

**CAREGIVERS' BELIEFS ON HERBAL MEDICINE USE AMONG CHILDREN  
UNDER THE AGE OF FIVE YEARS IN SILIBWET SUB-LOCATION,  
BOMET COUNTY**

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**A Thesis Submitted to the Institute of Postgraduate Studies of Kabarak University  
in Partial Fulfillment of the Requirements for the Award of the Master of  
Medicine in Family Medicine**

**KABARAK UNIVERSITY**

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The research thesis entitled **“Caregivers’ Beliefs on Herbal Medicine Use among Children under the Age of Five Years in Silibwet Sub-Location, Bomet County”** and written by Fridah Jepchirchir Kiptui is presented to the Institute of Postgraduate Studies of Kabarak University. We have reviewed the research thesis and recommend it be accepted in partial fulfillment of the requirement for award of the degree of the Master of Medicine in Family Medicine.

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## **DEDICATION**

This work is dedicated to the people of Silibwet Sub-location.

## ABSTRACT

The Declarations of Alma Ata and Astana recognized traditional medicine as part of primary health care. About 80% of people in the world today depend on traditional medicine to meet their health needs, because they are considered easily accessible, safe, cost-effective, and culturally acceptable. For this reason, the World Health Organization has devised a strategy to help member states formulate policies for regulation of herbal medicine production, use and practice. Many countries, in response to the WHO strategy, have formulated policies, research centers, and training institutions for herbal practitioners. In Kenya, the Ministry of Health has developed policies for regulation and registration of herbal practitioners. However, the policies are yet to be implemented. As such, the practice of traditional medicine in Kenya is unregulated and the products sold could potentially pose harm to the population. Children are at the highest risk of harm because of their developing body systems which are susceptible to toxicity. Since literature has shown that beliefs influence behavior, this study aims to explore caregivers' beliefs on herbal medicine use among children under the age of five in Silibwet Sub-Location, Bomet County. This was a qualitative phenomenological study that was done in Silibwet sub location. Purposive sampling was used to select caregivers 10 parents and guardians for in depth interviews and 15 community health workers for the focused group discussions. Snowball sampling was used to select 6 key informants. A researcher-administered semi-structured interview guide was used to collect data. Thematic data analysis was used. The study found that over 90% of caregivers used herbal medicines on their children for protection from evil eyes and for promotion of growth. Others used them for treatment of cultural, common and chronic illnesses and for cleansing. They considered herbal medicine safe, cheap and easily available

**Keywords:** *Beliefs, Caregivers, Children, Herbal Medicine*

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## **ABBREVIATIONS AND ACRONYMS**

CAM	Complementary and Alternative Medicine
CHS	Community Health Strategy
CHW	Community Health Worker
CO	Clinical Officer
CSO	Civil Service Organization
DMOH	District Medical Officer of Health
FGD	Focused Group Discussion
HM	Herbal Medicines
MINISAP	Ministerio de Salud Publica
MOH	Ministry of Health of Kenya
NACOSTI	National Commission for Science Technology and Innovation
PHC	Primary Health Care
PHO	Public Health Officer
TB	Tuberculosis
T&CM	Traditional and Complementary Medicine
TM	Traditional Medicine
UNDP	United Nations Development Program
USA	United States of America
WHO	World Health Organization

## OPERATIONAL DEFINITION OF TERMS

**Beliefs** – Convictions that people hold to be true.

**Caregivers** – Persons influencing or involved in direct decision-making for children when they need medical attention: parents, grandparents, other guardians, prescribers, opinion leaders and those who administer medicines to the children.

**Community** – Social unit sharing behaviors, values or customs.

**Complementary and Alternative Medicine** -set of health care practices that are not part of that country's own tradition or conventional medicine and are not fully integrated into the dominant health-care system.

**Conventional Medicine** – A system in which health care professionals treat symptoms and diseases using modern drugs, radiation or surgery.

**Frontline Health Workers** – Health workers providing services directly to communities, especially in rural areas. They include, Community Health Workers, midwives, local pharmacists, nurses and doctors.

