to the challenges of the 21st century. An increasing number of initiatives support this vision.

Effective HSS to promote UHC requires clarity and consensus on both desired performance goals and policy entry points. The HSS should focus on five dimensions of health system performance: equity; quality; responsiveness; efficiency; and resilience. Improved health system performance requires national, regional, and global action in three interrelated health system policy areas: service delivery, financing and governance (WHO, 2017). Progress in access and quality of services may be dependent on improvements in service delivery, including the management of human resources and availability of quality medicines, as well as in financing and governance. There are six building blocks, in Health system, which contribute to the strengthening of health systems in different ways. These are leadership/governance, health information systems, health workforce, medical products and technologies, service delivery and financing. Strengthening health systems thus means addressing key constraints in any of these building blocks. Financing and providing affordable, accessible and quality healthcare are one of the key health policy problems currently facing communities, governments, policy makers and international development institutions. Worldwide, 1.3 billion people in developing countries do not have access to adequate and affordable healthcare due to the high cost of using medical services (WHO, 2005). According to WHO World Health Statistics (2010), low- and middle-income countries bear 93% of worlds disease burden yet account for only 11% global health spending. In

developing countries, the low economic growth, limited capacity to collect tax revenues and competing priorities limit the tax revenue available for the health sector. Poor health prevails in many developing countries. World Bank (2005) attributed this state of affairs to underfunding of health, poor management of public health services and the inability of public primary health care services to match the demands of the growing populations.

The WHO Global Commission on the Social Determinants of Health (CSDH) identified inequities in the conditions in which people are born, live, work and age, driven by inequities in power, money and resources driving inequities in health (WHO,2017). The key targets for the SDGs are to achieve universal health coverage (UHC), which aims to provide financial risk protection, access to quality essential healthcare services and access to safe, effective, quality and affordable essential medicines and vaccines for all. However, healthcare and health outcomes are often driven by social factors and affected not only by the access and use of healthcare services, but by an array of factors outside health sector including social, economic, political, and environmental factors (social determinants of health). (KBS, 2017).

The constitution of Kenya 2010 provides the overarching legal framework to ensure comprehensive rights- based approach to health services delivery. Accordingly, the health service was devolved to the 47 counties (KBS, 2017). Kenya's Vision 2030 development agenda sets ambitious targets toward UHC in terms of financial protection, health service utilization, health service availability, and ultimately, health impact. Kenya has made significant progress in improving health outcomes. Overall, its 2015 UHC "service coverage index" was 57, based on a composite of different service delivery indicators analyzed by the World Health Organization.

Despite the great potential, Kitui County is among Arid and Semi-Arid land (ASAL) counties characterized by relatively high levels of poverty. The level of absolute poverty is estimated

at 47% compared to national average of 36.1% in 2016. Food poverty is estimated at 39.4% compared to the national average of 32%. About 50% of the population does not have access to improved water sources and 57.6% of households spent more than 30 minutes to fetch drinking water and accessing health services (KBS, 2017). The households in Kitui County with access to improved and unimproved sanitation services stand at 56.8 % compared at a national average of 65.3 percent. The five main common diseases in the County are malaria 49%, diarrhea 3.4%, stomach ache 5%, Flu 4.1% and Upper respiratory tract infection 7.7%. The nutrition status of the population in the Kitui County remains poor as a result of frequent droughts resulting to food insecurity at the household level, sub-optimal infant and young child feeding practices, poor child care practices, inadequate access to health services and poor hygiene and sanitation practices in the communities. The immunization for Kitui County is generally low at 63 % compared to the National status 83.5 %. The proportion of mothers delivering under the care of skilled health workers is only at 27.6%, which is below the national average of 42%. The percentage of mothers attending the WHO recommended minimum number of 4 antenatal clinics is 52.5%, compared to the country average of 52%. The proportion of mothers delivering under the care of skilled health workers is only at 27.6%, which is below the national average of 42%. Although the Kitui County government launched the UHC programme in 2017 with the aim of ensuring equity and financial protection for the residents, the UHC service coverage index stands at 27% compared to the national 57%.

1.2 Statement of the problem

The 2010 Constitution provides for the right to health and aims to ensure that all Kenyans have access the highest attainable standard of health care. Most recently, the GOK has committed to achieving UHC by 2022. Improved health for the population is one of the government's "big four" development priorities, which are affordable housing, economic

growth, food security, and universal access to affordable healthcare. Government-directed health systems reforms to raise National Health Insurance Fund (NHIF) coverage are critical to achieve UHC, but they are insufficient on their own. Achieving UHC would also require raising awareness among citizens of their health-related rights, the available health financing options and, more generally, social, economic, and environmental factors affecting their health and health seeking behaviors.

The Kenyan health system continues to feature a high share of out- of- pocket (OOP) expenditure in health spending, which has implications for healthcare access and financial protection. In 2017/18 financial year out-of-pocket (OOP) expenditure in Mwingi West sub-county consistently accounted for 35% compared to Kitui County 30% and nationally 25% of the total County and national health expenditure in periodic county and national health account respectively. Such OOP spending has placed a significant burden on poor and vulnerable households in Mwingi West and acts as a barrier to uptake of health care services (MOH, 2018). Life expectancy in Mwingi West sub county stands at 58 years compared to National level 62 years. These statistics worsen for poor households, reflected in lower per capita healthcare utilization rates, lower service access, and higher likelihood of foregoing facility-based healthcare. Coupled with high level absolute poverty that is estimated at 47.5% compared to the national average of 36.1% in 2016 and 39.4% compared to the national average of 32% in 2017, has greatly impacted on the accessibility to health care. Despite the launch of a pilot UHC programme in 2017/18 financial year, in overall, Mwingi West Sub-County UHC “service coverage index” was 17, compared to Kitui County 27 and Nationally 57 based on a composite of different service delivery indicators analyzed by the World Health Organization. The uptake of UHC was reported to be low hence this study will seek to assess determinants of access and uptake of universal health among households of Mwingi West Sub-County, Kitui County, Kenya.

1.3 Study Objective

1.3.1 Main Objective

Determinants of access and uptake of Universal Health Coverage among households of Mwingi West Sub-County, Kitui County, Kenya.

1.3.2 Specific Objectives

1. To determine awareness level of universal health coverage among households of Mwingi West Sub-County, Kitui County, Kenya
2. To determine socio-economic factors influencing access and uptake of universal health coverage among residents of Mwingi West Sub-County- Kitui County, Kenya.
3. To determine health care system factors influencing access and uptake of universal health coverage in Mwingi West Sub-County- Kitui County, Kenya

1.4 Research Questions

1. What was the level of awareness on universal health coverage in Mwingi West Sub-County- Kitui County?
2. What was the socio- economic factors influencing access and uptake of universal health coverage in Mwingi West Sub-County- Kitui County?
3. What was health care system factors influencing access and uptake of universal health coverage in Mwingi West Sub-County- Kitui County?

1.5 Significance of the Study

It is hoped that the study findings will aid in policy formulation especially in the redesigning the health insurance products to suit the specific needs of informal sector workers in rural areas in Kenya. It is also hoped that the study will be sensitive to stakeholders in the insurance sector on barriers to uptake of health insurance in the informal sector. Key health financing policy makers especially the Ministry of Health and National Hospital Insurance

Fund will use the findings in setting the premiums, collection mechanisms and benefit packages of the current fund and the proposed universal health care coverage scheme. Understanding the level of awareness of health insurance will assist in designing of simple health insurance messages and aid in selecting the communication channels for marketing health insurance in the mainly rural informal sector populations. Other stakeholders in the private health insurance industry may also use the findings of the study to address the barriers to uptake of micro-health insurance products.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter was to review the literature related to the topic of the study and focused on the following areas: health financing in Kenya, and the factors influencing uptake of universal health care in Mwingi West Sub-County- Kitui County. The issues discussed will include influence of demographic factors, level of education and economic factors and awareness of health insurance.

2.2 Universal Health Care coverage in Kenya

The Government of Kenya (GOK) is committed to achieving universal health care coverage (UHC) by 2022. The 2010 Constitution provides for the right to health and aims to ensure that all Kenyans have access to highest attainable standard of health care. This commitment is reflected in Kenya Vision 2030, the long-term national development blueprint, which states the country's goal to create an efficient, high-quality healthcare system to improve the well-being of all Kenyans (GOK, 2007). Improved health for the population is one of the government's "big four" development priorities, which are affordable housing, economic growth, food security, and universal access to affordable healthcare. From 2018, the government has launched pilot mechanisms that work through devolved levels of government and aim to reduce out-of-pocket (OOP) spending for health among households, and it has finalized a financing strategy for raising health insurance coverage. The government's Roadmap Towards Universal Health Care Coverage (2018–2022), details nine key objectives for achieving UHC over the next four years which include: universal coverage of health insurance, universal access to an explicit unified progressive health benefits package, increased availability and coverage of quality essential health interventions, financial risk protection for all Kenyans, particularly poor and vulnerable populations, mobilizing adequate

resources for delivery of health services, efficiency in allocation and use of existing resources, equity in distribution of services and resources, effective regulation and collaboration with private medical insurance companies focused on UHC and strengthened health sector leadership and governance for UHC. As of November 2018, both the roadmap and the Kenya Health Financing System (KHFS) identified the creation and expansion of the single-payer Social Health Insurance Fund (SHIF) as a key health financing reform.

Kenya's health service was devolved and primary responsibility for delivering primary and secondary health services falls to the counties. Post-devolution, most funds for primary and secondary healthcare, along with those for other needs under county jurisdiction, must be derived from the pool represented by the county revenue funds (CRFs), which in turn operationalize the concept of county revenue funds. These accounts receive general transfers from the national treasury, locally generated tax revenues, and for health, conditional grants as transfers from the national level for special programs such as those for user fee removal, and NHIF payments to county-operated facilities. These mechanisms, which were established under the Public Financial Management Act of 2012 (revised 2015), force pooling through the CRFs. This gives counties greater control over funding their annual development plans, but it may or may not lead to prioritization of health spending. Kitui County was among the five counties that UHC was piloted in 2017/18 financial year after which UHC was to be rolled out country wide.

2.3 Health systems factors influencing universal health coverage

2.3.1 Overview of health systems

Improved health system performance requires county national, and international action in three interrelated health system policy areas: service delivery, financing and governance. Health system frameworks identify key sub-systems (building blocks) that are subject to

policy decisions and are important determinants of health system performance. A human rights-based approach is premised on the core obligation of the state to take steps towards ensuring access to health services is universal, putting a particular emphasis on the poorest, vulnerable and marginalized groups and on the principle of non-discrimination. It implies that the promotion of UHC must be underpinned by a commitment to address inequalities and exclusion.

Health system performance dimensions include; equity, quality, responsiveness, resilience and efficiency. According to WHO, (2005) equitable access to needed services and protection against financial hardship are the key dimensions of UHC and health system performance. The focus on equity in access and financing implies that progress towards UHC cannot be assessed based only on national averages; rather, disaggregated data are important to understand the extent to which there are systematic disparities in access, effective coverage and the financial burden associated with health services (for example, by sex, age, geographical area, education, income, ethnicity, disability, migrant status).

