

**FACTORS INFLUENCING THE UTILIZATION OF HOME-BASED CARE
IN KISUMU CENTRAL SUB COUNTY**

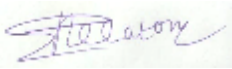
ERICK ENOCK RATORI

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**A RESEARCH THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENT OF THE DEGREE OF MASTER OF SCIENCE IN
HEALTH SYSTEMS MANAGEMENT, KENYA METHODIST
UNIVERSITY.**

DECLARATION AND RECOMMENDATION

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

Signature  Date: 15/4/2024.....

Erick Enock Ratori

HSM-3-0194-1/2019

Supervisors

This research thesis has been submitted for examination with our approval as the University supervisors.

Signature: Date:

Mr. Musa Oluoch

Department of Health Systems Management.

Kenya Methodist University.

Signature..... Date:

Dr. Muthoni Mwangi

Department of Population Health

Aga Khan University-East Africa

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DEDICATION

I dedicate this study to my family, my wife and my children Trevor, Dexter, Kingston and Kingsley, my late dad Eliashib Ratori and my late mother Phyllis Lorna Ratori for teaching me the value of hard work and determination. They are a great source of motivation for me, and I thank God for giving me the strength, good health, and courage to forge ahead.

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ABSTRACT

Kenya's healthcare system faces various challenges such as resource constraints, understaffing and overcrowded facilities. For instance, by 2016, the ratio of doctors to the population was 14 doctors per 100,000 population and only 42 nurses per 100,000, respectively, against a recommendation of 1:1000 by the WHO for doctors while a ratio of 83:10,000 for nurses (WHO, 2019). However, formal home-based care have not been implemented by MOH; instead, in place are NGOs, donor-funded agencies and religious-owned organizations that run throughout Kenya (WHO, 2001). The demand for hospital-based care often surpasses the available resources; leading to long waiting times, compromised quality of care, and increased healthcare costs. Kenya, like many other low- and middle-income countries, grapples with significant healthcare disparities, with marginalized populations often bearing the brunt of inadequate access to quality healthcare services. The study set out to determine the factors influencing the utilization of Home-Based Care in the Kisumu Central sub-county. Specific objectives of the study were to: i) establish the influence of predisposing factors on Home Based Care utilization, ii) establish the influence of enabling factors on the utilization of Home-Based Care, iii) establish the influence of the environment on the utilization of Home home-based care, iv) establish the influence of health behaviors on utilization of Home-Based Care in Kisumu Central Sub County. A mixed research design involving both quantitative and qualitative methods was used. The target population is comprised of 384 households with the potential to use home-based care services and home-based care staff and a total of 120 questionnaires were administered. Simple random sampling was used for those in the Home-Based Care homes, and purposive sampling was used for the key informant interviews. Using NF formulae, a sample of 384 households at a 95% confidence level and a 5% margin of error was used. Research ethics was observed with ethical approvals from Kenya Methodist University Scientific Ethics Review Committee and the National Commission for Science, Technology and Innovation. The data was analyzed using SPSS version 27. Descriptive statistics, Bivariate correlation and multivariate regression models were adopted. The results indicated that a significant association existed between age groups and Home Based Care utilization($X^2=29.619$, $p<.001$) with older age groups more likely to utilize Home Based Care, marital status and Home-Based Care utilization($X^2=19.70$, $P=.012$), religious affiliation and Home-Based Care utilization($X^2=11.23$, $p=.024$), occupation and home-based care utilization($X^2=38.89$, $p<.001$), education and Home-Based Care utilization($X^2=27.29$, $p=.002$), personal income and Home-Based Care utilization($X^2=22.20$, $p=.001$), There was no significant association found between household income bands and Home Based Care utilization($X^2=.069$, $p=.966$). The study recommends that the county government of Kisumu make deliberate interventions like setting aside funds, passing legislative laws and regulations, and investing in Home Based Care initiatives and programs that would lead to improvement in perceptions, uptake and utilization, which will translate to better provision of health care to the people.

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ABBREVIATIONS AND ACRONYMS

CBOs	Community-Based Organizations
CBS	Central Bureau of Statistics
CHBC	Community Home-Based Care
CMS	Centers for Medicare & Medical Services
FBOs	Faith-Based Organizations
FHI	Family Health International
HBC	Home-Based Care
HIV	Human Immunodeficiency Virus
IOM	International Organization of Migration
KII	Key Informant Interview
KVOWRC	Kenya Voluntary Women's Rehabilitation Center
LMICs	Low-and Middle-Income Countries
LTC	Long-term care
MOH	Ministry of Health
NACOSTI	National Commission for Science Technology and Innovation
NCD	Non-Communicable Diseases
NCHS	National Center for Health Statistics

NCPD	National Council for Population and Development
NGOs	Non-Governmental Organizations
PWDs	People with Disabilities
SERC	Scientific and Ethical Review Committee
UNFPA	United Nations Fund for Population Activities
UNICEF	The United Nations Children Fund
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

This chapter provides an overview of Home-Based Care globally and in Kenya. The study is based on the service delivery arm of the health systems. It is followed by a problem statement, the study objectives, the research questions, the significance, limitations, delimitations, assumptions of the research, and operational definitions of terms.

1.1 Background to the Study

Existing literature submits that home-based care programs for people living with AIDS were mostly launched in North America and Europe. In the USA, the Committee on National Strategy for HIV/AIDS decided that care for people living with AIDS was broad and affordable within the community or at home and hospitalizations only when required. Home-based care had to be monitored and coordinated (Spies & Edward, 1990)

In Africa, Home-based care programs evolved with a view of helping caregivers with the provision of HIV/AIDS and chronic and palliative conditions care; the reason is that health systems are unable to cope with increased demands for care and treatment, thus impacting health services utilization. These home-based care enterprises have developed and differ in the kinds of care and support they offer. Some home-based care services focus on providing psychological, social and nutritional support, while others major in primary nursing care. Others provide Anti-retroviral (ARVs), care for and treat opportunistic diseases and chronic conditions such as tuberculosis and cancer (World Health Organization [WHO], 2009). The home-based care services provided

by government clinics, community health groups, and Non-Governmental Organizations (NGOs) are key in assisting people living with chronic conditions, HIV/AIDS and providing care to families (WHO, 2009). In economically developing countries such as Kenya, home-based care initiatives evolved as un-systematic efforts when it was obvious that some alternative care was necessary to address the effects of AIDS and other chronic conditions. Home-based care was mainly initiated by concerned individuals (Cullinan, 2000).

Utilization of home-based care is more basic in economically developing countries where a lack of screening, treatment options or financial assistance modifies manageable conditions into long-term illnesses. The home-based care services provided by government clinics, community health groups, and Non-Governmental Organizations (NGOs) are key in assisting people living with chronic conditions, HIV/AIDS and providing care to families (WHO, 2009). According to the International Agency for Research on Cancer, by the year 2030, in economically developing countries, 70% of cancer cases will arise, Kenya included. Most cases will advance to an un-treatable stage before diagnosis. The elevated AIDS prevalence in these countries will increase mortality, cancer and opportunistic diseases. The global trend of growing disease weight has become noticeable in Kenya, with most of the admissions in hospitals and deaths associated with non-communicable diseases (NCD). In reaction, the home-based care system in Kenya has undertaken a monumental development over the past decade and a half (Johnston, 2017).

The demand for home-based care has gone up because of the increased need for health services and the increasing costs of the services. According to Schneider (2000), there are different models of home-based care, namely, home visiting programs (informal)

and comprehensive home-based care (formal). Literature suggests the existence of two forms of home caregiving: informal and formal. While formal caregiving is initiated and implemented through formal systems, informal, on the other hand, is by friends (World Health Organization, 2002). Moving forward, we are going to delve in detail into formal home-based care, where we will seek to understand the impact of predisposing factors, enabling factors, the environment and health behavioral factors on utilization.

1.2 Statement of the problem

A quarter of the Kenyan population regularly lack access to healthcare. A recent study estimated that nearly 2.6 million people remain poor due to ill health each year. 6% gender inequality is prevalent in Kenya's healthcare utilization. Kenya's healthcare system faces various challenges such as resource constraints, understaffing and overcrowded facilities. For instance by 2016 the ratio of doctors to the population was 14 doctors per 100,000 population and only 42 nurses per 100,000 respectively against a recommendation of 1:1000 by the WHO for doctors while a ratio of 83:10,000 for nurses. However, formal home based care have not been implemented by MOH instead in place are NGOs, donor funded agencies and religious owned organizations that run throughout Kenya (WHO, 2002). The demand for hospital-based care often surpasses the available resources; leading to long waiting times, compromised quality of care, and increased healthcare costs. Kenya, like many other low- and middle-income countries, grapples with significant healthcare disparities, with marginalized populations often bearing the brunt of inadequate access to quality healthcare services. Home-based care presents an opportunity to address these inequities by providing

tailored, community-based care solutions that reach underserved populations, including those in rural and remote areas, the elderly, and individuals with disabilities.

A significant proportion of the Kisumu resident's population, particularly those residing in rural and underserved areas and including those in Kisumu Central Sub County, face barriers to accessing essential healthcare services. Limited infrastructure, long distances to healthcare facilities, and financial constraints contribute to delayed or foregone medical care, exacerbating health disparities and inequities. The lack of accessible healthcare services underscores the need for alternative care delivery models, such as home-based care, to reach populations that are otherwise marginalized or underserved. This study underscores the multifaceted challenges and complexities inherent in the current healthcare landscape. From inadequate access to healthcare services and the rising burden of chronic diseases to fragmented healthcare systems and the challenges faced by family caregivers, there is a compelling imperative to prioritize home-based care as a viable solution to address unmet healthcare needs and improve health outcomes for all Kisumu Central residents. Identifying and addressing these challenges through evidence-based research, policy reforms, and strategic investments are essential steps towards building a more inclusive, responsive, and resilient healthcare system in Kisumu and Kenya at large (López-Varela et al., 2019).

1.3 Purpose of the study

The purpose and aim of this research were to determine factors influencing utilization of Home-Based Care in Kisumu Central Sub County. These factors include predisposing factors, enabling factors, the environment and health behaviors. This research was purely for academic purposes.

1.4 Study Objectives

1.4.1 General Objective.

The main objective of the study was to assess the factors influencing the utilization of home-Based Care in Kisumu Central Sub County.

1.4.2 Specific Objectives.

- i. To determine how predisposing factors influence the utilization of health services in Home-Based care in Kisumu Central Sub County.
- ii. To determine how enabling factors influence the utilization of health services in Home-Based care in Kisumu Central Sub County.
- iii. To determine how the environment influences utilization of health services in Home-Based care in Kisumu Central Sub County.
- iv. To determine how health behaviors influence the utilization of health services in Home-Based care in Kisumu Central Sub County.

1.5 Research Questions

- i. How do predisposing factors influence utilization of Home-Based care in Kisumu Central Sub County?
- ii. How do enabling factors influence the utilization of Home-Based care in Kisumu Central Sub County?
- iii. How does the environment influence the utilization of Home-Based care in Kisumu Central Sub County?
- iv. How do health behaviors influence utilization of Home-Based care in Kisumu Central Sub County?

1.6 Justification of the Study

In recent years, the concept of home-based care has garnered increasing attention as a viable alternative to traditional healthcare delivery models, particularly in resource-constrained settings like Kenya. As Kenya's population continues to age and healthcare needs evolve, there's an increasing demand for accessible and personalized care solutions. Home-based care has emerged as a crucial component in meeting these needs, offering tailored services in the comfort of individuals' homes. This narrative delves into the pressing need for home-based care in Kenya, highlighting its significance in improving healthcare outcomes, enhancing quality of life, and addressing systemic challenges within the healthcare system.

Kenya, like many other countries, is experiencing significant demographic changes, characterized by a rapidly aging population. With improved healthcare infrastructure and advancements in medical technology, life expectancy has increased, leading to a larger elderly population. This demographic shift poses unique challenges, including an increased prevalence of chronic diseases, disabilities, and age-related conditions, necessitating specialized care approaches. In many regions across Kenya, access to healthcare facilities remains limited, particularly in rural and remote areas. Distance, lack of transportation infrastructure, and financial constraints often hinder individuals from seeking timely medical attention. Home-based care offers a viable solution to bridge this gap by bringing essential healthcare services directly to the doorstep of those in need, irrespective of geographical location.

With limited healthcare resources and infrastructure, there is a pressing need to optimize resource utilization and improve healthcare efficiency in Kenya. Home-based care offers a cost-effective alternative to traditional hospital-based care, reducing the

burden on healthcare facilities, minimizing unnecessary hospital admissions, and maximizing the use of available resources. Understanding the potential cost savings and efficiency gains associated with home-based care is essential for informing healthcare policy and decision-making. Lack of coordination in HBC has been irregular, despite this the government has had initiatives. For instance, in 1999-2000, a total of fifty people were equipped with HBC knowledge and skills in Nyanza (Wesonga, 2007).

The need for home-based care in Kenya is undeniable, given the evolving healthcare landscape and demographic shifts. By prioritizing patient-centered care, accessibility, and sustainability, home-based care presents a viable solution to address the diverse healthcare needs of individuals across the lifespan. Embracing a collaborative approach involving policymakers, healthcare providers, community organizations, and stakeholders is essential to scale up home-based care services, enhance healthcare delivery, and promote the well-being of all Kenyans.

1.7 Delimitation and Limitation of the Study

1.7.1 Limitations of the study.

Cooperation is a limiting factor anticipated in the study by some of the respondents who might be reluctant to participate in the study when approached. The researcher will however address this limitation by building a rapport with the respondents, informing them of the value and significance of their participation in the study. Secondly the research will only assess three home-based care centers namely, Danid home based care, Aga Khan hospital home-based care program and Gifted minds medical Centre and the area of study will mainly focus on utilization this will pose a

challenge of a limited sample size. The third limitation is that this study will rely on information from weak patients in home based care where some respondents might feel that they are being disturbed and therefore refuse to participate or give wrong information to avoid this the researcher will help respondents in filling the research instruments, make follow up through patient caregivers and available healthcare staff at the time, this might led to being biased which was reduced by conducting a pretest study analysis at a home based care facility in the neighbouring sub county and necessary changes was made to the research instrument.

1.7.2 Delimitations of the study

The study focused on 3 home-based care facilities in Kisumu Central Sub County. For convenience, it used 120 structured questionnaires to collect primary data on factors that influenced HBC utilization and a Key Informant Interview.

1.8 Significance of the study

1.8.1 County Government

Results of this study may transform the way Home Based Care is viewed and utilized, thus enabling the county government to plan on resource allocation and prioritize where they can invest more to roll out the home-based care program to help more people access health.

1.8.2 Patients

Home-based care empowers patients and their families to actively participate in the management of health conditions by facilitating care within the home setting. Patients

receive education, training, and support to better understand their health needs, adhere to treatment plans, and adopt healthy lifestyle practices.