**Herb** -A plant or plant part valued for its medicinal qualities

**Herbal Medicine** –Herbs and raw herbal materials, that contain, as active ingredients, parts of plants, or other plant materials, or combinations.

**Opinion Leaders** – People working or living in a community that have gained trust of the people and can influence their choices and practices.

**Traditional Medicine** - Practices and beliefs indigenous to a community, used in health promotion, prevention and treatment of diseases.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Introduction**

This chapter covers background of the study, problem statement, and justification, it also covers the purpose of the study, study objectives and limitations as well as the significance of the study.

#### **1.2 Background of the Study**

Traditional medicine is an umbrella word for the practices and beliefs, indigenous to a community, used in health promotion, prevention and treatment of various common diseases, which have been transmitted from one generation to the next by apprenticeship (WHO, 2019). Herbal medicines are the core of traditional medicine, as they are native to a particular country or culture (WHO, 2019). Herbal medicines include herbs, minerals, or animal products used for their therapeutic benefit (WHO, 2019). An herb is a plant or a portion of a plant that is used because of its medicinal, aromatic or religious properties. Parts that can be used include the seed, bark, root, stem, leaves or flowers. They may be ingested raw, infused in tea or water, inhaled, or applied topically (Woolf, 2003). About 40% of the pharmaceutical products on the market today e.g. quinine, salicylates, artemisinin, the contraceptive pill, and digitalis have been extracted from plants (Mwangi et al., 2005; WHO, 2022). This demonstrates that many plants have intrinsic physiologic activity and may be of true therapeutic benefit if formulated appropriately (Woolf, 2003; WHO, 2022).

The World Health Organization (WHO) issued a statement in March 2022 during the signing of an agreement to establish the world traditional medicine center, that approximately 80% of the world's population utilize traditional medicine (WHO, 2022).

About 88% of the WHO member states acknowledged the practice of traditional medicine and stated that it was particularly practiced at the primary health care level (WHO, 2019). Some of the reasons listed for herbal medicine use were that it is affordable, accessible and culturally acceptable (WHO, 2013). As described in the Declaration of Alma Ata of 1978, primary health care (PHC) is the essential health care evolving from the people's socio-cultural beliefs and cemented by scientifically sound methods provided to all people in their context (WHO, 1978). Given that PHC is the initial point of contact of the national health system with communities and individuals, the Declaration of Astana urged partisan nations to invest in PHC in an effort to ensure health for all that is accessible, affordable and sustainable. They noted that such an investment is especially important in developing countries, to reduce healthcare inequalities (WHO, 2018). In defining the primary health care workforce, The Declaration of Alma Ata included traditional practitioners alongside conventional practitioners and the Declaration of Astana recommended integration of traditional medicine into conventional medicine where applicable. This means that the role of traditional medicine is key today.

With the support of the WHO, many countries are embracing and promoting certified education in traditional medicine. By 2013, about 30% of WHO member states were providing training on herbal medicines at institutions of higher learning (WHO, 2013). In Europe, North America, and China, most traditional medicine practitioners are trained at a tertiary level and are required to obtain a license to permit practice (WHO, 2013). Research institutions for herbal medicines have also been established. In China, for example, approximately sixteen national traditional Chinese medicine research institutions were running (WHO, 2019). In Africa, South Africa, The Democratic Republic of Congo, Tanzania, among others, have also introduced herbal medicine



training at institutions of higher learning. Research institutions have been established in a number of these African countries, including Kenya (WHO, 2013). In other developing countries, including Kenya, knowledge about herbal medicines is still passed down orally, which makes it difficult to identify truly-qualified herbal medicine practitioners (WHO, 2013).

China has made great strides in incorporating traditional medicine into the mainstream healthcare medium. By 2013, up to 90% of the health facilities had a traditional medicine department and both government and private insurance companies covered these services (WHO, 2013). In Europe, by 2013, more than 100 million Europeans were using traditional medicines with 20% of these being regular users (WHO, 2013). In Cuba, 80-99% of the population were using herbal medicines, with the herbal industry being regulated within the Ministerio de Salud Publica (MINISAP). Herbal medicines in Cuba are prescribed by specialists and technicians who have received training on the same at a tertiary level (WHO, 2019).