The concept of responsiveness refers to the extent to which a health system meets people's expectations and preferences concerning non-health matters, including the importance of respecting people's dignity, socio-cultural beliefs and preferences, autonomy and the confidentiality of information, besides responding to the needs and demand of patients. Although measurement and systematic benchmarking within and across countries present unresolved challenges, responsiveness is widely acknowledged as a key dimension of health system performance (WHO, 2017). Health system efficiency is concerned with the extent to which available inputs (for example, expenditures and other health system resources) generate the highest possible level of health outcomes. Inefficiencies in a health system may be related to waste or poor operational performance in the production of health services or

outcomes (technical inefficiency) or a sub-optimal choice of inputs, such as a mix of labor skills (allocative inefficiency).

Resilience is the capacity of health actors, institutions, and populations to prepare for and effectively respond to crises; maintain core functions when a crisis hits; and, informed by lessons learned during the crisis, reorganize if conditions require it to. According to WHO (2017) Major investment is needed to scale up the deployment of skilled health workers. In order to make progress towards UHC, it is critical to address the human resources for health shortage and scale up quality education and lifelong learning, so that adequate numbers of health workers who have the skills that match health needs and are motivated are available in the right quantity at the right places. Innovations are needed to meet the health needs of vulnerable and marginalized groups, including in contexts of fragility and conflict.

2.3.2 Heath financing in Kenya

Mobilizing adequate financial resources necessary for achieving reasonable standards of health for the growing population in both urban and rural Kenya remains a major challenge as the country strives to achieve SDGs. Kenya has adopted a mixed health financing structure that includes contributions from Government (main financing), private employer schemes, NGOS, community-based schemes and out of pocket (OOP) by individuals and households. The total public health expenditure for health for the period 2017/2018 was 6.1% of the total government expenditures, which is far below the 15% which was the target set by African heads of state in the Abuja declaration of 2000 (KBS, 2019). One of the key concerns however is the high and overreliance on donors. According to the National health accounts (NHA) for the year, households funded 29.1 percent of the total health expenditure, donors contributed 18.2 percent, central government contributed 39 percent, private health insurance

schemes 5.4 percent and NHIF contributed only 3.7 percent (Polinder, Haagsma, Stein, & Havelaar, 2012).

2.3.3 Human resources for Health in Kenya

Human resources for health is defined as the stock of all people engaged in actions whose primary intent is to enhance health. An adequate, productive, and equitably distributed pool of health workers who are accessible is necessary for the effective delivery of healthcare service. There has been a general increase in the number of healthcare personnel over the years to peak to an average of 20.7 doctors and 159.3 nurses for every 100,000 persons by 2013. This is below the WHO-recommended average of 21.7 doctors and 228 nurses per 100,000 people, which is the required standard for optimal delivery of health services.

2.4 Social economic factors influencing UHC

According to UNDP (2015) in a study investigating the factors affecting the enrollment of low- and middle-income groups in the Kupra health insurance scheme in Anand district in India found that the age will be one of the key demographic factors influencing demand for health insurance. Higher age groups had a higher probability of purchasing, than at lower age groups, the age of the respondents is not significant. WHO (2017) in its key report on social determinants of health notes that gender biases and inequalities are reflected in unequal access to material and non-material resources, reduced decision-making power, unfair division of work and possibilities of improving one's life. The report further says that in the health sector, gender power relations translate into different access to and control over health resources within and outside families, unequal division of labor in the formal, informal and home-based parts of the health care system.

Studies carried out in different countries have shown that marital status and the size of households plays a role in enrollment decisions. (Xu, K., Evans, Carrin, & Aguilar-Rivera,

2009)found that enrollment in health insurance in Jamaica was influenced by social standing, income, marital status, retirement benefits, living conditions and the number of males in the household. Married respondents were found to be more likely to purchase health insurance. Kirigia *et. al*., (2005) in a study of health insurance in South Africa also found that marital status had a positive effect on ownership of health insurance. The researchers noted that the higher demand by married people may be explained by the need to protect the children, being more concerned about high health expenditures and higher combined incomes. On households' size, there will be a negative effect on the likelihood of health insurance. Household size may have the effect of reducing the incomes.

Wangia & Kandie (2016) investigated the role of family formation, focusing on young women under 30 years and the effect of children on decisions to enrollment into health insurance in Australia and found that: -women who desired additional children in the future were more likely to have insurance compared to women who already had the desired number of children. Wanting more children raised the probability of insurance by percentage point for those without recent children and closer to five percentage points for those who had children in earlier years. Households which desired additional children in future were 7.4 percentage points more likely to insure compared to 5.6 percentage points for the women who had finished the family formation. Other factors that influenced the enrollment were marital status, perceived access to hospitals and location.

Education is important in shaping future occupational opportunities and earning potential by providing knowledge and life skills that allow better-educated persons access to information and resources to promote their health. This is emphasized by Ensor and cooper (2004) who argue that education, measured by the duration of schooling is correlated with good health through better lifestyles. Education also influences people's ability to assimilate information

with educated women, for example, being more effective at improving their own well-being and that of their family by improving their income-earning potential, decision making autonomy, control of their own fertility and participation in public life. Education is an important link to health and its determinants including health behaviors, use of preventive services and general attitudes to risks. Those with many years of schooling therefore tend to have better health, well-being and healthier behaviors (Prinja, Bahuguna, Gupta, Chowdhury , & Trivedi, 2019).

Leive & Xu (2008) analyzed health insurance policies in developing and developed world and noted that health planners may encounter difficulties in assessing incomes from informal sector workers. The incomes fluctuate over time, and often untaxed, making it difficult to collect insurance premiums at source. In rural areas where agricultural employment persists, cash incomes are seasonal and liquidity constraints persist for much of the year. According to Maina, Kithuka, & Tororei (2016) higher enrollment of people in higher income groups is consistent with consumer theory that considers health insurance as a normal good with positive elasticity of demand. The researcher came to this conclusion after observing in a study in Ghana that richer households were more likely to enroll, with those in the poorest Quintile constituting 34% of the uninsured while only 8% in the rich Quintile were uninsured. In a different study in Ghana, Ebenezar and Anthony (2014) investigated the demand for health insurance in Kumasi metropolis, focusing on both formal and informal sector employees, and also found that high income earners were 7% more likely to be enrolled compared to those with low incomes.

2.5 Awareness of Universal Health Care

Fenny, Kusi, Arhinful & Asante (2016) in their review of demand for health insurance in low-income countries observed that the concept of insurance which involves spending money

in return for an uncertain payout in future is fairly new in low-income countries. Newly insured people may expect to receive their premiums back when no payout or claim occurs, hence the need for intensive insurance literacy training and use of peers in spreading information on insurance products. Traditional channels of communication may not be effective in reaching the poor, rural and informal sectors in the developing world, hence the need to device effective messages for relying the benefits of health insurance using social marketing techniques including, use of local champions to speak to villages on benefits of health insurance. In India the micro insurance academy uses local leaders to organize activities for health insurance education and group exercises with the help of educated health insurance facilitators (Alesane, & Anang, 2018).

2.6 Conceptual Framework

A conceptual framework explains the relationship and possible connection between variables (Kombo and Tromp, 2011). According to Orodho (2009), conceptual models are ways of relating factors that influence a particular outline in a pictorial or diagrammatic way. The independent, dependent, moderating and intervening variables for the study are linked together in figure 2.1.

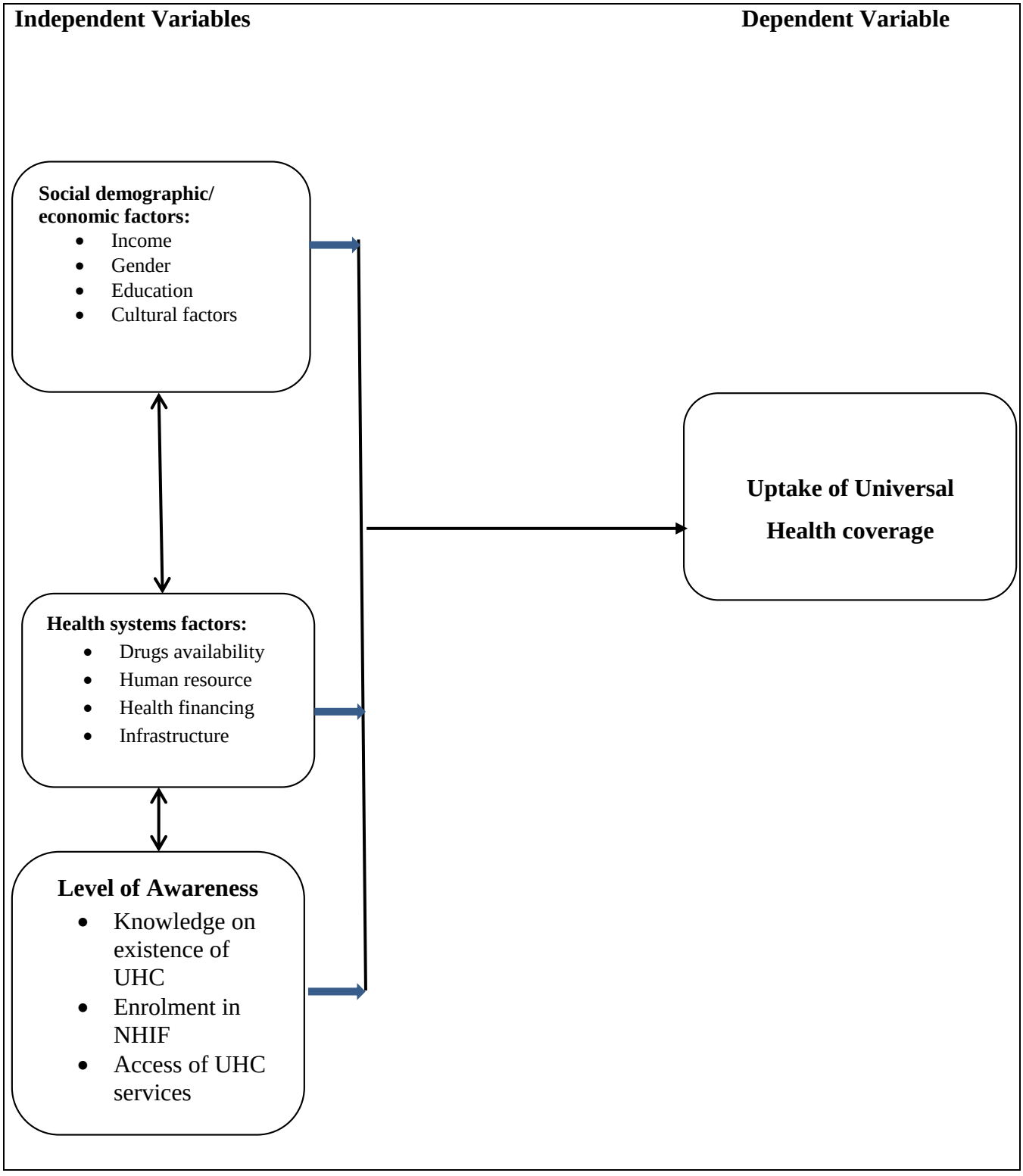

Figure 2. 1 Conceptual Framework on the relationship between study variables

Source: Author

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research methodology that was used for the study. Specifically, it explains the research design, target population, sample and sampling techniques, piloting of instruments, validity and reliability of research instruments, methods of data collection, and methods of data analysis, ethical considerations and the methodology matrix.3.2.