1.8.3 Ministry of Health

From the results Home-Based Care uptake by members of the public will inform the ministry of health allocation of funds and determine the policies that are made in terms of access, investment into the programs. The results may also help strengthen the home-based care thus strengthening this health system and pillar of health service delivery thus impacting positively on the beneficiaries and potential users. Home-based care emphasizes a personalized and holistic approach to healthcare, tailoring services to meet the unique needs of everyone.

1.9 Assumptions of the Study

The researcher assumes that the feedback given by the patients and caregivers was accurate and did not affect the validity and reliability of the data collected since some of the patients are either too weak or elderly to give their accounts.

1.10 Definition of Terms

Formal Home-Based Care	This study will refer to home-based care run professionally by non-governmental organizations, faith-based organizations, private investors, community groups and government health clinics offering palliative care and physical, psychological and spiritual support.
In-Formal Home-Based Care	In this study, it will refer to the home-based care activities in people's homes run by friends and family

Predisposing factors-	This study will refer to danger factors that make a person more vulnerable to developing a disease, such as education, age, and gender.
Enabling factors-	In this study, it will refer to operational aspects of obtaining care for example, waiting time, health insurance, income
Environment influences	This study will refer to forces and factors found within our environment that influence health, such as distance and waiting time.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section outlines past written work on Home Based Care and attributes that affect its implementation. The chapter also presents conceptual and theoretical frameworks that grounded this study.

2.2 Factors Influencing Utilization of Health Services.

2.2.1 Need for Health Care Services

The healthcare situation of an individual is the major determinant of healthcare utilization. The WHO states that health is determined by individual socioeconomic surrounding health behaviors and people's characteristics (Marmot, 2011). Individuals' traits refer to their genetics and inherited diseases. The individual's environment goes a long way in affecting health because of pollutants. People's individual traits, which impact health negatively, such as smoking, lack of exercise or watching one's diet, also bring about health conditions that call for health care attention. Those people in good health have proved that there is a correlation between good health and economic stability, proper housing and community safety. Individuals with unmet health and societal needs are likely to miss doctors' appointments (Thomas-Henkel & Schulman, 2017). Basically, an individual's need should be the main determinant for healthcare utilization despite other factors also being in play. Such factors include the tendency to access care; this does not stand alone as it is affected by timeliness, availability, convenience, and affordability (Magnan, 2017).

2.2.2 Staffing and Quality of Care in Hospitals/Home-based Care Facilities.

Staffing is a crucial factor in deciding the quality of treatment and service in hospitals (home-based care facilities). This also determines individual patients' care outcomes. Around-the-clock patient care is a distinguishing characteristic of inpatient care in hospitals. Since ancient times, in the USA health care system, hospitals have been at the Centre. Critical services such as nursing are significant in providing hospital care. For instance, the largest number of health personnel comprises nurses all over the world, including Kenya (Rosenberg, 2023). Recently, the nursing profession has been concerned about changes in the sector, which have led to the firing of registered staff. Much care is progressing toward ambulatory surroundings, the community, and HBC, thus influencing health utilization (Larki & Roudsari, 2020).

2.2.3 Ability and Tendency to Use Services.

Individual patients cannot utilize care if it does not exist in their surroundings. Also, if care providers do not provide care because a patient lacks insurance, this can also lead to people not utilizing care. Rural setups are insufficient when it comes to specialty physicians, in particular specialists in mental health problems and providers (Meit et al., 2014). In the event the services are available other obstacles will block utilization of care. One of the reasons is a lack of public transportation, which might be a hindrance to health utilization. We have providers who might have strict rules about not being able to see patients without an appointment, and the communication barrier between providers and patients might also be another hindrance. The inability of the disabled to access care facilities and excessive waiting times lead to high turnaround times for the services (Dall et al., 2013).

2.2.4 Access to health care.

The definition of access to healthcare is having reduced waiting times to obtain the best possible health services and care. Mutual trust and communication in healthcare systems can be built when patients gain access to the healthcare system by utilizing much-needed health services and gaining access to medical professionals. Consultants, physicians, and medical practitioners underscore the need for timely access to health services to manage acute episodes, prevent illness, and manage terminal conditions. All this works to help avoid complicated health conditions (National Center for Health Statistics, 2017). There are several ways to think about the word access, which is often used to describe characteristics that motivate one's contact with the utilization of services (Andersen & Newman, 2005). Levesque et al. (2013) define access to healthcare by these dimensions: approachability, accessibility, availability, acceptability, appropriateness, and affordability. Access to healthcare is, therefore, viewed as a continuum, for instance, the availability of providers who use insurance and the ease of booking appointments with the listed providers.

2.3 Predisposing Factors.

2.3.1 Education.

Poverty eradication is also cited categorically in developing countries in Africa's continent formal education and commonly relates to the use of birth control methods embraced by women and engaging with a partner (Koopman et al., 2001).

Education is the sole most notable reason to impact women's health (Heiberg, 2003). According to Rahman and Bhuiyan (2022), "One of the most significant determinants of women's socio-economic status is their education level." It is obvious that the level

of education and the economic socio-status are correlated, just as is the case of sex and gender when investigating health imbalances in the marginalized groups that reside in lower-income countries with access to countrywide health services (Cooper, 2002). Therefore, it is not astonishing to establish that the level of education and economic socio-status affect women's access to healthcare in lower-income level countries of the family are related to deciding to seek health services when ill in Zambia; even a lady's view of her economic socio-status and heightened confidence(self-regard) is positively related to her education attainment (Hjortsberg, 2003). Educational achievement is perceived as significant in the formation of health imbalances via economic socio-disparities in the workforce (Cooper, 2002).

WB, UNFPA, and UNICEF regularly employ maternal education as a pointer for the health of children and families at large (UNFPA,2003; United et al. on Fund), along with other surveys for instance (Shandra et al., 2004). Whereas numerous reviews globally have employed female education attainment as health pointers for all socio-concerns and challenges in addressing these types of ailments to the usage of clinics, statistics, and other medical services (Bhan et al., 2005; Tran et al., 2021). Education attainments thus raise the likelihood and levels of good health training is not an assurance (Tomlinson et al., 2003). Some studies dispute this fact and instead show that those with higher education attainments may yield misleading information, misinterpretation, and misconceptions (Tomlinson et al., 2003). This is the case particularly when it involves religious beliefs, cultural norms and societal norms, institutional pressures, group pressures, and ignorance. Buor (2003) asserts that patients with higher income who do not perceive the need for health care would not utilize it even if they had to drive 1 kilometer, while the one who cherishes the need

for it because of an excellent level of education achievement would gamble raising money even through credit finance if the health care service and distance are such that he has to foot for them that he cannot afford.

Of great interest is the definite association between the education level of the family head and the utilization of home-based care amenities. This certainly is a favorable thing for people's health state. It might be that the level of education attainment is acting as a substitute for income mirroring the optimistic effect on HBC utilization. In other practical studies, for instance Schulz and Johnson (2003) established that the greater the level of education achievement, the greater the prospects of pursuing contemporary healthcare services. Kosimbei (2005) established the female parent's education attainment level to be a significant determining factor of the baby's health care services utilization.

2.3.2 Income

As the world population advances in terms of age, for older adults with inabilities LTC insurance evidently is progressively significant as a retirement income system. Japan has an exponentially ageing population, with 13.8% being aged >75 years by the year 2017, of which this ratio is expected to hit the 17.8% mark in 2025. Also, the ratio of Japanese elderly adults utilizing the LTC platform has consistently increased with progressing age. There is increasing stress to make sure services are spread sustainably and equitably as per every individual's requirement with the quick increment in the people on LTC insurance recipients (Mori et al., 2020).

The Japanese LTC insurance system is established on a small fee-for-service prototype, apparently, this gives the luxury of choosing providers for recipients and their kin.

There are several economic models based on limitations. However, to the stated choices. Firstly, the recipients of LTC are assisted by care managers on the preferences and needs of each person, the recipient and their kin. The care managers, while carrying out this assignment, ensure that the chosen LTC services do not surpass the allocation in the patient's card. The recipients pay 10-20% of the costs as out of their pocket fees (Mori et al., 2020). Care managers have to keep in mind every patient's limitation. Because of these challenges, the level of family income impacts LTC utilization. Previously, it has been noted that raw data for expenditures for LTC services were on the higher side for low-income recipients compared to those of higher-income earners or families. Another review established that LTC service expenses for those in the higher income bracket were more as compared to those of the lower income people with modified health status-associated conditions. Therefore, for this reason, lower-income recipients may avoid utilizing high-cost services (Mori et al., 2020).

Japan's LTC insurance model offers institutional services and HBC services, with each amenity type playing a distinct role. HBC services in this context are categorized majorly under these subheadings: home nursing services and HBC rehabilitation services. Another review observed that LTC recipients with high-income levels utilized more home-visit nursing services compared to those people with lower income, the reason is because of the high cost of the services' rehabilitation services are quite costly; therefore, those people with low income tend to avoid utilizing these services because of the meagre financial resources they have. However, studies have been done to make a comparison between home help services and HBC rehabilitation services when it comes to utilization (Mori et al., 2020).

LTC insurance recipients overburdened with paying cash for the services may avoid using the service. The receivers of hospital expenses can impact on LTC services thus it is significance to factor in these expenses when considering the relationship between a family's income with LTC service utilization (Mori et al., 2020). (Abd-Rahim et al., 2021), noted that elderly patients with varying wealth statuses and economic socio-support had a huge disparity in utilizing health care from the view of the Health Protection Scheme. Snowden and Graaf (2023) discovered that affordable healthcare for families was affected by income; this played out as income grew and challenges with affordability went down. Bose (2023) envisaged that the wealthiest of the rural areas utilized the most public home care amenities, and those that lacked most had the least in terms of utilization. Dimitris et al. (2021) noted that increased income was a pointer to the usable financial means of people, and this directly raised healthcare affordability, while those with the least income had difficulty in accessing and utilizing home care amenities.

Haw et al. (2020) discovered in the Philippines that raised healthcare costs, impacted utilization by acting as a limitation. From study results, there is a consensus that economic accessibility of healthcare has an impact on home-based care utilization. Eme Ichoku and Leibbrandt (2003) discovered that income had a huge impact and was an important determinant of the need for home-based care services. However, it is to be noted that some studies did not find a correlation between income and utilization of healthcare like for instance as captured in Heller's study. The review also found out that unlike in lower income countries, income is not an obstacle when it comes to access and utilization of home-based care in Malaysia. Kalofonos (2016) discovered

that in Mozambique which is a lower income country that income was an important determinant of home-based care seeking and utilization.

2.3.4 Age of the Clients

Age is a huge reason for people utilizing home-based care. Age can act as a stand-alone determinant of health care utilization, or it can be combined with other factors to determine health care utilization. Age in the elderly and in children can be viewed as a factor of vulnerability or, in the case of youth, as a factor of energy and vitality. Different age groups, depending on age, can engage in potentially risky health behaviors which will impact healthcare utilization either positively or negatively. Age is an important demographic or population pointer. Globally, there is a significant increase in the ageing population. In lower-income countries and developing countries, there is rapid growth in the ageing population, thus posing a challenge in both increases in infectious diseases and chronic diseases. Lower-income countries have a big challenge with infectious diseases, including HIV/AIDs (Andrews et al., 2006).

Economic socio-status, such as education, income and employment, influences the effects on age difference, as well as depending on other people economically, loneliness, living in dilapidated houses and reduced self-confidence. The old are not able to utilize enough HBC amenities, which contributes to them having poor health status (Waweru et al., 2003). This is a great concern in lower-income countries and developed countries. Women have a higher likelihood of living longer than their male counterparts. As compared to men, elderly women are more likely to experience functional impairment and personal care issues compared to men of similar age. These surveys stand true after conducting an economic socio-position of women and men

based on the listed parameters such as housing tenure, income, marital status and social class. A close view of incomes, health status and social support systems that exist for the old shows that inequalities still persist in regard to age, gender and social class in terms of the available resources, access to both formal and informal healthcare services and the value attached to later old age life. It has been observed that these differences are due to the disparities in resources available and status... this further raises questions on the elderly generations' health statuses as defined by income distribution among generations and sexes, access to both formal and informal healthcare services, and sufficiency of old and elderly. It has been established that the old tend to utilize home-based care, traditional healers, medicine men, and religious healers. This is not just because of affordability reasons because traditional medicines are equally costly and expensive, but there is a high likelihood of their utilization of these traditional medicines because of their habits and also because of maintaining and keeping up with their tradition or culture. Those people of a lower economic socio-standing have a high tendency to make health decisions out of habit, preferences, and close association between their habits when it comes to home care utilization.

In this review, age concepts are for those who have attained adulthood only and, at the same time, those who have reported their health status of their own volition. Therefore, ageing is not to be presumed to be a disadvantage, but it carries with it great concerns, such as greater difficulties in utilizing care, higher rates of morbidity, and the possibility of economic socio lack of advantage. Also to be studied alongside these are the ever-transforming views and behaviors of the elderly, the surrounding changes which happen in their lifetimes, and transformations in medicine, technologies and procedures of treatment and care.

2.3.5 Gender

Gender is synonymous with the word sex. Gender is a word that has been used distinctively to differentiate the roles of women and men, behaviors and challenges placed upon individuals by society and culture, this by virtue of being male or female. Trends in illness and health in both genders show noticeable disparities. Women, as a gender, experience long life expectancy compared with their male counterparts who are in the same economic socio situation as theirs. Despite this longer life expectancy in women, women in most families studied tend to experience more illness than men. Women generally have higher home-based care amenities utilization compared to their male counterparts. Although there was a lingering perception that women utilized more healthcare during the childbearing age, most home-based care amenities utilization occurs at the time and after the menopausal cycle for various conditions that are quite unrelated, such as heart disease and bone density loss disease.

Related reviews have intimated the fact that women receive more healthcare attention compared to men in matters of nutrition and diet, counselling services, screening services and medical diagnostic services. Men, on the other hand, compared to women, receive more healthcare services when it comes to cardiovascular problems and obesity. Prohibitive prices of prescribed medicine act to reduce the rate of women utilizing healthcare in women aged 18-64 years. There is a likelihood of women scheduling more than 10 visits annually to healthcare facilities (National Center for Health Statistics, 2017). Gender was significant in both groups, inpatient and outpatient. Women used less inpatient care, which may be attributable to their less fortunate economic socio status as a group. Greater use of outpatient services was affirmed in several reviews.