In a systematic review of herbal medicine use in Sub-Saharan Africa, an average of 58% of the population used herbal medicines. The prevalence was even higher, 94%, in a population study in Nigeria (James et al., 2018). In Kenya, more than 70% of the population depend on herbal medicines to meet their health care needs because of the shortage of qualified health workers (Okumu et al., 2017).

Given the widespread use of herbal medicine by member states, WHO recommended that members develop a national policy to regulate the use and distribution of herbal medications, as well as create measures for the safety monitoring (WHO, 2019). Since then, the uptake of the regulation policy by member states has steadily been on the rise, especially between 1999 and 2018. By 2019, more than 50% of the member states had

policies on traditional and complementary medicine (WHO, 2019). The Ministry of Health (MOH) of Kenya recognizes traditional medicine. It even stipulated in the Health Act of 2017 that the MOH will formulate policies to govern traditional medicine practice, and that implementation of the policies will be done at the county level. It further stated that a regulatory body will be formed which will maintain a register of all the herbal and traditional medicine practitioners, both at the national and county levels (The Health (Kenya) Act, 2017). The Pharmacy and Poisons Act, PA of 2012, also specifies that no manufacturing or advertising of any unlicensed products should be done and that every product on the market should have a label showing the active ingredients and their quantities (Pharmacy and Poisons (Kenya) Act, 2012). The challenge however lies on the implementation, as there is no clear regulatory body (Okumu et al., 2017). Thus, many herbal practitioners are operating without licenses and selling unlicensed products which may potentially be harmful (Chebii et al., 2020).

The effectiveness of herbal medicine is a subject of ongoing research and debate, with a growing body of evidence suggesting that certain herbal remedies can offer therapeutic benefits, including in pediatric care. However, it is important to acknowledge that the effectiveness of herbal medicine can vary widely depending on several factors. The composition of herbal remedies can vary based on factors like plant species, growing conditions, and harvesting methods. This variability can influence the effectiveness of herbal treatments (Nwaiwu & Oyelade, 2016). Herbs like chamomile, peppermint, senna, valerian, and saffron have been used to treat conditions like infantile colic, chronic constipation, and in prevention of cancers in children (Lucas, 2010). Further, ginger and chamomile have shown effectiveness in relieving digestive issues in children. In another review, herbs in children have been used in chronic conditions like rheumatoid arthritis, cystic fibrosis and asthma (Woolf, 2003). In Sub-Saharan Africa,

about 61% of adults with non-communicable diseases used herbal medicines for treatment (James et al., 2018).

Despite their benefits, prolonged exposure to some herbs like *Echinacea* spp. can lead to liver fibrosis in children (Lucas, 2010). Herbs from *Aconitum* species have been shown to be toxic to the heart, inducing dangerous tachyarrhythmias that could lead to death. *Ephedra Sinica*, a common Chinese herb used for pulmonary illnesses, has been associated with liver toxicity and temporal blindness (Ekor, 2014). In a study of 306 adults admitted to a tertiary facility in Kenya, one of the factors associated with chronic kidney disease was herbal medicine use (Mwenda et al., 2019). At the cellular level, the pharmacokinetics and pharmacodynamics of drugs differ in children compared to adults. Children are able to detoxify medications faster because of their larger liver, but they have immature immune and central nervous systems which may be more susceptible to toxicity (Woolf, 2003). Given that these herbal preparations vary regionally, little is known about the quantities of the active ingredient in each preparation and may therefore be harmful, especially to children (Woolf, 2003).

In a review of studies done in Sub-Saharan Africa, patients believed that herbal practitioners offered holistic care as opposed to their conventional medicine counterparts who only offered curative treatment (James et al., 2018). A study of beliefs on traditional medicine of caregivers of young children in Western Kenya showed that they believed some illnesses like measles should be treated by herbal medicines while others like malaria by conventional medicines. This is because they attributed the cause of illnesses other than malaria to evil spirits, mistakes made by parents, or the evil eye (Ngere et al., 2022).