3.2 Study Area

Mwingi west Sub County is among the 8 sub counties in Kitui County namely; Kitui Central, Kitui West, Kitui East, Kitui South, Kitui Rural, Mwingi North, Mwingi Central and Mwingi West. These are further sub-divided into forty (40) wards. Mwingi West is divided into 4 wards namely; Kyome/Thaana, Nguutani, Migwani, and Kiomo/Kyethani. Mwingi West is among the Arid and Semi-Arid (ASAL) sub counties, characterized by relatively high levels of poverty. It is located between latitudes 0°10 South and 3°0 South and longitudes 37°50 East and 39°0 East. The level of absolute poverty is estimated at 47.5% compared to the national average of 36.1 percent in 2016. About 222,000 persons or 3.2% of the Kenyan poor live in the sub-county and food poverty is estimated at 39.4 percent compared to the national average of 32%. About 50% of the population does not have access to improved water sources and 57.6% of households spent thirty minutes or more to fetch drinking water (Kitui county intergrated development plan 2018-2023).

3.3 Research Design

Descriptive cross sectional study design was employed. Both qualitative and quantitative data was collected for study. According to Mugenda and Mugenda (2003), a descriptive cross-sectional design allows the researcher to describe record, analyze and report conditions that

exist without manipulation of variables. It also helps to determine specific characteristics of a large group (Kombo and Tromp, 2006). The design was chosen because the study collected information from a large population and reported on their current access and uptake of UHC.

3.4 Study Variables

The independent variables included level of awareness, social-economic factors and health system factors while dependent variable was access and uptake of UHC.

3.5 Study Population

The study population was 117,813 (KBS, 2019) and 300 health workers. The sub county has four wards namely: Kyome/Thaana, Nguutani, Migwani, and Kiomo/Kyethani .

3.6 Sampling Design

3.6.1 Sample Size Determination

The formula as used by fisher *et. al.,* (1998) was used to determine the sample size.

$$n=\frac{z^2\, p\,(1-p)}{d^2}$$

n= Sample size where population is more than 10,000.

z= Standard normal deviation (1.96), which corresponds to 95% confidence interval.

d^2= Degree of accuracy 0.05 (5% sampling error)

p= Proportion of the target population estimated to have particular characteristics, in this case 50% of the target population

Using Fishers formula:

$$n=\frac{1.96^2\times 0.50(1-0.50)}{0.05^2}$$

=384+10% (384) of the sample size to cater for none response.

=384+38

= 422 Respondents

3.6.2. Sampling Procedure

Two wards, Nguutani and Migwani will be selected based on population density. The one with high population (Nguutani) and the other with the lowest population (Migwani). The two wards were then stratified based on administrative villages. Nguutani has 8 villages while Migwani has 7 villages. At least eight villages (Nguutani, 4 and Migwani, 4) were randomly selected. Using household registers, 400 respondents and 22 K.I.I (Health workers who were the health facility in-charges) were randomly selected proportionally for study based on the population per village selected for study. The head of household was selected for study. Incase S/he was absent, the assistant head of the household was recruited for study while the unit of study was the household.

3.7 Data Collection tools and procedure

Structured questionnaire was used to collect both qualitative and quantitative data. It comprised of both open ended and closed ended questions. The structured questionnaire was used to collect data from the households. The structured questionnaire was divided in section namely: socio-demographic detail, awareness level for UHC, social-economic and health systems factors. The open-ended questions will be useful in collecting the qualitative data and give the respondents an opportunity to give insightful information that may not be adequately captured using closed ended questions.

Key Informant Interview was used to collect insightful information from health workers on access and uptake of UHC in Mwingi West Sub-County.

3.8 Inclusion and Exclusion Criteria

3.8.1 Inclusion Criteria

1. Residents of Mwingi West Sub County
2. Households and Health workers who consent to the study

3. Health workers who had worked in the Sub-County for at least 6 months.

3.8.2 Exclusion Criteria

1. Household who had resided in Mwingi West Sub County for less than 6 months.
2. Health workers were absent during the time of study.

3.8 Piloting of data collection tools

Pretest of data collection tools was carried out at Mwingi South Sub-County- Kitui County which had the same characteristics and was not included in the study. A sample of 42 (10%) respondents was used in pre-testing in Mwingi South-Sub County. The results of the pretest study were useful in improving the validity of the study tools.

3.9 Validity and Reliability of data collection tools

3.9.1 Validity of data collection tools

Validity is the degree to which an instrument measures what is supposed to measure (Kothari, 2004). To enhance validity, data collection tools were pretested in Mwingi south sub-county which had characteristics but not included in the study. Moreover, the research assistants were undertook a three-day training to understand the rigours of the study

3.9.2 Reliability of the data collection tools

Reliability is the degree of consistency that the instrument or tool demonstrates on repeat trials, that is, whether scores resulting from repeated use of the instrument are consistent. Reliability answers the question, “Are scores stable over time when the instrument is administered a second time?” (Creswell, 2003). To ensure reliability, the researcher used split half technique. This involves splitting the tool into two equal parts and each part being treated as a separate measure. Each part was then scored accordingly and the scores correlated. The

Spearman-Brown Prophesy formula was then used to estimate the reliability. A reliability value of 0.89 was obtained.

3.10 Data Analysis and Presentation

The data collected was checked for completeness, accuracy and managed using SPSS version 25. Descriptive statistical tools such as percentages, means, mode, median and standard deviation were used to analyze the demographic characteristics and level of awareness. For inferential statistics, chi-square test and regression analysis were used to determine the association between level of awareness, social-economic factors, health system factors and access and uptake of UHC. Data was presented using tables, charts and graphs. The confidence interval was set at 95%.

3.11 Ethical Considerations

Ethical clearance was from Jaramogi Oginga Odinga Teaching and Referral Hospital Institutional and Ethics Research Committee (JOOTRH IERC). Permission to carry out data collection was obtained from Maseno University School of Graduate Studies, Nacosti and County Government of Kitui. Confidentiality, anonymity and freedom to participate in the study was observed. To participate in the study, written consent was obtained from participants. The purpose of the study was explained to each respondent before allowed to sign the consent form.

CHAPTER FOUR

RESEARCH FINDINGS

4.1 Introduction

This chapter reports on the research findings of the study. Data collection was carried out between 1st may-July 28th 2021while the response rate was 322 (76.3%) .

4.2 Socio-demographic features

Table 4.1 shows the demographic features of the participants. A high proportion; 183 (56.3%) were females with slightly less than a half, 151 (46.9%) aged between 26 to 35 years. About 132 (41.0%) were married and most of the participants 176 (54.7%) comprised of 3 to 5 household members. Table 4.1 provides an overview on the socio-economic features of the study participants. Most, 194 (60.2%) of the participants were self-employed, with slightly more than a third, 132 (41.0%) having attained secondary school level education. Small scale farming was the major economic activity as reported, 170 (52.8%) of the participants. Close to average, 154 (47.8%) of the participants earned monthly household income of between Kenyan Shillings (Kshs.) 21,000 to 50,000. Most of the participants, 219 (68.0%) did not belong to a social welfare group.

Table 4. 1: Socio-Demographic characteristics of the Participants

n=322			
Socio-demographic Feature's		**Percentage (%)**	
Age in Years			
18 – 25	32		9.9
26 – 35	151		46.9
36 – 45	62		19.3
>46	77	23.9	
Gender			
Male	139	43.2	
Female	183	56.8	
Marital Status			
Married	132		41.0
Single	62	19.3	
Divorced	70	21.7	
Widowed/Widower	58	18.0	
Household Size			
1 to 2	45	14.0	
3 to 5	176	54.7	
5 to 8	81	25.3	
>9	20	6.2	
Occupation			
Formal Employment	62	19.3	
Self-Employment	194		60.2
Not Employed	66	20.5	
Education			
Primary	62		19.3
Secondary	132	41.0	
Tertiary	128		39.8
Economic Activity			
Salaried Employment	95	29.5	
Small Scale Farming	170	52.8	
Small Scale Business	57	17.7	
Household Income			
Less than 5000	49		15.2
6000-10000	52	16.1	
11000-20000	25	7.8	
21000-50000	154	47.8	
>50000	42		13.0
Social Welfare			
Yes	103	32.0	
No	219	68.0	

4.3 Awareness levels on UHC

On health coverage, more than average, 190 (59.0%, n=322) of the participants were members of the National Hospital Insurance Fund (NHIF) with most of the members, 135 (41.9%) making a monthly contribution of Kshs. 500 (Figure 4.1). Close to a third, 88 (27.3%) reported to have more than five years membership with the fund (Figure 4.2).

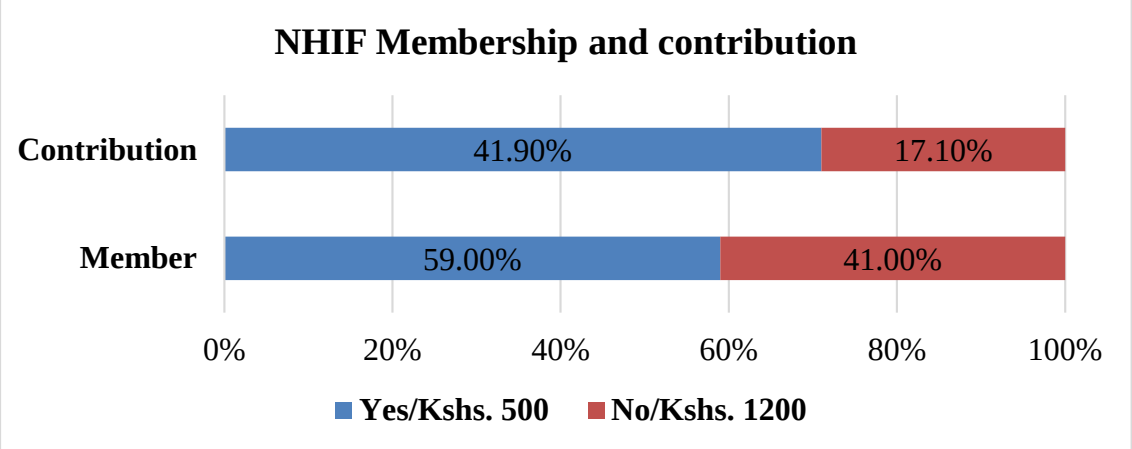

Figure 4. 1 NHIF membership and contribution

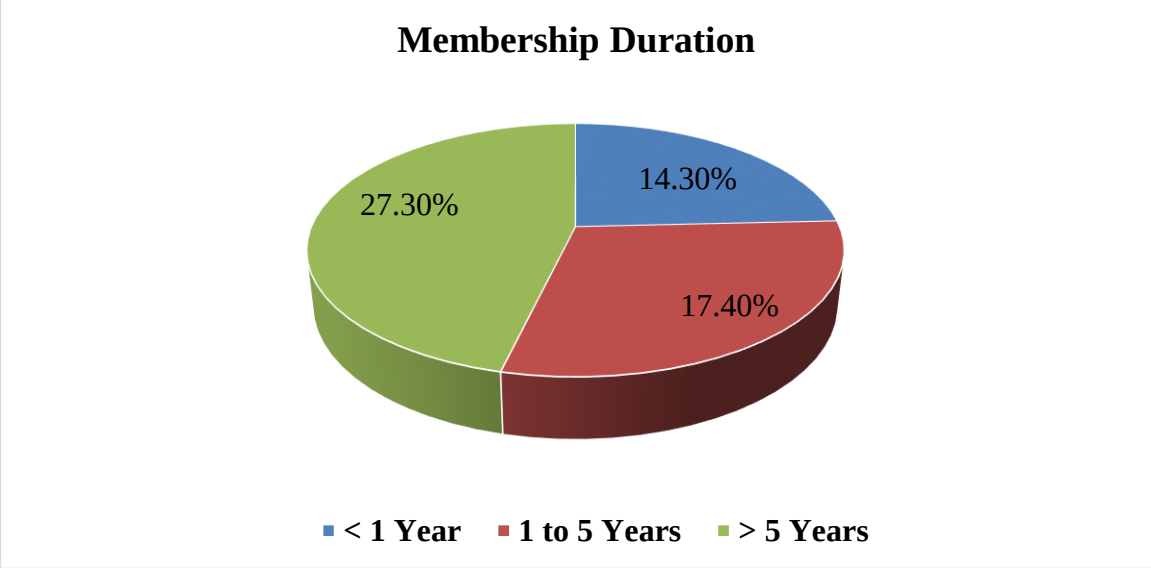

Figure 4. 2 NHIF membership duration

On matters awareness about Universal Health Coverage (UHC), most, 183 (56.8%) of the participants were aware of the service (Figure 4.3 below).