Sex difference in healthcare utilization is perceived to be huge in a woman's active reproductive years and studies conducted sometime earlier that concluded that women use healthcare services frequently as compared to men may be associated with this. In parts of Central Asia, for instance, it was established that women of reproductive age utilized health services one and a half times more compared with men of similar age. For health conditions that have a high likelihood of causing discrimination, such as HIV/AIDS, women may delay seeking healthcare services and skin conditions such as leprosy. Managing reproductive health problems using creativity has helped address and increase the attendance of women to health care services in Bangladesh; this has been made possible by integrating men's reproductive health problems into women's reproductive health issues. Referring to this encounter, therefore, means that some health problems may indeed impact health utilization. In the USA, it has been established that men will not seek healthcare for conditions such as depression, drug abuse, and disabilities. Research data from the UK indicates that men have a high likelihood of seeking and utilizing any type of healthcare services, including home-based care, thus leading to them delaying getting the service. As discussed by Courtney this delay in men seeking health might be because of their traditional masculine nature. Also, traditional norms have dictated men's healthcare utilization behavior, thus placing a higher risk of poor health as compared to women (McDonough et al., 2002).

It has been noted that gender impacts healthcare utilization in most under-developed and economically developed countries. Vast information has been generated from studies in different parts of India and Bangladesh with its special socio-cultural, religious and caste systems. In conducting research on literature, it is extremely difficult to separate gender and other related factors, which are the level of educational

achievement, socioeconomic status factors and education (Petzold et al.,2005). Research has shown that there is an association between one gender (whether male or female) and health utilization behaviors (Ahmed,2001; Ahmed et al.,2000); this includes disparities in health-seeking and utilizing treatment for families, such as female, male and children (Mazumder et al.,2005). Other studies point to the fact that certain health conditions, such as income, gender and education attainment level, these determinants do not impact or have any delay in HBC utilization and healthcare-seeking behaviors (Malhotra et al.,2002).

In Mamaree, Syria and Bashour (2003) established that gender does not impact the attitudes and knowledge of patients who have been diagnosed with tuberculosis, although women do not report any obstacles in seeking and utilizing home-based care. Belonging to the male gender was a socio-demographic and healthcare-related variable; from the general observation, it was proven that women are more compliant with treatment to healthcare services (Bashour & Mamaree,2003). In Nepal, gender has been shown to dictate how health conditions have been reported or diagnosed, the choice of healthcare provider and the amount of money the sick person spends on a patient (Pokhrel et al.,2005). Regarding specific health conditions, for instance, diseases such as tuberculosis, female patients tend to hesitate in seeking and utilization of healthcare services compared to men (Yamasaki-Nakagawa et al.,2001), while views of illness are established to be different between women and men (Pokhrel& Saverborn,2004). Studies conducted in Africa generally show a mixed pattern of health-seeking and home care utilization. In Ghana, for instance, compared to men, women are more likely to seek healthcare (Bosompem et al.,2004); in Zambia, the low education attainment of women impacted their seeking healthcare services as it led to

delays in seeking health services (Tomlison et al.,). The introduction of user fees affects women's health utilization (Nanda,2002'Soucat et al.,1997); the main issue to be considered most is a woman's household income (Foreit& Foreit,2003).

2.3.6 Marital Status

Several reasons have been put forward to justify the relationship between health and marital status. The association has not been proven, thus being because of data errors and thus an artifact. Others, on the other hand, believed that the relationship between the two was authentic and suggested different reasons. These explanations have been categorized into theories, such as marital selection theory and social causation theory. According to the marital selection theory, the perfect health individuals enjoy is because they get married to healthy spouses or people. According to the social causation theory, the bond of marriage has a health-promoting or protective effect. Thus, according to the marital selection theory, the health status of individuals comes before the marital status of that individual, and in the social causation theory, it is vice versa; marital status comes before the health status (Wong & Verbrugge, 2009).

Several research data have presented differences in home-based services utilization by marital status usually only adjusting for sex and age. Compared to the people who are married, the separated, divorced, widows and widowers have a high utilization, and those who have never been married tend to have a low utilization of home-based care services utilization. For instance, in the Netherlands, the disparities in home-based care services utilization by marital status have been described by the Central Bureau of Statistics (CBS). According to the CBS report, widows and widowers have the biggest rate of consultants and the biggest utilization of prescription medicines. Divorced

individuals have been taunted to have the highest frequency of hospitalization and admissions. On the other hand, married people have the highest rate of consulting general consultants. The never-married have the lowest rates of home-based care utilization on all pointers. Also, in Holland, there is a huge disparity in health by marital status; the disparities are found in both subjective and objective health intervention measures. The bottom line is that divorced individuals have high and married individuals have few health problems. Married people have fewer health problems than those who are not married living with a married partner. Disparities in death rate by marital status are less among women as compared to men, thus affecting home-based care utilization. In Korea, in middle-aged people, health behaviors, whether positive or negative, are affected by people not living with their spouses. Men are more vulnerable when it comes to screening, mental illness and diet deficiencies due to low health utilization; thus, services geared towards prevention and mitigation are significant in the improvement of their health status.

2.3.7 Religion

The link that exists between an individual's religion and his/her health status is something that has been studied for a long time in sciences over a period of more than a decade. The belief that our creator, the Almighty God, heals ill individuals is the main influence upon which people's behaviors when it comes to health issues are founded. Depending on an individual's religion, people have different health beliefs and convictions, which influence their uptake of healthcare. The clinicians may meet individual health demands by endeavoring to understand how religion impacts how they utilize health (Joyce, 2014). Some reviews point towards a strong link between the positive physical health of an individual and their religious practices. Religiosity

may curtail the occurrence of some maladies and thus impact home-based care utilization. Practices such as healing by faith in establishing, treating and preventing a number of health problems are prehistoric and can be confirmed to have started sometime way back into humanities history in many countries more significantly, in recent years, they have witnessed an escalation in utilization trends of healing by faith by modern day churches and religious leaders in the place of curative services in the sub-Saharan Africa. Many patients to the tune of 66.7% is said to seek the intervention of healers of faith, which is touted to be readily available, affordable and accessible, thus impacting or affecting home care utilization (Peprah et al., 2018).

According to Peprah et al. (2018), there is overwhelming proof that avoiding spiritual and religious demands led to unfavorable results for the sick, for instance, a reduction in the quality of life and heightened expenses in the event of death and dissatisfaction with care. When an enquiry is made about the effect or impact of healing by faith on individuals' health, it is found that there is no therapeutic backing of such an approach, thus making the enquiry and study controversial. Several patients, by virtue of their background and upbringing from the societies they come from, resort to healing by faith first before considering utilizing care, thus affecting home care utilization and the health-seeking behavior of those involved. Globally, studies have been conducted to establish the association between healing by faith and an individual's health. A study in Ghana on the behaviors, health attitudes and perceptions or views of healers by faith was conducted, and it was concluded that this could negatively impact the meeting of United Nations Sustainable Development Goal 3 of making sure health and well-being by all by 2030 since it affects home care utilization.

2.4 Enabling Factors Influencing HBC Utilization

2.4.1 Poverty

Poverty is gauged by the revenue of an individual and described as those existing below the verge of the socially acceptable norm of most people in the society or community. Although the formal use of family revenue level is simplistic and forthright, such an avenue only targets the monetary conditions but bypasses some significant forms of poverty, for instance, the non-monetary funds and societal obstacles to accomplishing enhanced existence standards. According to the classic Townsend theory of relative disadvantage, poverty is referred to as a deficit of command over enough revenue in terms of luxuries, food and socioeconomic activities over a range of time, which takes people's acquiring power and affordability of essential necessities into consideration. Proper health is a basic human freedom, a prized resource, and a precondition for enhanced production. Nonetheless, a high level of poverty leads to underusage or lack of application of healthcare, leading to a poor state of health for individuals. For individuals to experience proper health poverty curtailment is instrumental for proper healthcare utilization. Kenya has committed to poverty reduction since the year 1982; despite this, poverty rates remain at an all-time high, standing at 40% nationally. On the other hand, despite Kenya's remarkable health pointers, uptake of home-based care has been low. Testimonies show that those who became ill and divulged a deficit of revenue to be the major reason for not being able to look for medical help constituted 44 percent, 38 percent, and 21.4 percent in 2003, 2007, and 2013 in that event. The figures are evidence that poor home-based care utilization is due to their state of poverty. Findings showed that an upsurge in wealth optimizes healthcare utilization and encourages people to look for healthcare services

from providers thought to render high-quality health services, and this raises the individual's health status (Musyoka, 2019).

Nonetheless, with substantial health benefits over the last 10 years, notable geographical and economic socio-disparities in health have prevailed in Kenya, pointing towards a far-reaching position in sub-Saharan African nations. It is worth noting that low-income individuals experience poorer health than those who are financially stable, although parallel reviews and disparities in the broad locality are rare.

2.4.2 Health Insurance

A population of two billion in developing and high-income economy countries with healthcare systems that are impacted by disparities in access, inefficiency, lack of resources, and low-standard healthcare services. About 92% of the world's yearly death cases are from easily acquirable maladies, 80% of death cases arise from injuries, and 68% of deaths arise from non-communicable diseases. WHO approximates that over 150 million of the world's population are confronted by issues of lack of finances and they are compelled to pay for care from their pockets. Challenges of a health system that is not functioning properly are felt by low-income individuals in society. For low-income earners, their participation in healthcare services is proven to be half of that of high-income individuals; these services include immunization and deliveries. The low-income families also have low purchasing power for services from healthcare amenities. Their subscription to health insurance services is low. This exposes them to vulnerability to high health expenses (Escobar et al., 2020).

Considering these challenges, governments in developing and underdeveloped countries are deliberating on improving the uptake of health insurance services to enhance the uptake of health utilization. Conferences have been held to discuss health insurance in developing countries, for instance, one in Berlin (2005) and another in Paris (2007). In Africa, conferences have also been held as a follow-up of the two conferences held earlier in Berlin and Paris. Those people interested in strengthening health systems and improving their service delivery are keen on ensuring the success of health insurance. Being in possession of a medical insurance card does not guarantee quality health services but rather improves access and utilization of health care services. The medical insurance card is an equalizer of healthcare service utilization between the rich and the poor. A study by the Institute of Medicine of the National Academies in the capital city of America reviewed 130 people in adults between the ages of 18 and 64 years (IOM2004), and the information was reviewed further in 2009). The commissioned study determined that low-income individuals without a medical insurance card are half the number of times able to utilize health for chronic diseases as compared to high-income individuals. The low-income earners with no medical insurance card have poor access to maternal healthcare services, thus leading to low birth weight and infant death (Comfort et al., 2013).

Medical insurance is on the increase in terms of uptake in LMICs; several research reviews have documented the significance of health insurance in terms of uptake, utilization and health outcomes. Individual members of a cooperative Sacco studied displayed improved outpatient hospital visits by virtue of being in possession of a medical insurance card; this was checked against those individuals who did not have a medical insurance card. In Vietnam, using a tendency score and matching study, it was

established that hospitalizations went up with the increase in those with medical insurance cards (Comfort et al., 2013).

An evaluation of community-based health insurance (CHBI) in rural China pointed to the fact that those with medical insurance cards had a higher uptake of healthcare outpatient services of up to 70%. A survey by WHO also determined that individuals who were in possession of a medical insurance card had improved uptake of healthcare services especially when confronted by a challenge of a chronic disease. In Ghana, after utilizing a tendency score matching approach, it was determined that women who have a medical insurance card had fewer maternal complications as compared to those who did not (1.4 vs 7.5%), had more deliveries in hospital (75 vs 53%), those who had access to a medical practitioner's advice during delivery (65 vs 47%), and those who admitted to having at least three cycles of prenatal checkups (86 vs 72%). For postmenopausal women with a medical insurance card, it has been established that they attended more clinics than those who did not have a medical insurance card. In Bangladesh, women who participated in a study meant to be for intervention for people who had medical insurance viz a viz those who do not have medical insurance proved that their uptake of healthcare services was on the higher side as compared to those who did not have a medical insurance card, these services included postnatal care, antenatal care etc. Casabianca confirmed that in Colombia, the cheaper medical health insurance programs led to an upsurge in the uptake of specialist child delivery care and ensured that all the immunizations (3 in number) in public hospitals were completed (Casabianca et al., 2022). Other reviews have confirmed there is a link between the uptake and utilization of maternal healthcare and being in possession of medical insurance (Bose, 2023). Some studies contradict the fact that medical insurance

increases the uptake and utilization of healthcare services. A case in point of such a study is one carried out in India, which did not show any disparity between those having insurance and those who do not have insurance as regards their utilization of healthcare services (maternal healthcare services); these included prenatal and child delivery services in privately owned hospitals. Nonetheless, the author gives a reason that suggests that the low utilization of medical insurance may be because of listing of the maternal just the other day as a service under insurance, thus suggesting that much more time may be needed to come up with a meaningful result.

Ethiopia's health care system does not meet the WHO recommendation for this sector's financing because of committing less finances. Aware of its poorly financed healthcare sector, Ethiopia romped in health insurance to boost the revenue that would be channeled towards healthcare to meet the deficit they are experiencing. In theory, it is assumed that any reduction in price will lead to an increased uptake of healthcare services, CHBI leads to a reduction in the costs of healthcare services and with this, there is a guarantee that there will be an increased uptake of healthcare services. Studies from CHBI have drawn an association between increased uptake of home-based care and those members who have a medical insurance card (Mussa et al., 2023). CHBI decreased the utilization of privately owned hospitals as the primary origin of healthcare services by 11 % points and raised the utilization of public hospital care as a basic origin of healthcare services by 18 % points. The disparities that exist between those on the scheme and members not on the scheme were captured by quite a few reviews. In Burkina Faso, outpatient healthcare visits by individual patients were reported to be 40% higher among those patients who were in possession of medical insurance cards. In Rwanda, two categories of users were studied, and it was

established that among insured who are well off, there was higher use of healthcare services as compared with the insured low-income patients whose utilization of health insurance services was low. However, there is controlled information on the brunt of CHBI on the increased utilization rates of healthcare services in Ethiopia. In another study in the Northern-Western region of Ethiopia, the healthcare utilization percentage for CHBI users was 50.5% as compared to that of those who are not members, which stood at 29.3%, and this disparity was compelling. Another review on the effect of CHBI members in Ethiopia establishes that HBC utilization and the price put on healthcare services by Mebratie et al, that hospital outpatient healthcare services use stood at 35% and 22% of CHBI members as opposed to the ones who are not members of the CBHI respectively (Mussa et al., 2023).

2.5 Environmental Factors Influencing HBC Utilization

2.5.1 Waiting Time

Waiting time is measured by considering the time from which a patient waits in the hospital prior to being seen by one of the medical doctors or the clinic staff. According to Adamu and Oche (2014) an individual patient hospital waiting time is a significant pointer to the quality of services being provided by the clinic and healthcare facilities. Waiting time has been closely associated with the inefficient way that healthcare is delivered, delayed patient agony, and not being satisfied by the public. According to Adamu and Oche (2014), individual patients view protracted waiting times as an obstacle to procuring services keeping the patients waiting is another stress source for both the individual patients and the clinicians.