Of those reporting to be aware of UHC; 98 (30.4%), 95 (29.5%), 119 (37.0%), 96 (29.8%), 107 (33.2) had not utilized it for Maternal Child Health (MCH) or Family Planning (FP), HIV/AIDS, laboratory, X-ray, and pharmacy respectively. Nonetheless, slightly more than a third, 104 (32.4%) reported to have utilized UHC for disease treatment.

Slightly more than a half, 169 (52.5%) of the participants reported that they did not pay for services received at health facility visited for health care service (Figure 4.4 below). For those reporting to have paid for the service, 57 (17.7%) paid between Kshs. 50 to 100 (Figure 4.5 below).

A high number of the participants, 198 (61.5%) observed that the national government was the main UHC service provide (Figure 4.6 below).

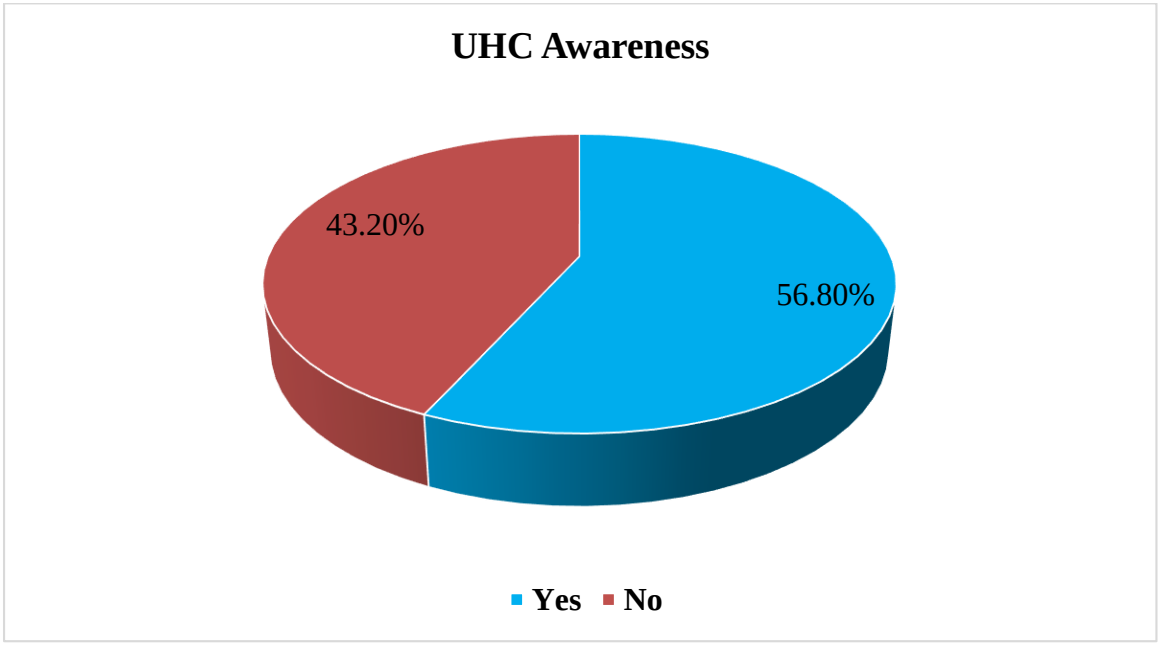

Figure 4. 3 UHC Awareness

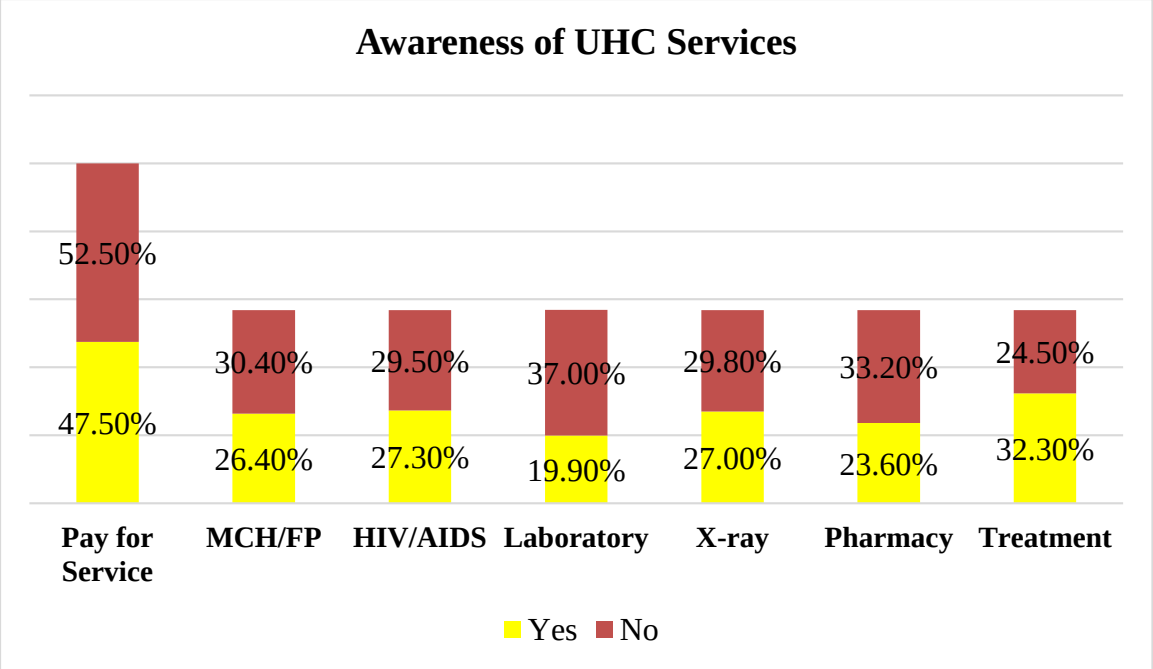

Figure 4. 4 Awareness of UHC Services

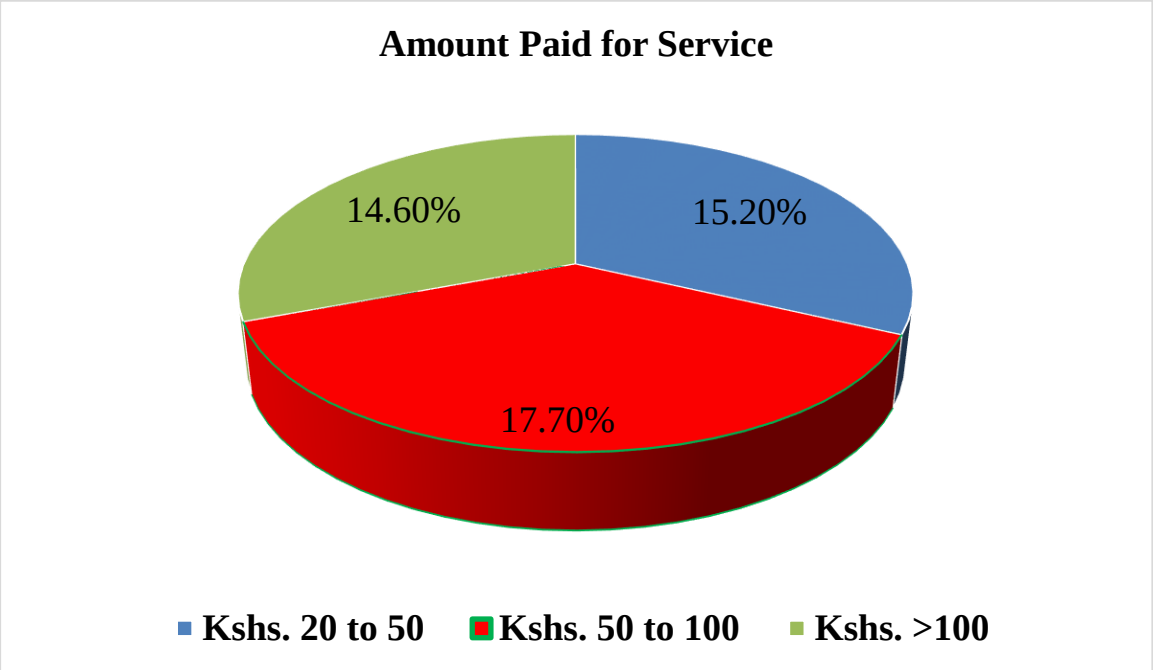

Figure 4. 5 Amount Paid for Service

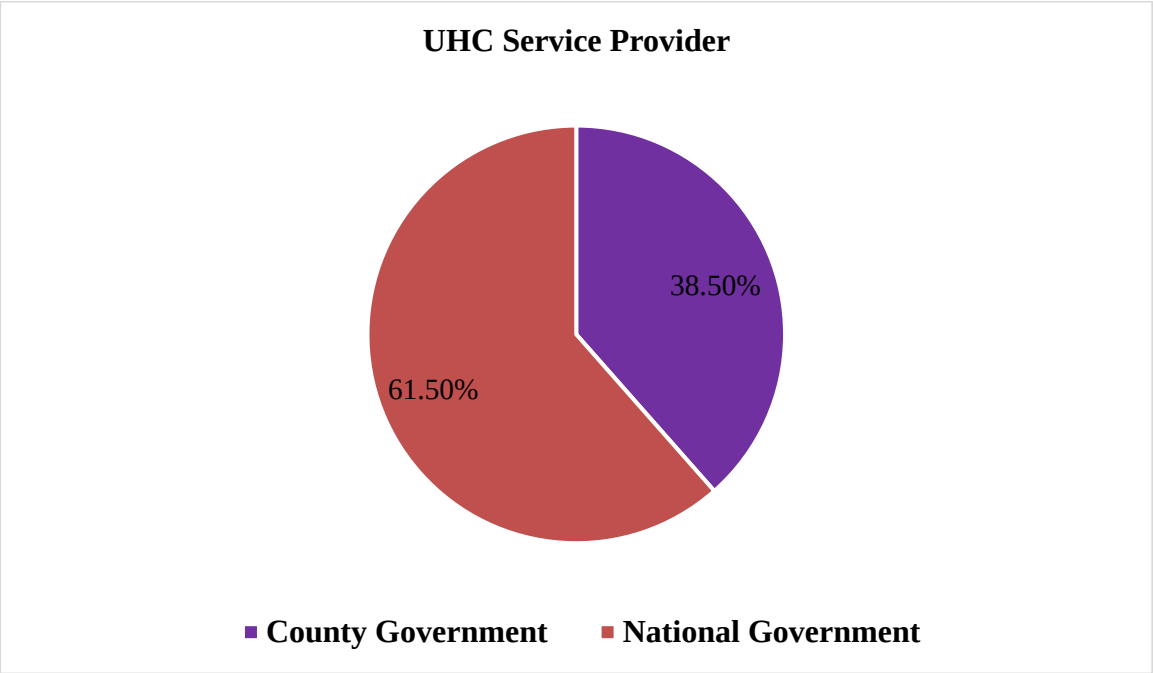

Figure 4. 6 UHC Service Provider

Chi-square test was performed to establish association between health systems factors and awareness of UHC at $\alpha \leq 0.05$. As shown in Table 4.2 there was an association between; gender of the participants and awareness of UHC (Chi-square: p=0.002), age and awareness of UHC (Chi-square: p=0.037), and marital status and awareness of UHC (Chi-square: p=0.036). However, there was no association between household size and awareness of UHC (Chi-square: p=0.369).