Nonetheless, the principle of equity in access to justifiable medical treatment has been promoted by the most developed healthcare systems in the world; in practice, the policy targets have not been met fully. This has led to waiting times being taken seriously by policymakers and decision-makers in the hospitals, which have led to policies being formulated to address the long waiting times. In 2005, Finland came up with a treatment guarantee for patients. However, there is no agreement on the standard waiting time among the different groups of patients who attend the clinic (Johanna et al., 2006). Health utilization was low in all groups of patients. Rehabilitation services and informal care accounted for the most utilized health services; this included free care by friends, kin and neighbors. Waiting time did not affect healthcare services quality at the point of admission, appointment and placement in the wards. Timely access to healthcare services has been a significant milestone in countries that have taken seriously healthcare access to be something that is serious. These countries include Finland, Sweden, Australia, Italy, Ireland, Netherlands, Spain, United Kingdom, New Zealand, Denmark and Canada (Siciliani & Hurst, 2003).

The importance of regulations to curtail waiting times seems to be similar in inefficient healthcare systems that lead to delays in patient service delivery, and these include absenteeism of staff, increased medical costs, and welfare losses. According to Hamilton et al., these are not scientific studies that can be proven but are politically motivated statements and theories that do not have any basis. No agreement exists when it comes to minimal or standard waiting times (WT). In Canada, home care utilization was measured among patients who utilized cholecystectomy for a one-year period. It was observed that the duration of WT was not linked with much HBC utilization, thus in conclusion, length was not related to utilization.

2.5.2 Distance

Access to health facilities in under-developed and low-income countries is a basic part of attaining the 4th Millennium Development Goal of curtailing infant death by two-thirds by 2015. Hospitals will at first act as the only sources of effective medicines, thus acting in monopoly for conditions such as malaria and diarrhea. Good characterization of the important parts that define the utilization of home care services and access is significant in order to direct our energies to the achievement of equitable healthcare in hospitals where most infant mortality occurs. Utilization of health services and access has many dimensions and is impacted by financial factors, tradition and behavioral factors. One significant factor that has been consistent in impacting the utilization of care in low-income countries is the distance from the individual patient's home to the hospital or point of service. The concept of devouring to decrease the distance from the patient's home to the point of service is known as the distance-decay effect (Gabrysch et al., 2011).

The distance-decay effect has been documented in many countries among different groups of patients, such as pediatrics, adults, outpatients, and inpatients. Hence, comprehending the impact of the distance-decay phenomenon will determine how resources are allocated to address these challenges in lower-income countries; this will, in the long term, help address the issue of inequalities in access to healthcare services. Geographic access to healthcare, which basically refers to the distance traveled for one to utilize health services, is an assumed bit that presents challenges such as cost, inconvenience, and time. It is evident that increasing the geographic distance curtails the utilization of both primary and secondary healthcare services, specifically in patients with asthmatic conditions. The death rate experienced is higher in several

studies that have, however, not quantified the lack of utilization and access to health services (Gabrysch et al., 2011).

Rural set-up has been highlighted as a reason for inaccessibility, as well as other categorizations, for instance, the availability or unavailability of a service provider in the rural set-up. More advanced measures, for instance, the straight line distance between different populations, which is also referred to as different demand points and healthcare service providers(including travel time), have often added to the complex nature, but it is unclear the association that exists between these listed measures. For groups that have a raised need for healthcare services, distance may, therefore, lead to health inequity when it comes to access. In Kenya, factors related to the use of trained medical practitioners are well documented and are cultural and social factors that determine the need and the physical access or distance to healthcare services. For pregnant women, a conceptual framework that came up Thaddeus and Maine (2006) with hinged on three delays for emergency care; it is purported that physical accessibility or distance directly impacted the second delay. The distance between a hospital and healthcare utilization acts as both an incentive and a disincentive to utilize healthcare when making a healthcare utilization decision. There is also a relationship between distance to the hospital and other linked factors to service, such as the cost and the quality of care, which impacts health services utilization (Actis Danna et al., 2020).

In a study by Remare in Kenya (2009), he found out that the population of births at maternity level 3 declined immediately when the distance exceeded 2 km, thus affecting also home care services utilization. The association between distance in urban areas is unclear because pregnant women have more options in urban setups

(Galiatsatos et al., 2020). Factors such as the location where one is employed influence hospital choice. For example, in Senegal's more populated areas, women seek healthcare services from faraway high-quality healthcare providers. In Sierra Leone, finally, very few women cited distance as an impediment; rather, they sought the quality of the healthcare provider (Conteh, 2022).

2.6 Health Behaviors Influencing HBC Utilization

2.6.1 Chronic Disease

Because of the high ageing rate and increased human beings' life expectancy due to advanced medical care services, the sick people living with chronic disease is on the rise at 30% of the European Union population chronic disease; this population is expected to rise in the next ten years or so. This population of people plagued by chronic disease is prone to multimorbidity. Multi-morbidity can be linked to higher rates of healthcare utilization (Bähler et al., 2015). Morbidity of chronic disease is linked with a rise in home care utilization, yet per any more added disease, the demand decreases. With an expected increase in morbidity over the next 10 years, the demand for healthcare services will go up. A comparison between patients with more chronic disease, one chronic disease and one without any chronic disease yielded the following statistics regarding the number of contacts they had in a year, respectively, as follows 18.3, 11.7 and 6.1 contacts annually. According to Sandra (2014), patients with several chronic diseases led to more contacts with healthcare providers, more prescriptions utilization and increased referrals to specialised doctors and consultants.

Nonetheless, the contact with every disease declined, with a rise in the number of disease conditions. It was noted that individual patients with one disease had 9 to 17

contacts annually and patients with five or more diseases had 5 to 6 contacts for every disease yearly. For specific disease conditions contribution, the contact rates were less compared to the separate diseases (Van Oostrom et al., 2014). Patients who experience many health conditions are assumed to have difficulty managing treatment regimens and more risk complications. According to Van Oostrom et al. (2014) thus, people with more chronic disease conditions have been proven even by studies to have high healthcare services utilization. Nonetheless, in Holland about home-based care utilization, there is no information concerning people with multi-morbidity.

2.6.2 Disability

According to the World Health Organization, disability refers to the association that exists between people with a health condition (for example, a disease known as cerebral palsy) and surrounding factors in our environment, such as public buildings that are inaccessible and reduced social support systems (WHO, 2022). Statistics point to the fact that approximately 1 billion people live with one form of disability or the other; this accounts for about 15% of the global population. Of this population, 190 million people, which corresponds to 3.8% of the population of people living with disability, have significant challenges and thus require healthcare services and home care services; these are people between 15 years and older. The population of people living with a disability is on the rise due to chronic diseases and ageing (WHO, 2022). Individuals regard health as way above education and wealth. Disability is a significant factor, especially for those people who want to replace a medical model of disability.

People with disabilities have similar healthcare needs just like every other member of society without any disability, and these include immunization, sexual and

reproductive health needs, screening and any other aspects of routine healthcare. They might have otherwise complex healthcare needs because of impairments arising from disability. Again, due to their susceptibility to health problems, disabled people may utilize much healthcare as compared to those who are not disabled. Disabled people have similar health needs as normal people living without disabilities. On the other hand, people living with disabilities may require a different kind of medical attention, such as specialized healthcare services. In this study by Shakespeare (2017), utilization of healthcare services was analyzed based on primary or secondary health services and use of tertiary services for instance to be considered are the visits to hospitals during the past 1 year or 2-3 months; access to healthcare services during the past period of 6 months; home-based care visits by a medical practitioner in the period elapsed of 12 months; the duration of time that has elapsed since the last consultation visit by a patient; outpatient hospitals visits by a patient over the past 6 months; hospitalizations during the past 3, 6 or 12 months. Overall, 33% of the reviews captured utilization of home-based care services to be higher in disabled people as compared to those individuals living without disability; 14% of those reviewed showed low levels of utilization, 43% of those reviewed pointed towards mixed results, and 10% did not establish any disparity (Shakespeare, 2017).

In a study by WHO (2014), based in Cambodia, there was proof that the disabled are confronted by both a high demand for health services and a low ability to pay for healthcare services compared to those who are not disabled. People living with disabilities are vulnerable and susceptible to injuries and falling ill twice as much compared to those who are not living with disability and thus utilize health care services or advice as compared to persons without disabilities. Persons living with

disabilities utilize a considerable number of resources on home care services, related treatment and travel costs as compared with people who do not live with any disability, all this depending on the degree of disability. Finally, according to this study, at hospitals, the disabled spent 30% more on treatment costs; they also spent twice the amount on travel costs as compared to those people living without any form of disability. In Cambodia, the disabled have been proven to experience higher health needs and higher costs of healthcare services as compared to those individuals not living with any form of disability; the disabled also in Cambodia have a decreased capacity to pay for healthcare services. This study finds a higher utilization rate of healthcare services by disabled people as compared to those individuals living without any form of disability; the results also show obstacles to the utilization of healthcare and access by the disabled in Cambodia. A health condition or problem is a major part of the meaning of the word disability; therefore, it is not amazing to discover that across most countries, those individuals living with disability are confronted by high needs for healthcare services as compared to those individuals living without any form of disability thus utilizing more healthcare services (WHO, 2014).

In Bangladesh, a household survey was performed in two villages by professional primary or firsthand care specialists who had resided in the study area for a period of 120 days. Approximately 81% of those sampled had admitted consulting unqualified medical or healthcare practitioners of contemporary medicine. For those disabled individuals whose kin viewed them as disabled, they were 14 times more likely to utilize and seek treatment and healthcare services. Being of the male gender and having a perceived belief in any form of disability led to an increased need and demand for healthcare utilization (Hosain & Chatterjee, 2009). In another study in Indonesia, it

was established a close association exists between access to healthcare services and healthcare service utilization, as PWDS needed much help in order to seek healthcare services. When healthcare services are at a faraway distance, people with disabilities have a challenge in utilizing the healthcare services. The reduced utilization of healthcare services is determined by the distance between healthcare services (Herawati & Idris, 2019).

2.7 Theoretical and Conceptual Framework

2.7.1 Theoretical Framework

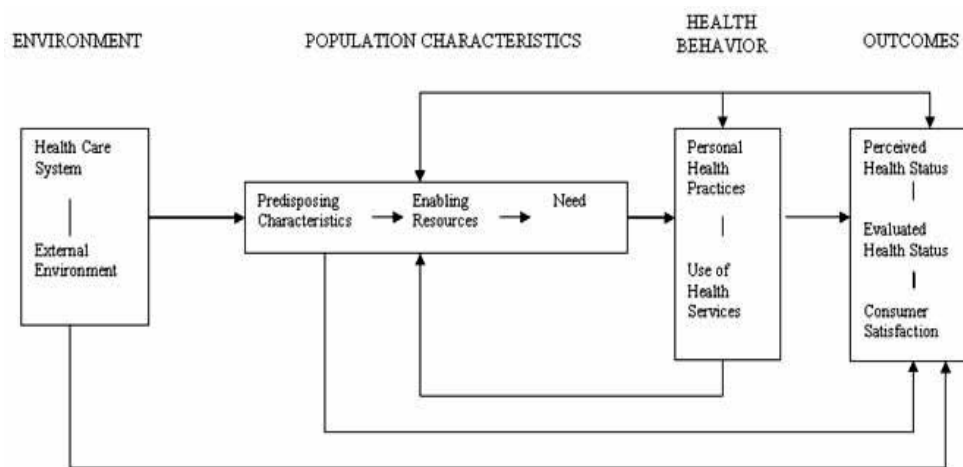
Under the key social sciences theories, different types of health utilization models are considered in this study. Models of decision-making by individual patients hinged on social research and theory; the health care belief model is hinged on psychological theory, the economic model addresses the need for medical care and health care, and the behavioral model of health services utilization has directed much of health care services research on access to and utilization of health services. Health care services utilization is not created by a health condition that might be termed simple but is the determinant after coming up with health care needs which are based on economic socio factors. This forms the basis of health care needs and is significant when some aspects of health care services utilization are determined. In the behavioral model, the patient's demographic or population, economic and socio-structural factors impact health care services utilization with health disease factors (Kim & Lee, 2016).

The Andersen healthcare utilization model is targeted at proving factors that there are reasons for the utilization of healthcare services. As per this model, utilization of health care services (which include physician visits, hospitalization and oral/dental care) is

determined by; enabling, predisposing and need factors as illustrated below in the diagram by Andersen and Newman Framework of health services utilization (Andersen & JF, 1995).

Figure 2.1

Andersen and Newman Framework of Health Services



Predisposing factors-the socio-cultural characteristics of individuals that exist prior to falling ill.

- i. Social structure: occupation, education, social networks, ethnicity, culture.
- ii. Health beliefs: attitudes, knowledge and values.
- iii. Demographic-gender and age.

Enabling factors: These are logistical aspects of obtaining care.

- i. Community-available facilities, waiting time and health personnel.

- ii. Personal/Family: the means and knowledge of how to access health services, health insurance, income, travel, the extent and quality of social relationships, and the source of care.
- iii. Additional factors are also considered-genetic factors and psychological characteristics.

Need factors- These are the most immediate cause of health service use, from health and functional problems that generate the need for health care services.” The perceived need will better help us understand care seeking and adherence to the prescribed medical regimen, while evaluated need will be more related closely to the amount and kind of treatment that will be provided after a patient presents to a health care provider” (Andersen & JF, 1995).

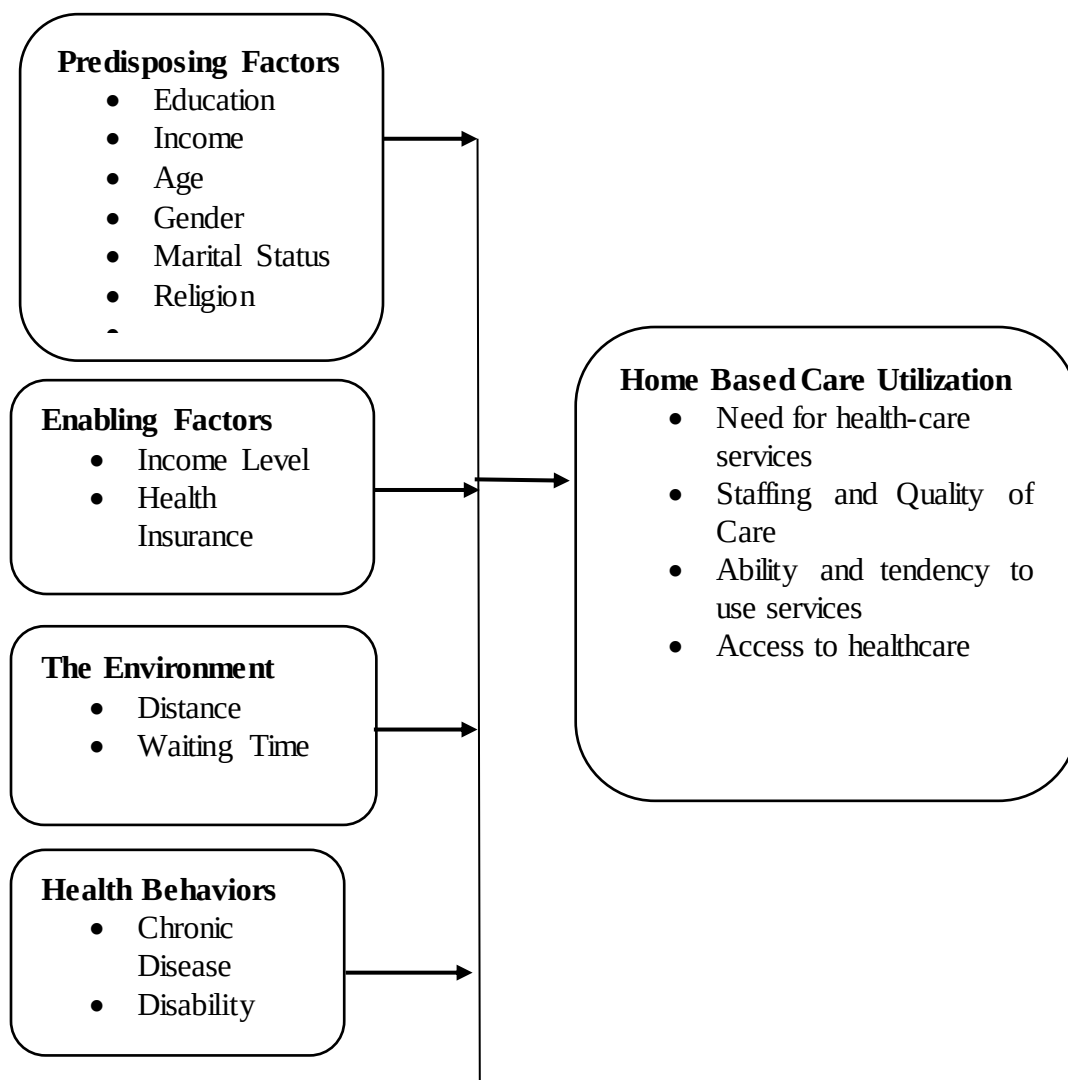
2.7.2 Conceptual Framework.

Figure 2.2

Conceptual Framework

Independent Variable

Dependent Variable



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction.

This chapter provides information regarding the study's location, target population, research design, variables, sample size, and sampling technique, as well as instrumentation, data collection methods, and data analysis procedures.

3.2 Research Design

This was a mixed research design which employed both qualitative and quantitative methods to examine and characterize the elements that impact the use of home-based care amenities. Quantitative data was collected via structured questionnaires to obtain information from various home-based care users. Qualitative data on the other hand was collected by use of Key Informant Guide Interviews in the three home-based care homes. This was to enable the collection of data without manipulating the research context where the researcher has no control over variables (Mugenda & Mugenda, 2003). The qualitative aspect of the research used open-ended questions in the form of a Key Informant Interview Guide to collect responses from purposively selected Key Informants.

3.3 Target population

The target population is the entire aggregation of a group of individuals that have similar characteristics and meet the set criteria of the study (Mugenda & Mugenda, 2003). Those in HBCs formed the target population in the 3 home-based care centres in Kisumu Central Sub County. The patients were mostly chronic disease patients who were critical besides being frail, and this meant at times that it took the intervention of

the nurse or the nurse aide who were also held up with other duties to administer a questionnaire successfully at times leading to postponement of the exercise to a later date thus indicative of the small sample size.

Table 3.1

Target Population

	Facility 1	Facility 2	Facility 3
Male	22	26	20
Female	18	14	20
Sub Total	40	40	40
Grand Total	120		

3.4 Sampling size determination and sampling technique.

3.4.1 Sampling Technique

Simple random sampling was used for those in Home-based care homes, and purposive sampling was used for the Key Informant Interviews. The study used a total of 384 households.

Table 3.2*Sampling Frame*

	Facility 1	Facility 2	Facility 3
CADRE			
Nurses	2	2	2
Pharmaceutical Technology	2	2	2
Medical Doctors/Clinical Officer	2	2	2
Nurse Aide	1	1	1
Nutritionist	1	1	1
Sub Total	8	8	8
Grand Total	24		

3.4.2 Sample size determination

$$N = \frac{n}{1 + n/N}$$

Where:

N f=Desired Sample Size

N=Estimate of the total population

N=Estimated Sample

$N = 384 / (1 + 384/1000)$

3.5 Instrumentation.

Two instruments, a questionnaire (Appendix) and a key informant interview guide (Appendix), were used to collect data. The questionnaire was hand delivered to the respondents to fill in the presence of the researcher or the research assistant to address any concerns. The questionnaire had two sections, with section A dealing with demographics and section B focusing on the study variables. Key informant interview guide was used for face-to-face interviews with the 3 home-based care staff.

3.6 Inclusion and Exclusion Criterion.

3.6.1 Inclusion Criterion.

The researcher sampled patients in Home-Based Care in Kisumu Central Sub County based on variables such as predisposing factors, enabling factors, the environment, and health behaviors. Those who were not influenced or affected by the listed variables were not included.

3.6.2 Exclusion Criterion.

The researcher omitted those who were not on Home Based Care in Kisumu Central Sub County.

3.7 Methods of Data Collection.

Data collection is defined as collecting information for exploration reasons (Kothari, 2004). Data was gathered using questions that provided accurate data. 120 research questionnaires were given out for self-application.

3.8 Statistical Model

The dependent variable was the utilization of HBC, while the independent variables were predisposing factors, enabling factors, environment factors, and health behavior factors, as presented in the following regression model.

$$Y_{hom} = \beta_0 + \beta_{enf}X_{enf} + \beta_{envf}X_{envf} + \beta_{hbf}X_{hbf} + \ell i$$

From the equation:

Y was the dependent variable (utilization of HBC), β_0 is a constant,

β_{enf} , β_{envf} , and β_{hbf} , are the regression coefficients, while X_{enf} , X_{envf} , and X_{hbf} represents the independent variables

X_{enf} =enabling factors

X_{envf} ,=environment factors

X_{hbf} =health behaviors factors

ℓi is the error term

3.9 Methods of data analysis.

3.9.1 Pretest

Pretesting of the questionnaires was done at Kisumu Hospice due to proximity and homogeneity of services being offered before commencing the study. According to Mugenda and Mugenda (2003), pretesting is key to revealing deficiencies in the questionnaire. The pretest study conducted involved 10% of the sample size, where consistency of the questions was determined by Cronbach's alpha reliability test. Pre-testing of the tools were aimed at looking at the time that was taken to complete the

questionnaire and relevance of the questions in addressing or achieving the study's objectives. The suggestions and comments made during pretesting were used to improve the quality of the questionnaire.

The pretest results, as outlined in Table 3.3, indicate that all study variables had a Cronbach Alpha value above 0.7, which is an acceptable and recommended value (Taber, 2018). Hence, the reliability of the questionnaire was confirmed.

Table 3.3

Reliability test

Variable	Cronbach Alpha	Number of Questions	Conclusion
Predisposing Factors	0.881	13	Reliable
Enabling Factors	0.882	10	Reliable
The Environment	0.882	10	Reliable
Health Behaviors	0.880	8	Reliable

3.9.2 Validity

To enhance the validity of the questionnaire, the researcher pre-tested (pilot study) on a population like the target population; Ten cases, which represent the target population in all major aspects, should be used in a pre-test. The interview schedules were pre-tested in Kisumu County Hospital in the neighboring Sub County; In (2017) stated the objectives of the pilot study; it enables the researcher to get feedback from research subjects that need improvements in the main study, leads to changes to some

assumptions, dropping some and coming up with new ones and increases the chances of obtaining clear-cut findings in the study.

3.9.3 Reliability

According to Cronbach, for a data collection instrument to be reliable, the alpha value must be between 0.7 to 1.0. For this study, Cronbach posted an overall Cronbach alpha of 0.882 for all the variables, implying that the instrument used to collect data in the study was valid and reliable (Kennedy, 2022).

3.9.4 Operational Definition of Variables

Table 3.4

Operational Definition of Variables

Objective	Type of Variable	Measurement Construct
Predisposing Factors	Independent Variable	• Sex • Age • Marital Status
Enabling Factors	Independent Variable	• Income Level • Health Insurance
The Environment	Independent Variable	• Distance • Waiting Time
Health Behaviors	Independent Variable	• Chronic Disease • Disability

3.10 Ethical Considerations

Ethical approval for this study was received from the Scientific Ethics and Review Committee of Kenya Methodist University (SERC), NACOSTI and clearance from the Kisumu County Government. Aga Khan Hospital also gave written consent to conduct research in their centres. Individual interviewees were presented with an informed written consent form prior to interviews and were involved in the study only after they had recorded their agreement to participate. Participant's confidentiality was ensured by keeping all participants anonymous. No personal identifiers were recorded, and the paper questionnaires were securely stored in an undisclosed location. Access to the electronic data, as well as printouts of preliminary results, was limited and subject to the discretion of the researcher.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the findings/results of the data collected to address the main objective of the study, which was to assess the factors influencing the utilization of Home-Based Care in Kisumu County. The four study independent variables included the predisposing, enabling, environmental, and health behavioral factors that influence utilization of home-based care.

4.2 Response Rate

120 questionnaires were administered consistently and filled out well. 68 out of the 120 being male, representing 56.7%, and 52 out of 120 being female, representing 43.3%.

4.3 Reliability Results

Table 4.1

Reliability Statistics

Cronbach's Alpha	N of Items
.882	68

Table 4.1 presents the reliability test using the Cronbach Alpha of each variable and a cutoff threshold of 0.7 chosen for the study. All the variables were found sufficient as Cronbach Alpha of .882 was obtained.

4.4 Predisposing Factors and Utilization

The first objective of the study was to examine how predisposing factors influence the utilization of health services in Home-Based Care in Kisumu Central Sub County, as presented in Table 4.2. The factors include gender, age, marital status, religious grouping, occupation, education, personal income, household income, number of family members, and living arrangements among unmarried people.

Table 4.2*Predisposing factors and utilization of home-based care*

		Fr	(%)	Chi-Square	Asymp. Sig.
gender	male	68	(56.7)	2.133	.144
	female	52	(43.3)		
age band	below than 20 years	6	(5.0)	192.000	.000
	between 21-30 years	6	(5.0)		
	between 31-40 years	6	(5.0)		
	between 41-50 years	18	(15.0)		
	over 50 years	84	(70.0)		
marital status	Single	12	(10.0)	165.417	.000
	Never Married	1	(.8)		
	Married	79	(65.8)		
	Separated/ Divorce	8	(6.7)		
	Widowed	20	(16.7)		
religion grouping	Christian	102	(85.0)	145.400	.000
	Muslim	14	(11.7)		
	Hindu	4	(3.3)		
occupation	salaried employee	60	(50.0)	91.200	.000
	self-employed	52	(43.3)		
	student	4	(3.3)		
	child	4	(3.3)		
highest education attained	certificate level	38	(31.7)	84.300	.000
	diploma	38	(31.7)		
	degree	34	(28.3)		
	master	4	(3.3)		
	primary students	1	(.8)		
	N/A	5	(4.2)		
personal income band	1-9,999 Kshs	4	(3.3)	98.400	.000
	9,999-99,999 Kshs	70	(58.3)		
	Above 100,000 Kshs	40	(33.3)		
	N/A	6	(5.0)		
household income band	20000 to 99,999 Kshs	49	(40.8)	4.033	0.45
	Above 100,000 Kshs	71	(59.2)		
number of family members	1-3	52	(43.3)	75.800	.000
	4-6	55	(45.8)		
	7-10	12	(10.0)		
	more than 10	1	(.8)		
living arrangement among	unmarried alone	3	(2.5)	168.950	.000
	with a child	10	(8.3)		
	with another family member	107	(89.2)		

From Table 4.2, 68(56.7%) of the respondents were male, and 52(43.3%) were female,

indicating from the outset that males utilized more Home-Based Care services than

females. Those over 50 years comprised 84(70%), and those aged between 41-50 years accounted for 18(15%). The combined total of respondents aged between 41 and 50 years was 102(85%). This shows that the aged utilize more Home-Based Care services because of being susceptible to chronic diseases and failing health. Also, according to the results, the married accounted for 79(65.8%) of those who utilized Home-Based Care services. This could be because the married are financially stable compared to the single, never married, separated/divorced, and widowed.

Most 102(85%) Christians utilized home-based care. Kenya is a Christian nation, and over 70% of this could be the reason; thus, the likelihood of anyone you come across being Christian is high. The salaried 60(50%) and the self-employed 52(43.3%) utilized most Home-Based Care services. This suggests that those with a source of income are able to access Home-Based Care services. There was no difference in the utilization of Home-Based Care services by a certificate holder and a diploma holder, with both respondents tying at 38(31.7%). The reason is that their income levels or the kind of occupation they have are not so different.

Those with a personal income between 9,999 and 99,999 Kshs utilized more Home-Based Care services, at 70(58.3%), followed closely by those whose income was over 100,000 Kshs, at 40 (33.3%). The latter were few compared to those earning less than 100,000/=Kshs.

For the household income, those with a combined income above 100,000/= Kshs utilized more than 71(59.2%), indicating that income is a determinant in Home-Based Care utilization. Those with family members between 4 and 6 were utilized most, at 55(45.8%), followed by those between 1 and 3 members, at 52(43.3%). This is attributable to the available resources or resources at disposal: the smaller the family,

the more resources, and vice versa. In terms of living arrangements among the unmarried, 107 (89.2%) were those living with other family members, and they utilized the most Home-Based Care services.

These findings agree with those of Abd-Rahim et al., (2021); Bose, (2023) and Mori et al., 2020). Income was a determining factor in Home-Based Care utilization, and varying wealth statuses and economic support caused a huge disparity in utilization. The wealthiest in rural areas utilized most public home care amenities. Lack of affordability affected utilization, and a good number of health-seeking patients went for cheaper alternative care.