Table 4. 2: Socio-demographic factors and UHC uptake

	N=322				
	Awareness of UHC			**Chi-square**	**p value**
	Total n (%)	**Yes n (%)**	**No n (%)**		
Gender					
Male	139(43.2)	100(31.1)	39(12.1)	10.044	0.002*****
Female	183(56.8)	100 (31.1)	83(25.7)		
Age of participants					
18 to 25	32(9.9)	22(6.8)	10(3.1)	8.471	0.037*****
26 to 35	151(46.9)	103(31.9)	48(15.0)		
36 to 45	62(19.3)	37(11.5)	25(7.8)		
>46	77(23.9)	38(11.8)	39(12.1)		
Marital Status					
Married	132(41.0)	74(23.0)	58(18.0)	8.544	0.036*****
Single	62(19.3)	48(15.0)	14(4.3)		
Divorced	70(21.7)	44(13.7)	26(8.0)		
Widowed/widower	58(18.0)	34(10.6)	24(7.4)		
Household size					
1 to 2	45(13.9)	30(9.3)	15(4.6)	3.148	0.369*****
3 to 5	176(54.7)	114(35.4)	62(19.3)		
5 to 8	81(25.2)	46(14.3)	35(10.9)		
>9	20(6.2)	10(3.1)	10(3.1)		

*Significance at $\alpha \leq 0.05$.

4.4 Socio-economic factors and uptake of UHC

Majority, 290 (90.1%) of the participants reported to have sought treatment from a health facility at one time in their lives, whereby all observed to have paid for the service sought. Of these, 121 (37.6%) sought treatment for particular condition(s), 64 (19.9%) sought for checkup, 119 (37.0%) sought laboratory service, 172 (53.4%) sought MRI/X-ray scan, and 178 (55.3%) went for MCH and FP service (Table 4.3 below). For majority of the respondents, 259 (80.4%), public hospital was the main place of treatment, however, more than average, 190 (59.0) had a preference of private hospital (Figure 4.7), with most, 128 (39.8%) citing quality of service as the major reason for their preference (Figure 4.8). A high number, 256 (79.5%) reported a recent hospitalization of family member (Table 4.3), whereby for most of them, 151 (46.9%) the bill was paid by the family (Figure 4.9). About 72

(22.4%) indicated that religion/traditional culture influences decision on place of treatment (Table 4.3 below). Moreover, 66 (20.5%) indicated that there are members who seek traditional medicine for treatment.

Table 4. 3: Treatment seeking amongst the participants

	N=322	
Treatment Seeking	**n**	**percentage (%)**
Ever sought treatment		
Yes	290	90.1
No	32	9.9
Paid for service		
Yes	290	90.1
No	0	0.0
Treatment		
Yes	121	37.6
No	169	52.5
Check Up		
Yes	64	19.9
No	226	70.2
Laboratory		
Yes	119	37.0
No	171	53.1
MRI/X-Ray/CT scan		
Yes	172	53.4
No	118	36.6
MCH/FP		
Yes	178	55.3
No	112	34.7
Recent hospitalization		
Yes	256	79.5
No	66	20.5
Influence of religion		
Yes	72	22.4
No	250	77.6
Seek Traditional Medicine		
Yes	66	205
No	256	79.5
Help to family by UHC		
Yes	78	24.2
No	244	75.8

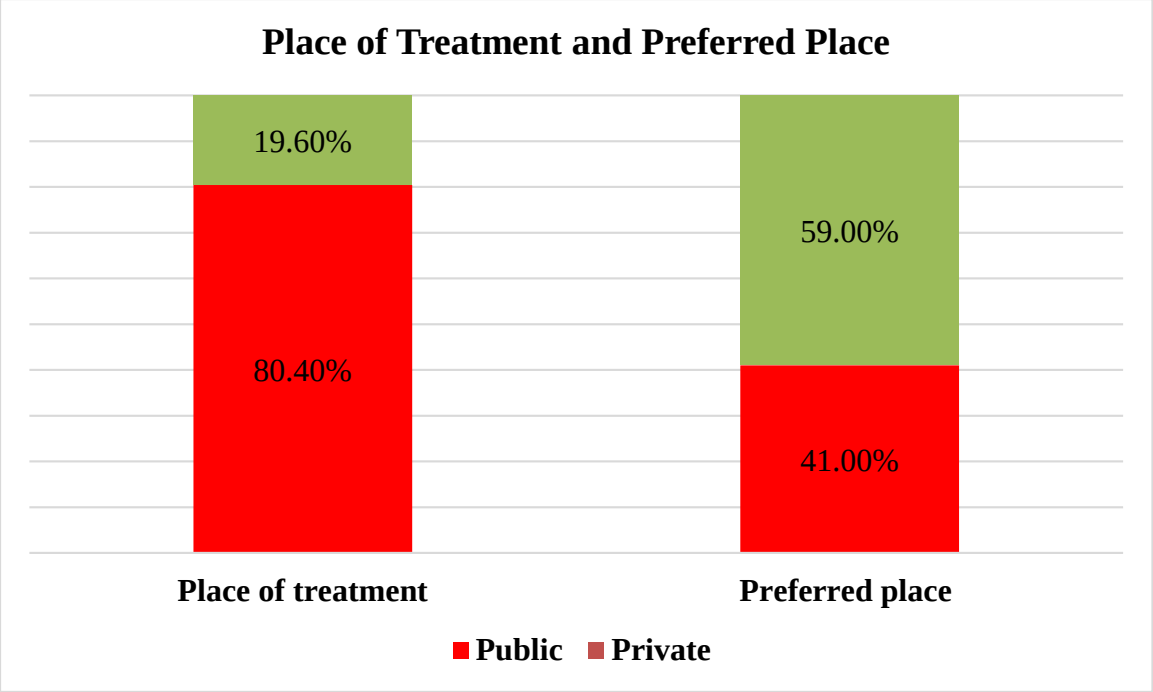

Figure 4. 7 Place of treatment and preferred place

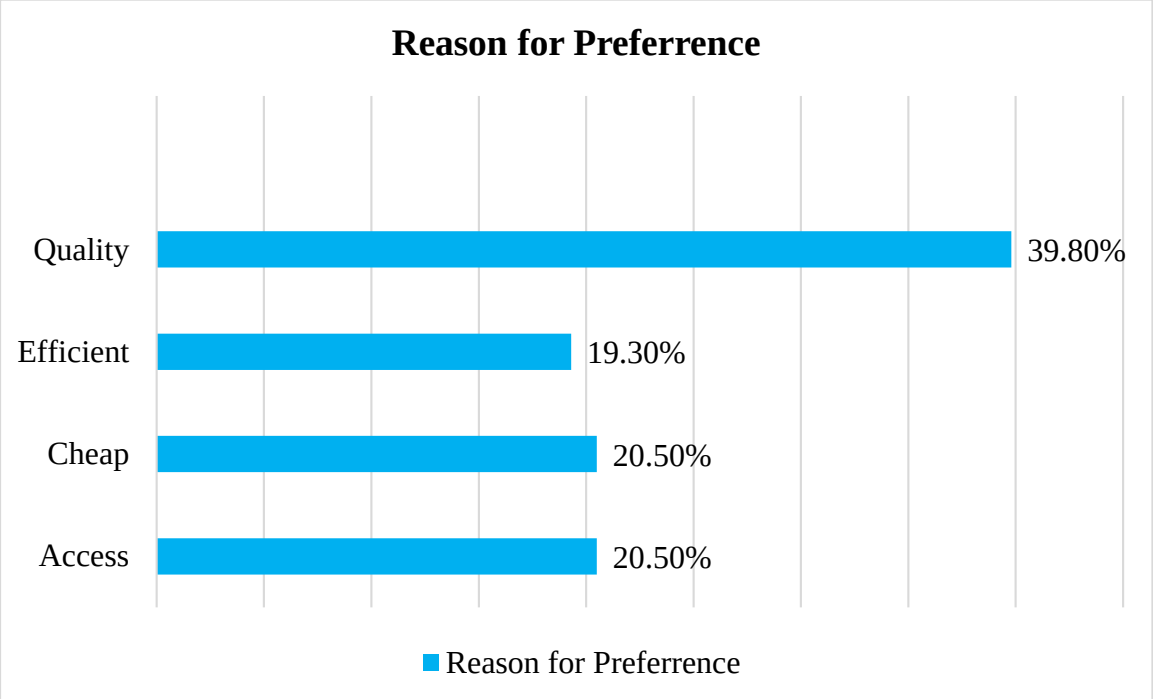

Figure 4. 8 Reason for preference

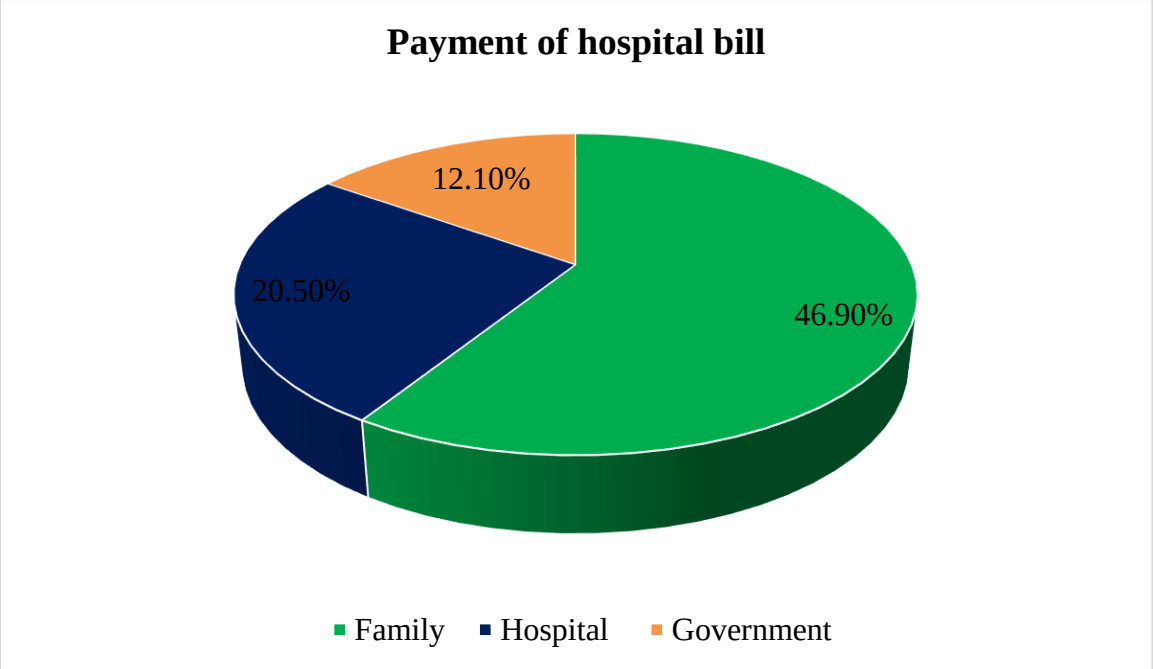

Figure 4. 9 Payment of Hospital Bill

Chi-square test was performed to establish association between socio-economic factors and uptake of UHC at $\alpha \leq 0.05$. As shown in Table 4.4 an association was found to exist between occupation and uptake of UHC (Chi-square: p=0.000). An association was found to exist between educational level and uptake of UHC (Chi-square: p=0.000). There was an association between belonging to a social welfare group and awareness of UHC (Chi-square: p=0.0.027).