4.5 Enabling Factors and Utilization of Home-Based Care

The second objective of the study was to determine how enabling factors influence the utilization of health services in home-based care in Kisumu County, as presented in

Enabling factors and utilization of home-based care table

Table 4.3*Enabling Factors and Utilization of Home-Based Care*

	Yes		No		Chi Square		P value
	Fr	%	Fr	%			
Income							
Have income from any sources than salary	52	43.3	68	56.7	10.80		.001
I have received any social security benefits or disability in the last year	3	2.5	117	97.5	108.30		.000
I have a regular source of income.	51	42.5	69	57.5	112.13		.000
Home based care is affordable to most of the people in need of it in my community.	98	81.7	22	18.3	48.13		.000
My income supports the home-based care I receive	117	97.5	3	2.5	108.30		.000
I receive financial support from family and friends for home-based care	66	55.0	54	45.0	1.200		.273
The rich utilize more home-based healthcare	85	70.8	35	29.2	116.03		.000
Health Insurance							
I am a member of health insurance (NHIF and any other)	78	65.0	42	35.0	10.80		.001
My health Insurance supports the home-based care I receive	52	43.3	68	56.7	10.80		.001
I comfortably pay for my health insurance premiums	75	62.5	44	36.7	8.076		.004
Having insurance plays a positive role in receiving home care health services	78	65.0	42	35.0	10.80		.001
The health insurance pays for all healthcare needs	78	65.0	42	35.0	10.80		.001

From the results in Table 4.3, 117(97.5%) respondents confirmed that their income supported Home-Based Care, meaning they had sufficient income. Also, 98(81.7%) confirmed that Home-Based Care was affordable within the community. This is compared to other care alternatives. 85(70.8%) agreed that the rich utilized more Home-Based Care services compared to the poor. Secondly, we looked at insurance, and 78(65%) confirmed being registered with NHIF. This shows the significance of NHIF, especially in bed capitation, chronic disease management, and generally covering healthcare expenses at a small fee. 78(65%) further affirmed that insurance plays a positive role in receiving Home-Based Care services.

The Key informants were asked how health insurance impacted on Home Based Care utilization.

Key Informant 1.

“.....Most patients on Home Based Care are insurance patients, and it goes without saying that, indeed, insurance plays a critical role when it comes to admission, treatment and maintenance of the patients in these Home-Based Care facilities. I would, as a matter of fact, commend the NHIF because of bed capitation it usually pays since most of these patients are bedridden; it also covers critical conditions and covers people of diverse ages, including the old.”

Key Informant 2.

“.....A critical role especially those on NHIF who are covered or most of the procedures, medications as long as they are fully paid for.”

Key Informant 3.

“....A big role because insurance covers patients on Home Based Care which helps to limit hospital visits, it is cheaper and convenient for the family and lowers the risk of hospital-acquired diseases.”

To examine the client's perception of the enabling factors for utilizing health services in home-based care, Table 4.6 presents a comprehensive analysis of income sources, financial support, and health insurance coverage concerning access to home-based care (HBC) services within a community. These factors play a crucial role in determining the affordability and accessibility of healthcare services, particularly for individuals in need of specialized care within their homes. On income diversity, forty-three percent of respondents indicate having income from sources other than salary, highlighting the financial diversity within the community. This suggests that a significant portion of individuals may have additional financial resources to allocate towards healthcare expenses. Only a small fraction (2.5%) report receiving social security benefits or disability payments in the last year, indicating limited reliance on government assistance for healthcare funding. Forty-two and a half per cent affirm having a regular source of income, while a vast majority (97.5%) state that their income supports the HBC they receive. This suggests a level of financial stability among respondents, enabling them to afford and sustain HBC services.

Over 80% of respondents believe that home-based care is affordable to most people in need within the community. This perception underscores the importance of ensuring cost-effective healthcare options for all individuals, regardless of their financial circumstances. Fifty-five per cent report receiving financial support from family and friends for HBC, highlighting the role of social networks in supplementing healthcare

expenses. On the impact of Socioeconomic Status on Healthcare Access, seventy per cent of respondents perceive that the wealthy utilize more HBC services, suggesting potential disparities in access based on socioeconomic status. This underscores the need for policies aimed at ensuring equitable access to healthcare resources for all members of the community. Sixty-five per cent of respondents are members of health insurance schemes, with a slightly lower percentage (43.3%) indicating that their health insurance supports the HBC they receive. This highlights the importance of health insurance in facilitating access to HBC services. While a majority (62.5%) report comfortably paying for health insurance premiums, a sizable proportion (36.7%) may face challenges in meeting these financial obligations, indicating potential barriers to insurance coverage.

The majority (65%) believe that having health insurance plays a positive role in receiving HBC services, emphasizing the perceived benefits of insurance coverage in facilitating healthcare access. However, an equal percentage (35%) indicates that health insurance may not cover all healthcare needs, suggesting potential gaps in coverage that could affect access to comprehensive care. The study agrees with various authors, such as Musyoka (2019) who argued that a high level of poverty leads to underusage or lack of application of healthcare, leading to a poor state of health for individuals. The study findings align with Actis Danna et al. (2020) that low-income families also have low purchasing power for services from healthcare amenities. The study findings agree with various authors Bose (2023); (Casabianca et al., 2022; Comfort et al., 2013; Mori et al., 2020; Mussa et al., 2023) that medical insurance is on the increase in terms of uptake and has been shown to have a positive significance of health insurance in terms of uptake, utilization and health outcomes.

The study agrees with Mussa et al. (2023), who pointed out that community-based health insurance (CHBI) in rural China pointed out that those with medical insurance cards had higher uptake of healthcare outpatient services of up to 70%. The same sentiments and agreement shared with Comfort et al. (2013) in Ghana medical insurance cards had fewer maternal complications as compared to those who did not have and those with health insurance had more deliveries in the hospital. The study also agrees with Mussa et al. (2023) who further indicated that health insurance was key in healthcare services utilization. The Hosmer-Lemeshow test was done with goodness-of-fit for logistic regression models. The p-value obtained indicated that the logistic regression model fits the data well.

Table 4.4

Hosmer and Lemeshow Test

Hosmer and Lemeshow Test		
Chi-Square	df	Sig.
28.158	17	.063

4.6 Health Behavioral Factors and Utilization of Home-Based Care

The third objective of the study was to determine how health behaviors influence the utilization of health services in home-based care in Kisumu County.

Table 4.5*Health Behavioral Factors to Utilization of Home-Based Care*

	Yes		No		Chi Square		P value
Chronic disease	Fr	%	Fr	%			
I have a chronic disease.	79	65.8	41	34.2	12.03		
Chronic conditions are better managed under home-based care	95	79.2	25	20.8	40.83		
Home-based care is affordable to most people with a chronic disease in my community.	85	70.8	35	29.2	90.13		
My healthcare needs are catered for by home-based care caregivers	100	83.3	20	16.7	53.33		
Those with more than one chronic disease/conditioned specialized palliative home-based care services.	84	69.8	36	30.2	53.33		
Disability							
People with advanced disabilities are managed better under home-based care							
There is stigmatization of the disabled in utilization of hospital services							
Home-based care provides social support for People living with disability							
Disability							
People with advanced disabilities are managed better under home-based care	90	75.0	30	25.0	30.00	.000	
There is stigmatization of the disabled in utilization of hospital services	28	23.3	92	76.7	34.13	.000	
Home-based care provides social support for People living with disability	20	16.7	100	83.3	53.33	.000	

The role of disability on Home Based Care Utilization.

Key Informant 1.

“More social support, if provided to the people living with disability, will lead to improved utilization of Home-Based Care services.”

Key Informant 2.

“Because of lack of stigmatization of one’s condition, people who are living with disability are not discriminated; thus, most of them feel free to utilize Home Based Care services.”

Key Informant 3.

“The care provided at Home Based Care facilities is specialized in nature since the facilities enjoy the services of consultants in various fields and areas of specialization, this has encouraged the disabled with chronic conditions to utilize the services.”

Table 4.5 presents valuable insights into the perceptions of individuals regarding health behavioral factors influencing the utilization of home-based care (HBC) services, particularly in the context of chronic disease management and disability support within the community. A significant proportion (65.8%) of respondents’ report having a chronic disease, highlighting the prevalence of long-term health conditions within the community. The majority (79.2%) believe that chronic conditions are better managed under HBC, indicating confidence in the effectiveness of this healthcare model in addressing the complex needs of individuals with chronic diseases. Over 70% of respondents perceive HBC as affordable for individuals with chronic diseases in the

community, suggesting that cost considerations may not be a significant barrier to access for this population segment.

An overwhelming majority (83.3%) feel that their healthcare needs are adequately catered to by HBC caregivers, underscoring the importance of personalized and attentive care in managing chronic conditions effectively. Nearly 70% of respondents believe that individuals with multiple chronic diseases or conditions require specialized palliative HBC services, highlighting the recognition of the diverse and complex needs of this patient population. A substantial majority (75%) perceive that people with advanced disabilities are managed better under HBC, suggesting the potential advantages of home-based care in providing tailored and accessible support for individuals with severe impairments.

A notable proportion (23.3%) report experiencing stigma or discrimination in utilizing hospital services, indicating potential barriers to accessing traditional healthcare settings for people with disabilities. Although only 16.7% believe that HBC provides social support for people living with disabilities, this perception underscores the multifaceted role of HBC in addressing not only medical needs but also social and emotional well-being for individuals with disabilities. The study agrees with Van Oostrom et al. (2014), that the large number of sick people living with chronic disease is on the rise, and the multi-morbidity can be linked to higher rates of healthcare utilization. The study agrees with Van Oostrom et al. (2014), that the Morbidity of chronic disease is linked with a rise in home care utilization and with an increase in morbidity over the next 10 years, the demand for HBC will increase. The study agrees with (Shakespeare, 2017), that the utilization of healthcare services was analyzed based on primary or secondary health services and the use of tertiary services. For

instance, to be considered are the visits to hospitals utilization of home-based care services to be higher in disabled people as compared to those individuals living without disability.

4.7 Environment Factors and Utilization of Home-Based Care

The fourth objective of the study was to examine how the environment influences the utilization of health services in home-based care in Kisumu Central Sub County. Table 4.6 presents the responses to address this objective.

Table 4.6*The Environment Factors to Utilization of Home-Based Care*

Distance	Yes		No		Chi Square		P value
	Fr	%	Fr	%			
The home-based care is within reach of many users.	84	70.0	36	30.0	19.20	36.30	.000
Users can reach home-based care facilities with ease.	99	82.5	21	17.5	50.70	17.5	.000
Users living far away from the home care facilities utilize less of the services.	27	22.5	93	77.5	36.30	77.5	.000
Home-based care is accessible to everyone in need of it in my community, no matter the distance.	36	30.0	84	70.0	19.20	70.0	.000
The service provider can easily access my home to provide me with services.	95	79.2	25	20.8	40.83	20.8	.000
I can easily get means of transport to a home-based facility	95	79.2	25	20.8	40.83	20.8	.000
Waiting Time							
The waiting time to receive service is short.	93	77.5	27	22.5	36.30	22.5	.000
Shorter waiting times encourage the utilization of home-based care services.	94	78.3	26	21.7	38.53	21.7	.000
I receive home based care support as per schedule.	89	74.2	31	25.8	28.03	28.03	.000
My doctor/service provider is available around the clock in case of emergencies.	92	76.7	28	23.3	34.13	23.3	.000

Role of distance on utilization of Home-Based Care.**Key Informant 1.**

“There is around the clock service delivery by Home Based Care providers, so distance does not seem to have a direct bearing on Home Based Care utilization.”

Key Informant 2.

“Since these patients are chronic condition patients who have been brought in by relatives, caregivers and family, distance does not dictate the utilization of Home-Based Care services.”

Key Informant 3.

“Distance, I believe, has a direct relationship to Home Based Care utilization this depends on how financially endowed the patient or his family is vis a vis the location of the Home-Based Care home, the logistics involved, and the resources needed are all in direct relationship with the distance from home to the Home-Based Care and vice versa.”

Table 4.6 offers valuable insights into how individuals perceive environmental factors that affect the utilization of home-based care (HBC) services within their community. These perceptions shed light on the accessibility, convenience, and responsiveness of HBC services, ultimately impacting their utilization rates. (70.0%) of respondents perceive HBC as within reach for many users, indicating a sense of accessibility within the community. Over 80% believe that users can reach HBC facilities with ease, highlighting the importance of convenient access points in facilitating service utilization. However, 22.5% of respondents feel that users living far from HBC facilities utilize the services less, suggesting that distance may serve as a deterrent to accessing care for some individuals.

Thirty per cent believe that HBC is accessible to everyone in need, irrespective of distance, underscoring the importance of equitable access to healthcare resources for all members of the community. A significant (79.2%) feel that service providers can easily access their homes to deliver care, indicating the importance of home visits in ensuring comprehensive and personalized support. Similarly, 79.2% believe that they

can easily access means of transport to HBC facilities, further facilitating access for those who may not have personal transportation options. (77.5%) report short waiting times to receive HBC services, indicating efficient service delivery and responsiveness to patient needs. Nearly 80% feel that shorter waiting times encourage the utilization of HBC services, highlighting the role of prompt service delivery in promoting access and utilization. Despite the perception of short waiting times, 74.2% indicate that they receive HBC support as per schedule, suggesting consistency and reliability in service provision. (76.7%) report that their doctor or service provider is available around the clock in case of emergencies, ensuring timely access to care during critical situations. The study agrees with Adamu and Oche (2014), who pointed out that patient hospital waiting time is a significant pointer to the quality of services being provided by the clinic and healthcare facilities and further agrees with Siciliani and Hurst (2003), that Waiting time has been closely associated with the inefficient way that healthcare is delivered, delayed patient agony.

The study agrees with Gabrysch et al. (2011), that distance travelled for one to utilize health services is an assumed bit which presents challenges such as cost inconvenience and time, and increasing the geographic distance curtails utilization of both primary and secondary healthcare services, specifically in patients with asthmatic conditions, the death rate experienced is higher. The study findings agree with Buor (2003), who determined that physical access to the healthcare service affects HBC utilization, while Maine's (2006) findings align with this study's findings that physical accessibility or distance directly impacts healthcare service utilization in this regard the HBC.

4.8 Utilization of Home-Based Care

The main objective of the study is to assess the factors influencing the utilization of Home-Based Care in Kisumu County, and the responses to address it are provided in the table below 4.7

Table 4.7

Utilization of Home-Based Care

	Yes		No		Chi-Square	P value
Need for healthcare services.	Fr	%	Fr	%		
There is a need for home-based care services in my community	83	69.2	37	30.8	17.63	.000
A good number of people depend on home-based care services for their health needs.	51	42.5	69	57.5	2.70	.060
Home-based care services are essential to all with chronic illness	109	90.8	11	9.2	80.03	.000
Staffing						
The staff are adequate in number.	58	48.3	62	51.7	.133	.715
Staffs are very friendly.	85	70.8	35	29.2	20.83	.000
Staff are professional in handling patients.	105	87.5	15	12.5	67.50	.000
Quality of care.						
I am satisfied with the home-based health services I receive	103	85.8	17	14.2	61.63	.000
I would refer another patient for homebased care	111	92.5	9	7.5	6.70	.800
I have not suffered any harm since I began homebased care	100	83.3	20	16.7	53.33	.000
Home based care is cheaper than hospital care	96	80.0	24	20.0	43.20	.000
The homebased care caregivers respect my values and opinions	85	70.8	35	29.2	43.20	.000
Care is given without discrimination of type illness, age, gender, ability etc.	96	80.0	24	20.0	43.20	.000
Medication is given without delays	101	84.2	19	15.8	56.03	.000
Caregiver/nurse/doctor is reachable in case of emergencies	103	85.8	17	14.2	61.63	.000
Nursing services are given around the clock in a timely manner.	100	83.3	20	16.7	53.33	.000

Table 4.7 provides a comprehensive overview of the perceptions and satisfaction levels regarding home-based care (HBC) services within a community. Through a structured questionnaire, respondents were asked to express their opinions on various aspects of HBC, staffing, quality of care, and accessibility. On the perceived Need for Home-Based Care Services, most respondents (69.2%) believe there is a need for HBC services in their community, indicating recognition of the importance of this healthcare model in addressing community health needs. Furthermore, 42.5% of respondents feel that a significant number of people depend on HBC services for their health needs, underscoring its role as a crucial healthcare resource. Essentiality of HBC Services for Chronic Illness Management: A striking 90.8% of respondents affirm the essentiality of HBC services for individuals with chronic illnesses, highlighting the critical role HBC plays in managing long-term health conditions within the community. On staffing satisfaction, while opinions are more divided regarding staffing adequacy, with 48.3% agreeing that staff numbers are adequate, a substantial (70.8%) express satisfaction with the friendliness of HBC staff. Additionally, 87.5% acknowledge the professionalism of staff in handling patients, indicating a high level of confidence in the competence and demeanor of caregivers.

The vast number of respondents (85.8%) report satisfaction with the quality of HBC services received. Moreover, an overwhelming (92.5%) expressed a willingness to refer another patient for HBC, highlighting a high level of trust and confidence in the services provided. Despite the inherent challenges of providing healthcare outside traditional hospital settings, a significant majority (83.3%) of respondents indicate that they have not suffered any harm since beginning HBC. Additionally, most respondents (85.8%) report that caregivers or medical professionals are reachable in case of

emergencies, reassuring patients of timely assistance when needed. Respondents largely perceive HBC services as equitable and non-discriminatory, with 80% indicating that care is provided without discrimination based on illness, age, gender, or ability. Furthermore, a similar proportion (80%) report that medication is administered without delays, reflecting efficient service delivery. The majority of the respondents (83.3%) acknowledge that nursing services are provided around the clock in a timely manner, underscoring the accessibility and reliability of HBC services. The study agrees with WHO (2014) which states that the need for health services is determined by behaviors that impact health negatively, such as smoking, lack of exercise or watching one's diet. The study findings align with Thomas-Henkel and Schulman (2017), that individuals with unmet health and societal needs are likely to miss doctors' appointments.

On staffing and HBC utilization, the study findings agree with Meit et al. (2014), who opined that rural setups are insufficient when it comes to speciality physicians, in particular, specialists in mental health problems and providers. The study agrees with Andersen and Newman (2005); Levesque et al. (2013) that access to HBC services was critical in their utilization. **4.9 Binary Logistic Regression Model**

Table 4.8*Predisposing Factors and HBC Utilization*

Predisposing Factors	Indicator	Std.				
		B	Error	Wald	Sig.	Exp(B)
	Intercept	15.923	2514.919	.000	.995	
Age Band	< 20 years	- 15.285	2514.919	.000	.995	2.301E-7
	21-30 years	-1.312	1.216	1.164	.281	.269
	31-40 years	.210	1.510	.019	.889	1.234
	41-50 years	.416	.911	.209	.648	1.516
Marital Status	Never married	14.170	5029.838	.000	.998	14.2547
	Married	.083	.965	.007	.932	1.086
	Separated/Divorced	-1.479	1.346	1.206	.272	.228
Religion	Christian	1.040	1.528	.463	.496	2.830
Affiliation	Muslim	1.023	1.858	.304	.582	2.783
highest education attained	certificate level	- 14.315	2514.919	.000	.995	6.067E-7
	diploma	- 15.177	2514.919	.000	.995	2.564E-7
	degree	- 13.901	2514.919	.000	.996	9.176E-7
	Primary student	- 20.895	.000	.	.	8.422E-10
household income band	20000 to 99,999 Kshs	-.049	.687	.005	.943	.952

In the contemporary healthcare landscape, understanding the factors that predispose individuals to seek healthcare services is paramount for effective healthcare delivery and resource allocation. Utilizing statistical modelling techniques like binary logistic regression can illuminate the relationship between predisposing factors and healthcare

utilization behaviors. The study explored a binary logistic regression model that investigates the association between predisposing factors such as age, marital status, religious affiliation, highest education attained, household income band, and the utilization of healthcare services, specifically Home-Based Care (HBC) utilization.

The model employs a dichotomous outcome variable where HBC utilization is categorized as either present or absent. The independent variables, or predisposing factors, include age band, marital status, religious affiliation, highest education attained, and household income band. The odds of HBC utilization for individuals aged less than 20 years are significantly lower ($p < 0.001$) compared to other age groups. No significant difference in HBC utilization is observed for individuals aged 21-30, 31-40, and 41-50 years compared to the reference group. Never-married individuals exhibit significantly higher odds ($p < 0.001$) of HBC utilization compared to married individuals. Separated/divorced individuals demonstrate lower odds ($p = 0.272$) of HBC utilization compared to the reference group. No significant difference in HBC utilization is observed between Christian and Muslim individuals. Individuals with higher education levels (certificate, diploma, and degree) exhibit significantly lower odds ($p < 0.001$) of HBC utilization compared to primary students. No significant association is found between the household income band and HBC utilization.

The Hosmer-Lemeshow test was used to test the goodness of fit of logistic regression models on Predisposing Factors and HBC utilization. The p-value (0.063) obtained indicated that the logistic regression model fits the data well since it is greater than 0.05.

Table 4.9*Hosmer and Lemeshow Test*

Hosmer and Lemeshow Test		
Chi-Square	df	Sig.
28.158	4	.063

Table 4.10*Enabling Factors and HBC Utilization*

Enabling Factors	B	Std. Error	Wald	Sig.	Exp(B)
	13.439	1.626	68.329	.000	
Income					
receive any social security benefits or disability in the last year	14.312	1760.517	.000	.994	1642930.710
I have a regular source of income.	16.093	1.464	120.784	.000	9755310.598
Home based care is affordable to most of the people in need of it in my community.	.653	.657	.989	.320	1.922
Health Insurance					
I am a member of a health insurance (NHIF and any other)	14.795	2208.542	.000	.995	2662828.444
I comfortably pay for my health insurance premiums	-14.745	2208.542	.000	.995	3.947E-7

The binary logistic regression model aims to predict the likelihood of HBC utilization based on enabling factors. The model employs a dichotomous outcome variable where HBC utilization is categorized as either present or absent. The enabling factors

considered in the model include income status, receipt of social security benefits, availability and affordability of home-based care, and health insurance membership.

Individuals with a regular source of income demonstrate significantly higher odds ($p < 0.001$) of HBC utilization. Receipt of social security benefits or disability in the last year is associated with significantly higher odds ($p < 0.001$) of HBC utilization. The affordability of home-based care to most people in need in the community does not significantly influence HBC utilization ($p = 0.320$). Membership in health insurance schemes, including NHIF and others, is associated with significantly higher odds ($p < 0.001$) of HBC utilization. Comfortably paying for health insurance premiums is associated with significantly lower odds ($p < 0.001$) of HBC utilization. The Hosmer-Lemeshow test was used to assess the goodness of fit of logistic regression models on enabling factors and HBC utilization. The p-value obtained indicated that the logistic regression model fits the data well ($p > 0.05$).

Table 4.11

Hosmer and Lemeshow Test

Hosmer and Lemeshow Test		
Chi-Square	df	Sig.
12.189	8	.183

Table 4.12*Health Behavioral Factors to Utilization of Home-Based Care*

Health behavioral factors	B	Std. Error	Wald	Sig.	Exp(B)
Chronic Disease	.700	1.438	.237	.627	
I have a chronic disease.	.391	.581	.454	.001	1.479
Chronic conditions are better managed under home-based care	.284	.627	.205	.651	1.328
Home-based care is affordable to most people with a chronic disease in my community.	.558	.941	.352	.553	1.748
My healthcare needs are catered for by the home-based care caregivers	.066	.703	.925	.009	1.068
Those with more than one chronic disease/condition need specialized palliative home-based care services.	-.401	.826	.235	.628	.670
Disability					
People with advanced disabilities are managed better under home-based care	.413	.623	.440	.507	1.512
There is stigmatization of the disabled in the utilization of hospital services	1.077	.884	1.487	.023	2.937
Home-based care provides social support for People living with disability	-.450	.797	.319	.573	.638

The binary logistic regression model aims to predict the likelihood of HBC utilization based on health behavioral factors. The model utilizes a dichotomous outcome variable where HBC utilization is categorized as either present or absent. The health behavioral factors under investigation include satisfaction with HBC services, presence of chronic diseases, perceptions of chronic disease management, affordability of HBC, caregiver satisfaction, need for specialized palliative care, disability status, stigmatization of disability, and social support for people living with disabilities.

Satisfaction with the HBC services received is significantly associated with higher odds ($p = 0.009$) of HBC utilization. Individuals with a chronic disease have significantly higher odds ($p = 0.001$) of utilizing HBC services. Perceptions about chronic conditions being better managed under HBC do not significantly influence HBC utilization. The affordability of HBC services for individuals with chronic diseases in the community does not significantly impact HBC utilization. Satisfaction with the caregivers providing HBC services is significantly associated with higher odds ($p = 0.009$) of HBC utilization. The need for specialized palliative HBC services does not significantly influence HBC utilization. The perception that people with advanced disabilities are managed better under HBC does not significantly affect HBC utilization. Stigmatization of the disabled in hospital services is significantly associated with higher odds ($p = 0.023$) of HBC utilization. The perception that HBC provides social support for people living with disabilities does not significantly impact HBC utilization.

The Hosmer-Lemeshow test was used to test the goodness-of-fit of logistic regression models on Health Behavioral Factors and the Utilization of Home-Based Care. The p -value obtained indicated that the logistic regression model fit the data well ($p > 0.05$).

Table 4.13*Hosmer and Lemeshow Test*

Hosmer and Lemeshow Test		
Chi-Square	df	Sig.
8.456	8	.391

Table 4.14*The Environment Factors to Utilization of Home-Based Care*

The environment	B	SE	Wald	Sig.	Exp(B)
Intercept	.939	1.492	396	.529	
Distance					
The home-based care is within reach of many users.	.396	.606	428	.013	1.486
Users can reach home-based care facilities with ease.	-.499	.861	.336	.562	.607
Users living far away from the home care facilities utilize less of the services.	-.840	1.264	.442	.006	.432
Home-based care is accessible to everyone in need of it in my community, no matter the distance.	.085	1.198	.005	.943	1.089
The service provider can easily access my home to provide me with services.	.040	.690	.003	.954	1.041
I can easily get means of transport to a home-based facility	-.425	.724	.344	.057	.654
Waiting Time					
The waiting time to receive service is short.	.806	.625	1.661	.098	2.239
Shorter waiting times encourage the utilization of home-based care services.	.984	.610	2.607	.106	2.676
I receive home based care support as per schedule.	.410	.604	.461	.097	1.507
My doctor/service provider is available around the clock in case of emergencies.	-.091	.664	.019	.891	.913

The binary logistic regression model aims to predict the likelihood of HBC utilization based on environmental factors. The model utilizes a dichotomous outcome variable where HBC utilization is categorized as either present or absent. The environmental factors under investigation include distance to HBC facilities, accessibility of HBC, ease of reaching HBC facilities, availability of means of transport, waiting time for services, adherence to schedules, and availability of healthcare providers during emergencies.

The perception that HBC is within reach of many users is significantly associated with higher odds ($p = 0.013$) of HBC utilization. Users living farther away from HBC facilities utilize less of the services ($p = 0.006$). The perception that HBC is accessible to everyone in need in the community does not significantly influence HBC utilization. Ease of reaching HBC facilities and availability of means of transport to HBC facilities do not significantly affect HBC utilization. Perception of shorter waiting times encouraging HBC utilization approaches significance ($p = 0.106$). The short waiting time to receive service is not significantly associated with HBC utilization.

Receiving HBC support as per schedule is marginally associated with higher odds ($p = 0.097$) of HBC utilization. The availability of doctors/service providers around the clock in case of emergencies does not significantly influence HBC utilization.

The Hosmer-Lemeshow test was used to test the goodness of fit of logistic regression models on environmental factors and Utilization of Home-Based Care. It indicated that the logistic regression model fit the data well ($p > 0.05$).

Table 4.15*Hosmer and Lemeshow Test*

Hosmer and Lemeshow Test		
Chi-Square	df	Sig.

Table 4.16*Inferential Statistics*

		HBC utilization	Predisposi ng Factors	Enabling Factors	Health behavior	Enviro nment al Factor s
HBC utilization	Pearson Correlation					
	Sig. (2-tailed)					
Predisposing Factors	Pearson Correlation	.892*				
	Sig. (2-tailed)	.015				
Enabling Factors	Pearson Correlation	.722*	.100			
	Sig. (2-tailed)	.045	.278			
Health behavior	Pearson Correlation	.637*	-.099	.099		
	Sig. (2-tailed)	.036	.283	.282		
Environmenta l Factors	Pearson Correlation	.441*	.096	.196*	.072	
	Sig. (2-tailed)	.026	.299	.032	.434	

*. Correlation is significant at the 0.05 level (2-tailed).

There is a strong positive correlation (0.892) between HBC utilization and predisposing factors, and this correlation is statistically significant ($p = 0.015$). There is a strong positive correlation (0.722) between HBC utilization and enabling factors, and this correlation is statistically significant ($p = 0.045$). There is a moderate positive correlation (0.637) between HBC utilization and health behavior, and this correlation

is statistically significant ($p = 0.036$). There is a moderate positive correlation (0.441) between HBC utilization and environmental factors, and this correlation is statistically significant ($p = 0.026$). There is a weak positive correlation (0.099) between enabling factors and health behavior, which is not statistically significant ($p = 0.282$). HBC utilization has strong, significant correlations with enabling factors (0.722) and health behavior (0.637). HBC utilization has a moderate, significant correlation with environmental factors (0.441). Enabling factors have a weak but significant correlation with environmental factors (0.196). Other correlations between enabling factors and health behavior (0.099) and between health behavior and environmental factors (0.072) are weak and not statistically significant.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the conclusions based on the findings, which sought to determine the main objective of the study, which was to assess the factors influencing the utilization of Home-Based Care in Kisumu Central Sub County. The chapter also presents the recommendations based on the research objectives.

5.2 Conclusions

This study concludes that predisposing factors influenced and determined the way home based care was utilized for instance males utilized more compared to females at 56.7% as compared to 43.3% respectively. The married also utilized more compared to the rest at 65.8% and religion also influenced utilization with Christians utilizing more as compared to the rest of the groups.

Also, the income level determined utilization of home-based care because it determined those who could be able to afford insurance.

The environment which determined the waiting times and distance influenced utilization with 77.5% reporting the reason for utilization is the short waiting times at home-based care centers.

Finally, 70% of the respondents perceived home based care as affordable for individuals living with chronic disease.