Table 4. 4: Associations between socio-economic factors and UHC uptake

	N=322				
	Uptake of **UHC**			**Chi-square**	**p value**
	Total n (%)	**Yes n (%)**	**No n (%)**		
Occupation					
Formal Employment	62(19.3)	58 (18.0)	4(1.3)	60.059	0.000*****
Self-Employment	194(60.2)	88 (27.3)	106(32.9)		
Not employed	66(20.5)	54 (16.8)	12(3.7)		
Highest Level of Education					
Primary	62(19.3)	48(15.0)	14(4.3)	97.985	0.000*****
Secondary	132(41.0)	40(12.4)	92(28.6)		
Tertiary	128(39.8)	112(34.8)	16(5.0)		
Economic activity					
Salaried employment	95(29.5)	56(17.4)	39(12.1)	0.644	0.725*****
Small scale farming	170(52.8)	107(33.2)	63(19.6)		
Small scale business	57(17.7)	37(11.5)	20(6.2)		
Belonging to social welfare group					
Yes	103(31.9)	55(17.0)	48(14.9)	4.886	0.027
No	219(68.0)	145(45.0)	74(23.0)		

*Significance at $\alpha \leq 0.05$.

4.5 Health care system factors

The study explored health care system factors that may pose as determinant of UHC uptake. It was observed that a high number of the participants, 90 (28.0%) cited lack of drugs as the reason for not seeking treatment (Figure 4.10). This was further observed as a high number of the participants, 227 (70.5%) reported that there were no adequate drugs in health facilities (Figure 4.9). All the K.I.I were in agreement that there was inadequacy of medical supplies.

> *K.I.I-1 '....in this public health facilities, the main drugs supplies are extremely irregular.'*
>
> *K.I.I-2: '...You really want to help the patient but due to lack of drugs, there is nothing you can do but ask the patient to buy drugs for treatment. Even*

emergency cases, the need to buy medicine including gloves for the doctor/clinical officer or nurse to treat.'

Only 66 (20.5%) of the participants reported that UHC delivery had challenges (Figure 4.9), with most of them, 47 (14.6%) indicating coverage as the main challenge. Time taken to be treated for most of the participants, 122 (37.9%) was five (5) to ten (10) hours.

All K.I.I indicated workload as the main challenge due to understaffing. Other challenges included poor working environment, poor remuneration, and delayed salary payment.

K.I.I-5 '....You overwork from Monday to Monday yet at the end of the month they delay salaries.'

'K.I.I-18-'....They don't provide necessary basic personal protective equipment.'

K.I.I 19: '……Poor working environment with high volume of patients due to NHIF cover is crazy and demotivating. No one wants to listen to our problems. Most of us hust do what is humanly possible'

Distance to health facility for most of the participants, 117 (36.3%) was two (2) to five (5) kilometers. Majority of K.I.I indicated that the health facilities are few and far away hence some patients fail to access the treatment due distance yet it's an arid and semi-arid area. The waiting time for treatment was also an issue due to inadequate staff and large volume of staff.

K.I.I-7: '....The health facilities are few, far from some households yet they need the services. This hinders access to much needed health services to poor any needy patients.'

K.I.I-9: '...Most households are absolute poor, the cannot afford, transport, NHIF cover of Kshs. 500 per month. This affects them directly when seeking services. Some seek alternative traditional medical treatment'

Rating on health care services was more than average, 194 (60.2%) as reported by the participants(Figure 4.12). Most, 136 (42.2%) of the participants rated health care workers as average. More than average, 177 (55.0%) of the participants observed that there was adequate number of health workers in the facility (Figure 4.9). Majority of the K.I.I reported the inadequacy of staff, poor working condition, poor remuneration and inadequate medical supplies as main challenges of UHC (figure 4.11). The most commonly cited suggestion to improve UHC uptake was increase funding, as cited by 190 (59.0%) of the participants.

K.I.I 11 '……The major undoing of UHC is inadequate staff….You are expected to work under the poor condition without resting….serving hundreds of patients. Nobody cares your conditions.'

K.I.I 14 '.....They delay salaries, no protective gear….how do you work?' salary should be paid on time and improve working conditions.

K.I.I 15 '....The community doesn't know about existence of UHC. Majority are poor, they can't afford Kshs. 500 For NHIF. We need to do something. .... UHC is good for it saves lives of the poor in the community. Let's empower the community by alleviating poverty

The K.I.I suggested that, the National government and County government should increase funding, medical supplies, improve working conditions, better remuneration of health workers and enrolling more households in NHIF and increase sensitization of the community on UHC.

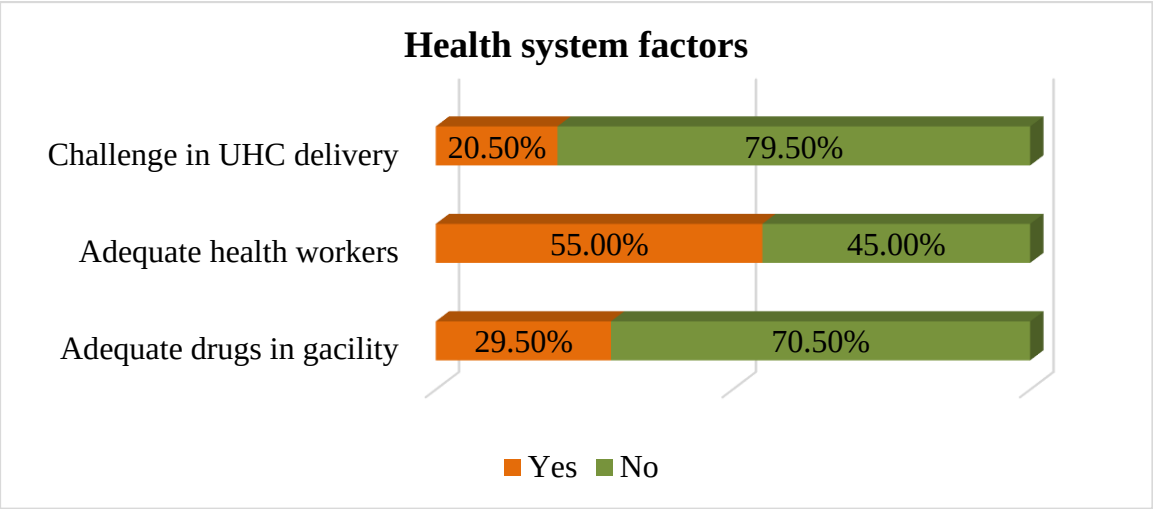

Figure 4. 10 Health care system factors and UHC

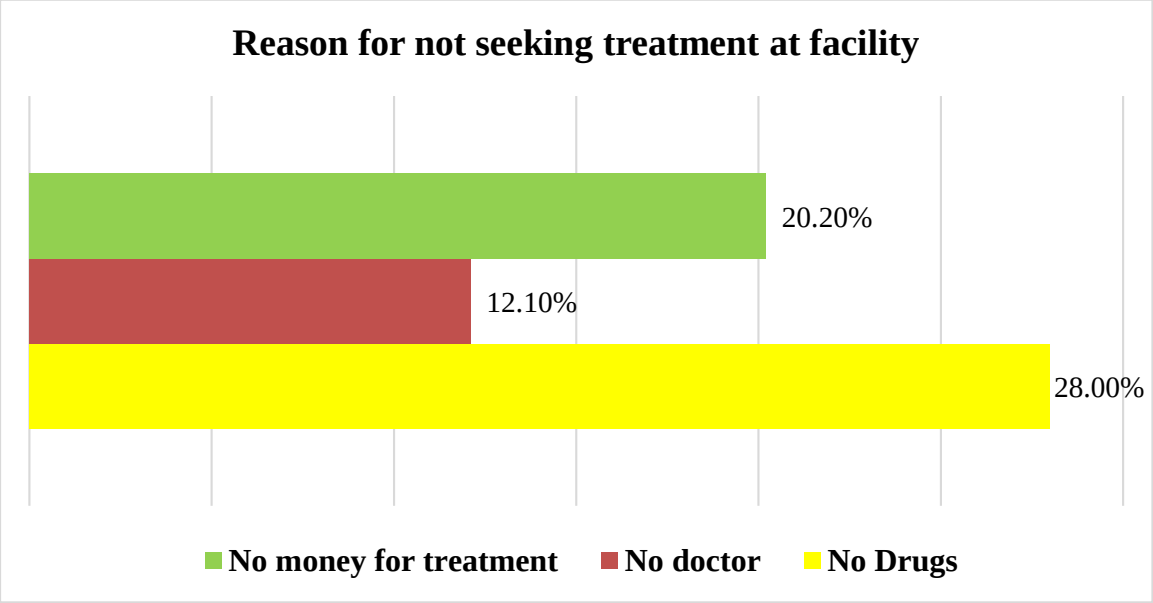

Figure 4. 11 Reason for not seeking treatment

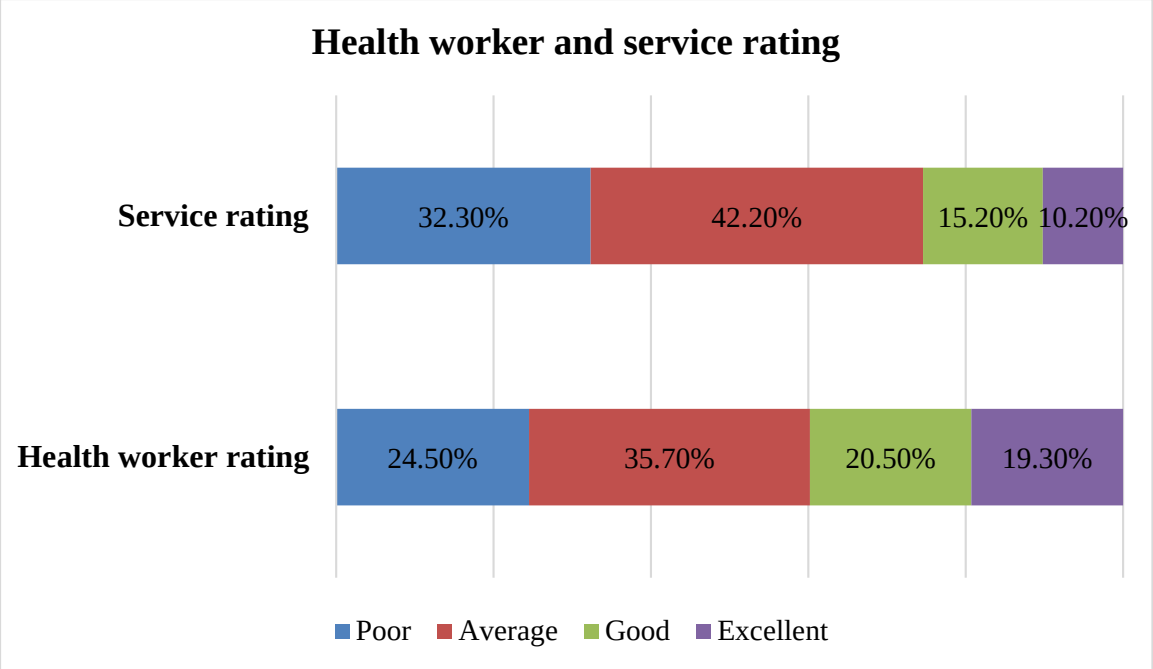

Figure 4. 12 Health worker and service rating

Chi-square test was performed to establish association between health systems factors and awareness of UHC at $\alpha \leq 0.05$. As shown in Table 4.6 there was no association between adequate drug availability in health facilities and uptake of UHC (Chi-square: p=0.800). An association was found to exist between treatment waiting time and uptake of UHC (Chi-square: p=0.000). An association was found to exist between rating of health care workers and uptake of UHC (Chi-square: p=0.002). There was no association between rating of health service received and uptake of UHC (Chi-square: p=0.120). Table 4.5