5.3 Recommendations

5.3.1 Predisposing Factors.

Ages and sex seem to be heavy influencers of the utilization of home-based care services. This could inform the government programs in terms of coming up with programs for the age and which are also gender specific.

5.3.2Enabling Factors.

Several demographic and socioeconomic factors exhibit significant associations with the reception of HBC services at the three studied Home-Based Care facilities. Understanding these associations can inform targeted interventions and resource allocation to enhance HBC accessibility and effectiveness for different demographic groups. Further research may delve into the underlying reasons for these associations and explore additional factors influencing HBC reception including income level and health insurance.

5.3.3The Environment.

Perceptions regarding environmental factors such as accessibility, distance, waiting times, and service availability play a significant role in shaping the utilization of HBC services within the community. Understanding these perceptions is essential for healthcare providers and policymakers to tailor service delivery models and address barriers to access, ultimately enhancing the effectiveness and reach of HBC services for all individuals in need. Further research and targeted interventions may be warranted to address specific concerns and optimize the utilization of HBC services in diverse community settings. Patient perceptions of timeliness and availability of services in home-based care settings play a significant role in shaping their overall experience and satisfaction with care. By prioritizing timely service delivery, ensuring clinician and nurse availability, and maintaining effective communication with patients, healthcare providers can further enhance the quality and effectiveness of home-based care services, ultimately improving patient outcomes and well-being.

5.3.4 Health Behaviors

The overall positive perceptions and high levels of satisfaction with home-based care services within the community. These findings underscore the importance of continued investment in and support for HBC as a vital component of healthcare delivery, particularly for individuals with chronic illnesses and those requiring personalized and accessible care within their homes. There is an intricate interplay between income sources, financial support networks, health insurance coverage, and perceptions of affordability in accessing home-based care services. Addressing disparities in income and insurance coverage is essential for ensuring equitable access to HBC services and improving health outcomes for all members of the community.

The diverse perceptions regarding the utilization of HBC services for chronic disease management and disability support within the community. Understanding these perceptions is crucial for tailoring HBC programs to meet the unique needs and preferences of individuals with chronic conditions and disabilities, ultimately improving health outcomes and enhancing the quality of life for all members of the community. Further research and targeted interventions may be warranted to address perceived barriers and enhance access to HBC services for vulnerable populations.

5.4 Recommendations for Further Study

The study sought factors influencing the utilization of Home-Based Care among the terminally ill in Kisumu Central Sub County. It collected primary data in three HBCs with a total sample size of 120. Future studies undertaking the same area should use a bigger sample in other countries to examine whether the same results could be achieved.

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APPENDICES

Appendix I: Informed Consent Form

Kenya Methodist University,

P.O Box 267-60200,

MERU, Kenya.

SUBJECT: INFORMED CONSENT

Dear Respondent, my name is Erick Enock Ratori and I am a Master of Science (MSc) student from Kenya Methodist University. I am conducting a study entitled: Factors influencing the utilization of home-based care: a case of Kisumu County. This research forms the basis for strengthening Health Systems of Home-based care in Kenya, which has been neglected, unlike other sectors. As a result, Communities and individuals will benefit from improved quality of healthcare services. It generates new knowledge and informs decision-makers on decisions that are evidence-based to improve the facility's service delivery and utmost service uptake.

Procedure to be followed

Participation in this study will require that I ask you some questions in a questionnaire, access all the home-based care facilities, and observe and record information in an Observation checklist. You will not be penalized or victimized for not joining the study, and your decision will not be used against you or affect you at your place of employment.

Please remember that participation in the study is voluntary.

Benefits: If you participate in this study, you will help us strengthen the health system of HBC in Kenya. As a result, countries, communities, and individuals will benefit from improved quality healthcare services. This field attachment is critical to strengthening the health systems as it will generate new knowledge in this area that will inform decision-makers to make research-based decisions.

Rewards: There is no reward for anyone who chooses to participate in the study.

Confidentiality: The interviews will be conducted in a private setting within the hospital. Your name will not be recorded on the questionnaire, which will be kept in a safe place at the University Contact Information.

If you have any questions, you may contact the following supervisors: Mr. Musa Oluoch and Dr. Muthoni Mwangi.

Department of Health Systems Management,

Kenya Methodist University,

Nairobi Campus.

Participant's Statement

The above statement 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 my records will be kept private and that I can leave the study at any time. I understand that I will not be victimized at my place of work whether I decide to leave the study or not and my decision will not affect the way I am treated at my place.

Date..... Signature.....

Investigator's Statement

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

Name of Interviewer: Erick Enock Ratori.

Interviewer's Signature.....Date.....

Appendix II: HBC Questionnaire

QUESTIONNAIRE ON FACTORS INFLUENCING THE UTILIZATION OF HOME-BASED CARE IN KISUMU CENTRAL SUB COUNTY.

SECTION A: Demographic Characteristics

1. Please indicate your gender.

☐ Male

☐ Female

2. I receive my home-based care.

☐ At home

☐ In a facility

3. Please indicate your age

4. What is your present marital status?

☐ Single

☐ Never married

☐ Married

☐ Separated/Divorced

☐ Widowed

5. Living arrangements among unmarried.

☐ Alone

☐ With a child

☐ With another family member

6. Which religious grouping do you belong to?

☐ Christian

- ☐ Muslim
- ☐ Hindu
- ☐ Others(specify).....

7. What is your occupation?

- ☐ Salaried employee
- ☐ Casual labourer
- ☐ Self-employed
- ☐ Student

8. Your education level.

- ☐ Certificate
- ☐ Diploma
- ☐ Degree
- ☐ Masters
- ☐ PhD
- ☐ Any other(specify).....

9. Which of these describes your personal income?

- ☐ 1-9,999 Kshs
- ☐ 9,999-99,999 Kshs
- ☐ Above 100,000 Kshs

10. What is your household income?

- ☐ Less than 10,000 Kshs
- ☐ 10000 to 19,999 Kshs
- ☐ 20000 to 99,999 Kshs
- ☐ Above 100,000 Kshs

11. Do you have income from any sources than salary?

☐ Yes

☐ No

12. Did you receive any social security benefits or disability in the last year?

☐ Yes

☐ No

13. Total number of family members

☐ 1-3

☐ 4-6

☐ 7-10

☐ More than 10

PERCEPTION ON ENABLING FACTORS TO UTILIZATION OF HOME-BASED CARE

14. The following questions relate to your perception of enabling factors to the utilization of home-based care; indicate your agreement level to the statements below;

Income		Yes	No
i.	I have a regular source of income.	☐	☐
ii.	Home based care is affordable to most of the people in need of it in my community.	☐	☐
iii.	My income supports the home-based care I receive	☐	☐
iv.	I receive financial support from family and friends	☐	☐

	for home-based care		
v.	The rich utilize more home-based healthcare	☐	☐
Health Insurance			
vi.	I am a member of health insurance (NHIF and any other)	☐	☐
vii.	My health Insurance supports the home-based care I receive	☐	☐
viii.	I comfortably pay for my health insurance premiums	☐	☐
ix.	Having insurance plays a positive role in receiving home care health services	☐	☐
x.	The health insurance pays for all healthcare needs	☐	☐

PERCEPTION OF HEALTH BEHAVIORAL FACTORS AND UTILIZATION OF HOME-BASED CARE

15. The following questions relate to your perception of health behavioural factors and utilization of home-based care; indicate your agreement level to the statements below;

Chronic disease		Yes	No
i.	I have a chronic disease.	☐	☐
ii.	Chronic conditions are better managed under home-based care	☐	☐
iii.	Home-based care is affordable to most people with a chronic	☐	☐

	disease in my community.		
iv.	My healthcare needs are catered for by home-based care caregivers	☐	☐
v.	Those with more than one chronic disease/condition need specialized palliative home-based care services.	☐	☐
Disability			
vi.	People with advanced disabilities are managed better under home-based care	☐	☐
vii.	There is stigmatization of the disabled in the utilization of hospital services	☐	☐
viii.	Home-based care provides social support for People living with disability	☐	☐

**PERCEPTION OF THE ENVIRONMENTAL FACTORS AND UTILIZATION
OF HOME-BASED CARE**

16. The following questions relate to your perception of the environmental factors and utilization of home-based care; indicate your agreement level to the statements below;

Distance.		Yes	No
i.	The home-based care is within reach to many users.	☐	☐
ii.	Users can reach home-based care facilities with ease.	☐	☐
iii.	Users living far away from the home care facilities utilize less of the services.	☐	☐
iv.	Home-based care is accessible to everyone in need of it in my community, no matter the distance.	☐	☐
v.	The service provider can easily access my home to provide me with services.	☐	☐
vi.	I can easily get means of transport to a home-based facility	☐	☐
Waiting Time			
vii.	The waiting time to receive service is short.	☐	☐
viii.	Shorter waiting times encourage the utilization of home-based care services.	☐	☐
ix.	I receive home based care support as per schedule.	☐	☐
x.	My doctor/service provider is available around the clock in case of emergencies.	☐	☐

SECTION B.

PERCEPTION ON UTILIZATION OF HOME-BASED CARE

16. The following questions relate to your perception of the utilization of home-based care; indicate your agreement level to the statements below;

Need for healthcare services.	Yes	No
i. There is a need for home-based care services in my community	☐	☐
ii. A good number of people depend on home-based care services for their health needs.	☐	☐
iii. Home-based care services are essential to all with chronic illness	☐	☐
Staffing		
iv. The staff are adequate in number.	☐	☐
v. Staffs are very friendly.	☐	☐
vi. Staff are professional in handling patients.	☐	☐
Quality of care.		
vii. I am satisfied with the home-based health services I receive	☐	☐
viii. I would refer another patient for home-based care	☐	☐
ix. I have not suffered any harm since I began home-based care	☐	☐
x. Home-based care is cheaper than hospital care	☐	☐

i.	The home-based care caregivers respect my values and opinions		
ii.	Care is given without discrimination of type illness, age, gender, ability etc		
iii.	Medication is given without delays		
iv.	Caregiver/nurse/doctor is reachable in case of emergencies		
v.	Nursing services are given around the clock in a timely manner.		

Thank you

Appendix III: Key Informant Interview Guide.

- (1) What is the role of insurance in the utilization of Home-Based Care?
- (2) What is the role of religion in the utilization of Home-Based care?
- (3) What is the role of disability in the utilization of Home-Based Care?
- (4) What is the role of distance in the utilization of Home-Based Care?

Appendix IV: Serc



KENYA METHODIST UNIVERSITY

P. O. BOX 267 MERU - 60200, KENYA
TEL: 254-064-30301/31229/30367/31171

FAX: 254-64-30162
EMAIL: INFO@KEMU.AC.KE

June 20, 2022

KeMU/SERC/HSM/13/ 2022

ERIC ENOCK RATORI
HSM-3-0194-1/2019

Dear Eric,

SUBJECT: FACTORS INFLUENCING THE UTILIZATION OF HOME-BASED CARE IN KISUMU CENTRAL SUB COUNTY

This is to inform you that Kenya Methodist University Scientific Ethics and Review Committee has reviewed and approved your research proposal. Your application approval number is KeMU/SERC/HSM/13/2022. The approval period is 14th June, 2022 – 14th June, 2023.

This approval is subject to compliance with the following requirements:-

- I. Only approved documents including (informed consents, study instruments, MTA) will be used.
- II. All changes including (amendments, deviations, and violations) are submitted for review and approval by Kenya Methodist University Scientific Ethics and Review committee.
- III. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to KeMU SERC within 72 hours of notification.

- IV. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to KeMU SERC within 72 hours.
- V. Clearance for export of biological specimens must be obtained from relevant institutions.
- VI. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- VII. Submission of an executive summary report within 90 days upon completion of the study to KeMU SERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) <https://oris.nacosti.go.ke> and also obtain other clearances needed.





KENYA METHODIST UNIVERSITY

P. O. Box 267 Meru - 60200, Kenya
Tel: 254-064-30301/31229/30367/31171

Fax: 254-64-30162
Email: deanrd@kemu.ac.ke

DIRECTORATE OF POSTGRADUATE STUDIES

June 20, 2022

Commission Secretary,
National Commission for Science, Technology and Innovations,
P.O. Box 30623-00100,
NAIROBI.

Dear Sir/Madam,

RE: ERIC ENOCK RATORI – (REG. NO. HSM-3-0194-1/2019)

This is to confirm that the above named is a bona fide student of Kenya Methodist University, in the School of Medicine and Health Sciences, Department of Health System Management undertaking a Masters' Degree in Health System Management. He is conducting research on: "Factors Influencing the Utilization of Home-Based Care in Kisumu Central Sub County".

We confirm that his research proposal has been presented and approved by the University.

In this regard, we are requesting your office to issue a research license to enable him collect data.

Any assistance accorded to him will be appreciated.

Thank you.



Dr. John Muchiri, Ph.D.
Director, Postgraduate Studies

Cc: Dean SMHS
CoD, HSM
Postgraduate Co-ordinator-HSM
Supervisors

Appendix V: NACOSTI License

 REPUBLIC OF KENYA	
Ref No: 997256	Date of Issue: 13/July/2022
RESEARCH LICENSE	
	
This is to Certify that Mr.. ERICK ENOCK RATORI of Kenya Methodist University, has been licensed to conduct research in Kisumu on the topic: FACTORS INFLUENCING THE UTILIZATION OF HOME BASED CARE IN KISUMU CENTRAL SUB COUNTY for the period ending : 13/July/2023.	
License No: NACOSTI/P/22/18705	
997256	
Applicant Identification Number	Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Verification QR Code	
	
NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.	

Appendix VI: Kisumu County Approval

REPUBLIC OF KENYA
COUNTY GOVERNMENT OF KISUMU

Telegrams: "PRO (MED)"
Tel: 254-051-2020105
Fax: 254-051-2020176
E-mail: kisumucdnc@gmail.com



Director of Medical Services,
Public Health and Sanitation
P.O. Box 771 - 40100,
Kisumu.

**DEPARTMENT OF MEDICAL SERVICES, PUBLIC HEALTH
& SANITATION**

Our Ref: GN 133 VOL. XIII/423) Date: 17th May, 2023

To:

SCMOH - Kisumu Central

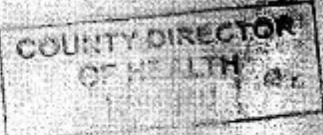
RE: APPROVAL TO CONDUCT RESEARCH IN KISUMU CENTRAL SUB COUNTY

The Department has reviewed and approved this research titled '*Factors Influencing the Utilization of Home-based Care in Kisumu Central*'.

The purpose of this letter therefore, is to request you to kindly allow Eric Enock Ratori who is the Principal Investigator to conduct the research.

Regards,


Lilyana Dayo
Ag. Director - Public Health & Sanitation
Kisumu County



CC Eric Enock Ratori

From the office of Director for Public Health & Sanitation