Table 4. 5: Health systems factors and uptake of UHC

	N=322	
Health care system factors	**n**	**percentage (%)**
Waiting time		
Less than one hour	97	30.1
2 to 5 hours	103	32.0
5 to 10 hours	122	37.9
Distance to health facility		
Less than one kilometer	96	29.8
2 to 5 kilometers	117	36.3
5 to 10 kilometers	109	33.9
UHC challenge		
Coverage	47	14.6
Personnel	11	3.4
Supplies	8	2.5
Suggestions to improve UHC uptake		
Increase funding	190	59.0
Hire health workers	66	20.5
Retain health workers	66	20.5

			Chi-square		**p value**
	Total n (%)	**Yes n (%)**	**No n (%)**		
Adequate drug availability					
Yes	95(29.5)	58 (18.0)	37(11.5)	0.64	0.080*****
No	227(70.5)	142 (44.1)	85(26.4)		
Treatment waiting time					
Less than one Hour	97(30.1)	72(22.3)	25(7.8)	83.697	0.000*****
2 to 5 hours	103(32.0)	90(28.0)	13(4.0)		
5 to 10 hours	122(37.9)	38(11.8)	84(26.1)		
Health care worker rating					
Excellent	33(10.2)	18(5.6)	15(4.6)	14.979	0.002*****
Good	49(15.2)	39(12.1)	10(3.1)		
Average	136(42.2)	91(28.3)	45(13.9)		
Poor	104(32.3)	52(16.15)	52(16.15)		
Service rating					
Excellent	62(19.3)	40(12.7)	22(6.8)	5.836	0.120*****
Good	115(35.7)	79(24.5)	36(11.2)		
Average	66(20.5)	40(12.4)	26(8.1)		
Poor	79(24.5)	41(12.7)	38(11.8)		

*Significance at $\alpha \leq 0.05$.

CHAPTER FIVE

DISCUSSIONS, CONCLUSION AND RECOMMENDATION

5.1 DISCUSSIONS

5.1.1 Awareness on Universal Health Coverage

Statistics drawn from researches carried out in the recent past indicate that close to a half of the world's population do not have access to coverage that can assure ease in accessing essential health services. For this reason, a huge proportion of the populations are driven to poverty as a result of increased expenditure on health care, especially in adverse disease scenarios. The UHC provides a comprehensive platform that does not only ease health access, but makes it affordable for all the population segments. According to Akhnif *et. al*. (2018), out of pocket means of payment of health services and medical prescriptions augment the occurrence of poverty, and worsen the situation for the already poor populations. The UHC cushions against such concerns by providing protection against increased out-of-pocket health care expenditures. Precisely, UHC allows for progressive pre-paid pooled financial resources, which eliminate the monetary risks that often emanate from sudden unforeseeable health costs. The benefits conferred by UHC are not only limited to the positive health effects it offers, but extend to the benefits attributed to enhanced productivity of societal members, which manifests when the societal members have stable health states to enable participation in daily livelihood sustaining chores.

The study explored awareness levels amongst participants in the study, which was assessed based on an array of variables. On matters health coverage, more than average 190 (59.0%) of the participants reported that they subscribed to National Hospital Insurance Fund (NHIF) membership, whereby almost a third, 88 (27.3%) of these had subscribed to the fund for more than five (5) years. Enhanced subscription to the national insurance fund

was laudable, because this limits chances of limited access due to lack of funds. However, there is a need to realize that NHIF does not cater for all health care costs in Kenya. This is mainly applicable to outpatient services, which have limited coverage by the NHIF cover. Deductively, the fact that a high number of the participants belonged to an insurance fund does not necessarily guarantee comprehensive health care access. A study by Barasa et al. (2018) notes the need for reforms in the NHIF fund as a means on expanding health care coverage. These notions are apparent in our study as it is evident that the main mode of health care coverage adopted by the participants; NHIF, does not guarantee comprehensive access to health care by its membership. This means that there are other direct out-of-pocket costs incurred by members of NHIF, which means that the cover does not address the issue of direct health services and medication costs, which remains a major challenge in ensuring sustained health care access for the populace (Akhnif et al., 2018).

On awareness on matters Universal Health Coverage (UHC), 56% (183) of the study participants were aware of its existence. Mere possession of information on the existence of UHC is hypothetically expected to increase health care uptake. This is in line with notions expressed by Ranabhat *et. al.* (2019), who note that positive health-seeking behavior is often encouraged by the existence of any form of health care coverage. This is because, individuals with any form of health cover are likely to seek treatment, even for minor ailments due to presence of cover, which minimized out-of-pocket costs. Therefore, more than half of the study participants were often likely to seek health services due to the fact that they knew that UHC was available within their context (Kitui). However, a study by Shin & Lee (2021) contradicts these notions as it notes there are other covariates that dictate health seeking behavior other than presence of medical or health cover. This is perhaps the reason as to why despite being aware of existence of UHC, most of the participants had not utilized UHC to access any given health service with rarely used

service being laboratory service. This could be interpreted to mean that perhaps laboratory services results in additional out-of-pockets costs; hence, the populations seldom use UHC to access this service.

5.1.2 Socio-Economic Factors Influencing Uptake of Universal Health Coverage

The current study explored an array of socio-economic variables with the sole intent of determining their influence on uptake of UHC. Despite most of the participants reporting to seek health care at public health facilities, a high proportion reported to have paid for a particular service they sought. This gives a true representation of the fact that direct expenditure on health service is still a requisite requirement for one to access health care in the study context. An empirical study by Callander, Fox & Lindsay (2019) observes that health care costs remain a major impediment to adequate health-seeking behavior across different contexts all around the world. This is further corroborated by Wang & Geng (2019) who report that persons of higher socio-economic classes are more likely to seek health care in cases of even minor sicknesses due to availability of funds to cater for out-of-pocket medical expenses. On another note, the reason for high preference of public hospitals by the participants could be attributed to low costs of health service in such set-ups. Braveman & Gottlieb (2014) observes that private health care institutions in developing world have higher cost implications, which limits use of such institutions by populations drawn from such contexts. This is corroborated in the current study whereby more than average, 190 (59.0%) of the participants reported to have a preference for private hospitals due to their effectiveness and quality of service offered in such set-ups.

The study found that there was a significant association between specific socio-economic factors and awareness of UHC. The specific socio-economic factors that exhibited associations include occupation, education level, and belonging to social-welfare group. As

noted by Ensor & Cooper (2004), education correlates with good health whereby persons with higher educational attainments often lead better lifestyles, which guarantee adequacy of various aspects of health and overall well-being. Therefore, the current findings confirm notions that education provide a viable platform allowing populations to assimilate health related information and put into practice; hence, adopt positive health behavior, which result in good health (Fenny et al., 2016). A study by Prinja et al. (2019) observes that education improves income-earning potential of an individual, which allows for partaking in adequate health seeking, especially preventive health, which reduces instances of adviser health outcomes, which have a dire cost-implications. In a nutshell, education influence awareness on matters UHC, which triggers a positive implication on UHC uptake.

On another note, occupation plays a critical role in determining access to health information. It is often poised that people in formal employment sectors are more likely of have increased awareness on matters health when compared to those drawn from informal sectors. For this reason, there is often evident limited uptake of health coverage by populations working in the informal job sectors. A report by Barasa *et. al*., (2018) notes that informal job sector livelihoods are often unpredictable and less sustainable. This makes it difficult for persons in such sectors to have additional income that can guarantee their enrollment in reliable health coverage schemes. This analysis points a glaring disparity in access to health coverage based on an individual's employment sector. Overall, socio-economic inequalities within a given population set up are likely to influence access to information; hence, awareness on pertinent matters such as health. There is often a need to bridge emerging gaps aligned with socio-economic inequalities as means of ensuring population-level progress in realization of adequate health outcomes. Stable forms of occupations determine individual choices such as type of housing, sanitation and hygiene

facilities used, medical care, and child care practices, which are core indicators of health status. On the contrary, unsustainable occupations or job engagements limit these choices; hence, jeopardize an individual capability to cater for health insurance costs or accrue saving for use in accessing health and medical care.

On another note, the manner in which belonging to a social welfare groups influence awareness on matters universal health care coverage aligns to various factors. More importantly, belonging to a welfare groups provide an opportunity for group learning on various matters including health. A study by Oche & Adamu (2013) notes that Non-Governmental Organizations rolling our health-related programs in various contexts often use welfare groups as means on reaching out to the populations. It is for this reason that social welfare groups are the primary beneficiaries of donor funding on various community-based activities as noted by Reichert & Jacobs (2018). For this purpose, the associations between belonging to social welfare group and awareness on UHC notable in the current study could be attributed to knowledge and information sharing foundation apparent in such groups. Overall, health care delivery at community level mimics peer to peer support group approach where members of social welfare groups are trained on particular health-related concepts and tasked with the role of educating other community members on the same. Such an approach provides a means through which populations can identify with health programs being rolled out in their set-ups; hence, own them and make them sustainable. Deductively, social welfare groups allow creation of social network between its membership, which are important in the attainment of health lives and other long-term goals (Akhnif *et al*., 2018).

5.1.3 Health-Care System factors Affecting Uptake of Universal Health Coverage

According to WHO (2005), equitable access to health services evident through the availability of protections against financial hardships is critical to UHC. This was not guaranteed in the current study as there was reported lack of drugs, which hindered seeking of treatment by the study population. Coverage of UHC in the study context was not guaranteed as reported by the participants. This is a shortcoming based on the fact that the sole intent of UHC is to ensure health coverage for everyone. Health system factors that exhibited significant associations were treatment waiting time and health care worker rating.

UHC services are embedded in hospital set-ups; hence, these set ups are becoming increasing vital in determining uptake of health services catered for by UHC. Treatment waiting time occurs as one of the core factors that influence patient outcomes; hence, uptake of health care services. As connoted above, the current study found a significant association between treatment waiting time and uptake of UHC. Health care worker to patient ratio is the commonly known factor that influence UHC uptake. Inadequacy of health care workers in health institutions result in increased waiting time, which limits general uptake of health care services. Patients spending little time at hospital set ups where they seek health or medical service are often satisfied; hence, are more likely to partake in health care service provisions such as UHC. For this reason, the success in uptake of UHC depends on the quality of service offered by health care institutions.

On the other hand, health care worker rating by patients plays a role in defining utilization of health services. Health care worker ratings are often dictated by patient experiences with health care providers. As such, patients perceiving to have received quality services from health care professional are likely to be satisfied; hence, have a higher rating of the respective health care workers.

5.2 Conclusion

Health care expenditure remains a core factor that drives populations to poverty. Universal Health Care (UHC) is critical in cushioning the near-poor (middle class) and he poor from the financial costs attributed to health expenditure. It is estimated that close to one hundred (100) million people are impoverished annually as a result of health care costs. This shows that health care is a top concern, which requires urgent and sustainable resolutions. Emerging economics such as Kenya are starting to appreciate the role of UHC in catering for the health care needs of its populace. It is on this basis that the Kenya government rolled out pilot projects on UHC with the sole intent of assessing it practicability in its contexts. Certainly, adoption of UHC is essential for Kenya as it will assure health and well-being; hence, productivity of its populace. The current study explored factors that determine uptake of UHC in Kitui County, which is amongst the counties where UHC was piloted.

More than average, 186 (56.8%) of the participants were aware of the existence of UHC within the context (Kitui). A further 190 (59.0%), reported to be members of the National Hospital Insurance Fund (NHIF). These statistics portray a scenario where there is partial awareness and access to coverage by the study populations. The study further explored the associations between socio-economic factors and awareness of UHC. There was an association between occupation, education level, and belonging to social welfare group and awareness of UHC. This confirms notions on the essential role played by socio-economic variables in dictating different aspects of health care including uptake of health care coverage. In regards to health care system factors, the study reports that there is an association between treatment waiting time and health care worker rating. This means there is a need to strengthen the capacity of health care institutions expected to offer UHC. Worth noting is the fact that UHC is expected to make health care affordable, and this will

result in a rise in the number of populations seeking health care from the UHC scheme. Therefore, limited capacity of health care systems will jeopardize enhanced health care access efforts; hence, resulting in poor patient experiences.

5.3 Recommendations

1. There is a need to create awareness among households and community on the availability of UHC services. This can be done through community health assistants and Community health volunteers.
2. There is need to increase the number of health care workers to bridge the demand for UHC services. This will reduce waiting time and also increase the health services.
3. The National Government and the County Government of Kitui should develop a policy that will expand the coverage of UHC to include all health services and medical prescription costs. This will reduce direct, out-of-pocket expenditure incurred by populations already enrolled in the UHC.
4. Adequate resources i.e. medical equipment supplies, human resources for health and drugs should be made available to improve uptake of UHC

5.3.1 Recommendation for Further studies

There is a need for studies utilizing longitudinal approach in exploring determinants of UHC uptake. This will allow for consensus on the trends in these determinants over time.

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APPENDICES

APPENDIX I: DATA COLLECTION TOOLS

Informed Consent Form for Household Surveys

Introduction and Purpose of the Study

Hello, my name is Dominic Mutunga a student at Maseno University and currently conducting a research study as a requirement for the award of a Degree of Master of Public Health. The research project is entitled, "**Determinants of access and utilization of universal health care among households of Mwingi west sub-county- Kitui County, Kenya.'** I am inviting you to participate in this study because you meet the eligibility criteria for the study. Before you decide to be part of the study, it is important for you to understand what this study involves. Please ask me if there is anything that is not clear, or if you would like more information. When all of your questions have been answered and you feel that you understand the study purpose, you will be asked if you wish to participate in the study, and if yes, to sign this informed consent form. You will be given a signed copy to keep.

Risks or Discomforts

Your participation in this study may have few risks. While answering questions, you may experience discomfort interacting with a stranger, asking questions that you may consider personal but the researcher will minimize this risk through procedures to protect your privacy and confidentiality. I understand that the time you take to be a participant in this survey may cause some inconvenience to your schedule of the day, and you may also find one or more of the questions asked to be upsetting or emotionally sensitive. You do not have to respond to any question that makes you feel uncomfortable.

Benefits

There shall be no direct benefits to you for participating in the study. You will not be paid nor will you have to pay for your participation in this study. However, study findings will be useful in promoting uptake of UHC in Mwingi

Confidentiality

All the information you share shall be kept confidential. Only the researcher and school supervisors will have access to the information gathered during our conversation and no personal identifiers will be connected to the data for analysis. You will be assigned a number that is linked to your name and your actual name will not be required, in this manner your personal information will be safe and not accessible by anyone. Interviews will be conducted in a private room where only you and the researcher will be available.

Data safety

Information that relates to and identifies you will be protected accordingly. You will be provided with a unique number in place of your name and household. Data collected from you will be kept securely. Filled questionnaires will be stored under key and lock. All information will thereafter be encrypted and stored on password-protected computers accessible to only the researcher and the school supervisors. The researcher will not use your identities in any reports or publications that may result from this study.

Voluntary Participation

You are free to join this study or not. If you decide to join, you are also free to change your mind and stop your participation in the study at any time for any reason. You will not have any penalty if you do not want to participate or stop participating.

Measures to safeguard your rights as a participant

In order to safeguard your rights, the researcher will ensure that you are taken through a comprehensive informed consent process with emphasis on privacy and confidentiality concerns and that the principle of autonomy and voluntariness is observed. Benefits and risks from the research study will be clearly explained to you before the interview session and you will be treated with patience and respect devoid of prejudice, allowing free will and ruling out any form of insensitivity. Researcher will assess your language and literacy capability and shall use an acceptable language that can be comfortably understood by you at any time.

Contact (Further Questions)

If at any time during the survey period you have questions or concern about the study, you may contact the researcher directly who will do his best to answer your questions. You may please call Dominic Mutunga. Telephone: 0722-805246. Do you have any questions up to that point?

Consent Signing (by the participant)

I have clearly understood the purpose of this study. I have received an explanation of the planned research, procedures, risks and benefits and privacy of my personal information. I agree to take part in this study. I understand that my participation in this study is voluntary.

Participant: Unique No. & Signature: ---------- Date: ----------

Researcher: Name & Signature: ---------- Date: ----------

APPENDIX II: QUESTIONAIRE

HOUSE HOLD QUESTIONAIRRE

The purpose of the study is to assess the factors that influence uptake of universal health care in Mwingi West Sub-County- Kitui County: A case of MWINGI WEST SUB-COUNTY-KITUI COUNTY. Kindly fill the questionnaire as honestly as possible. The information you provide will be used purely for academic purposes and the recommendations made will be of great importance to our country. The information you provide will be treated with utmost confidentiality.

SECTION A: DEMOGRAPHIC FACTORS

1. **Gender?** Male {} **Female** {}

2. **Age?** 18-25 year {} **26**-35 year {} 36-45 year {} 46 years and above {}

3. **Marital Status?** Married {} Single {} Divorced {} Widow/Widower {}

4. **What is the size of your household?** 1-2 {} 3- 5{} 5-8{} 9 and Above {}
5. Occupation? Formal employment {} Self-employment {} Not Employed {}
6. What is the highest level of education? Primary {} Secondary {} Tertiary {} None {}
7. What is your main economic activity? Salaried employment {} Small scale farming {}
   Small scale businesses {} Others Specify……
8. Approximately how much is the total house hold income per month? Less than KES 5000 {} KES 6000 -10,000 {} KES 11,00-20, 000 {} KES 21,000-50,000{} Above KES 50,000

9. Are you a member of a social welfare group? Yes {} No {}
   If "Yes' name the social welfare……
10. Are you a member of National Hospital Insurance Fund (NHIF)? Yes {} No {}
    If "Yes" How much do you pay Yes {} No {}
    If "Yes" How long have you been a member of NHIF? Less than 1 year {} 1-5 years {} 0ver 5 years {}

SECTION E: LEVEL OF AWARENESS OF UHC

11 Are you aware of Universal health care Yes {} No {}?

If "Yes" in (11) what services to they offer under UHC? MCH/FP {} HIV/AIDS {} Laboratory {} X-Ray {} Pharmacy {} Treatment {} Others, Specify…….

11. Do you pay for health services in the health facility? Yes {} No {}

If "Yes" how much? Less than KES 20 {} KES 20-50 {} KES 50-100 {} Above KES 100 {}

12. Who offers UHC services? County government {} National government {} Constituency Development Fund {} Others, Specify……

13. How many times have you accessed UHC services? Ones {} Twice {} Thrice {} Frequently {} Never {}

SECTION C: SOCIAL-ECONOMIC FACTORS INFLUENCING ACCESS AND UPTAKE OF UKC

14. Have ever gone to health facility for treatment? Yes {} No {}

If 'Yes', what services did you seek (Tick many)? Treatment {} Checkup {} Laboratory {} MRI/X-RAY/CT Scan {} MCH/FP {} Others, Specify…….

If 'Yes', did you pay for the services received? Yes {} No {}

15. Do public health facilities charge some fee for services received? Yes {} No {}

16. When you/your family member gets sick, where do you go for treatment? Public health facility {} Private health facility {} others, specific…….

17. Where do you prefer to seek treatment? Public hospital {} Private health facility

Why? Give reasons ……

18. Has your family member ever been admitted in a hospital and in-patient? Yes {} No {}

Who paid the hospital bill? Family {} Hospital {} Government {} other, specify….

19. Does your religion influence your health treatment decision on where you will treat? Yes {} No {}

20. Are there community members who seek traditional medicine for their sickness? Yes {}

No {}

21. Has the UHC service helped you/ you're as a family? Yes {} No {}

SECTION D: HEALTH SYSTEM FACTORS INFLUENCING ACCESS AND UPTAKE OF UNIVERSAL HEALTH CARE

22. Did you receive treatment from the health facility? Yes {} No {}

If "No" Why? Lack of drugs {} No doctor {} No money to pay for treatment {} others, specify……

23. Do health facilities have adequate drugs for treatment? Yes {} No {}

24. How long did you take to be treated? Less 1 hours {} 2-5 hours {} 5-10 hours {} Over 10 hours {}

24. How far is the health facility from your home? Less 1 Km {} 2-5 Kms {} 5-10kms {} Over 10 Kms {}

25. In your opinion, rate the services received in the health facility. Poor {} Average {} Good {} Excellent {}

26. In your opinion rate the health workers. Excellent {} Good {} Average {} Poor {}

27. Does your health facility has adequate number of workers? Yes {} No {}

28. Does the health facility have any challenges to deliver UHC? Yes {} No {}

If "Yes" Specify……

29. What do you think should be done to improve access and uptake of UHC services?

Increase Funding {} Hire more health care workers {} Supply more drugs {} Motivate health workers {} Retrain health care workers {} Others, Specify…….

QUESTIONNAIRE FOR KEY INFORMANT INTERVIEWS

1. Position: Facility Administrator {} Nursing In-Charge {} Medical superintendent {} CMOH {} Director Medical services {} Others, Specify…….
2. Gender: Male {} Female {}
3. Period worked in the facility…
4. Do your facilities offer UHC services?
5. Does your facility have adequate staff?
6. Do your health facilities have adequate drugs and medical equipment?
7. Does your staff attend continuous medical education?
8. Is your staff remunerated adequately and promptly?
9. Does your health facility treat many patients daily?
10. Do you charge fees for the health services offered at the facility?
11. What are the challenges affecting access and uptake of UHC services?
12. Suggest ways of improving the access and uptake UHC services?

APPENDIX III: MWINGI WEST AREA STUDY MAP