Literature has shown that the world is moving toward integrating alternative medicine into the conventional medicine in order to meet the health needs for all in their context. This has been emphasized in the WHO traditional medicine strategy:2014-2023, whose objective is to advance the goal of universal healthcare coverage by integrating traditional and complementary medical services within the contemporary healthcare system (WHO, 2013). The strategy aims to do so by promoting safe and effective use of herbal medicines through regulation of herbal practitioners and products (WHO, 2013). Kenya is still a step behind as many clear policies on herbal medicine trade and a regulatory body are yet to be implemented (Okumu et al., 2017). Unlike their counterparts in countries like France and Germany, doctors in Kenya are not given training in herbal medicines and are therefore unable to prescribe those (Mwangi et al., 2005).

Despite the benefits seen with some herbal preparations, many herbal medicines sold in the Kenyan market today have not been studied, and their safety still remains uncertain. This is especially true in children, due to their susceptibility to toxicity. Some unpublished quantitative studies in Kenya have described the frequency of herbal medicine utilization among children in the Eastern Region of Kenya and factors promoting its use (Kenyatta University, 2016). Kenya has more than 42 tribes, each with its own distinct socio-cultural beliefs and their own variety of herbal medicines. There is a dearth of studies on the common herbs used, the prevalence of use, or even the beliefs and practices of people concerning herbal medicine use among children in Kenya and more so, in Bomet County. This study aimed at engaging the people of Silibwet Sub-Location as one of the steps in understanding this community's beliefs on herbal medicine use among children under the age of five years.

### **1.3 Problem Statement**

Traditional medicine is currently practiced widely in both developing and developed countries. More than 50% of WHO member states have developed regulation policies to ensure safety of these medications (WHO, 2019). In Kenya, 70% of people depend on herbal medicines and practitioners to meet their health needs (Okumu et al., 2017). This is because of the scarcity of qualified health care workers, long distances to health care facilities, and high cost of medical care. There are also widespread cultural attitudes regarding safety and effectiveness of herbal remedies. Although research has demonstrated therapeutic benefits in some herbal medicines, the quantities of the active ingredients, potential drug interactions, and toxicities remain largely unknown (Woolf, 2003). Poor regulation of traditional medicine increases the likelihood of errors during harvesting, preparation or even labelling of the drugs and this misidentification could have deleterious effects on people. The many and varying plants developed by Kenya's culturally and ethnically diverse population makes studying each of these drugs very expensive because they are numerous and vary across regions (Okumu et al., 2017).

Children, in particular, are at a higher risk of these toxicities due to their developing systems and organs (Woolf, 2003). This is especially so, because most herbal preparations are mixed and some are taken concurrently with conventional medicines, despite their unknown interactions (Akinlua et al., 2018). Herbal medicine practice has also affected adherence to treatments like tuberculosis (TB), as patients have defaulted treatment to use herbal medicines, because they consider them to have less side effects. In a survey of children and adults who defaulted treatment for TB in Nairobi Kenya, users of herbal medicines were five times more likely to default TB medications compared to non-users (Muture et al., 2011).

Policies to regulate trade and practice of herbal medicine in Kenya are yet to be implemented (Okumu et al., 2017).As such, there continues to be freelance trade of herbal medication whether fit or harmful and infiltration of the industry by unscrupulous tradesmen intending to make money without considering the safety of the citizens. In the meantime, however, solutions have to be found to keep the communities safe. According to the Declaration of Alma Ata of 1978, policy-making begins with public participation by the community members themselves. Intervening at this level may influence or hasten the process of having clear regulation on herbal medicine use and trade. Beliefs contributing to use of herbal medicine can best be described by the community members themselves. This study therefore aims to explore such beliefs, especially concerning their use in children, to better document and understand the reasons for their choicest use these medicines.

#### **1.4 Justification of the Study**

One of the ways that the United Nations' Sustainable Development Goal 3 aims to "secure well-being and foster good health for everyone across all age groups" by 2030 is by ensuring safe and effective medicines for all(UNDP). The proposed ways to achieve this objective is to strengthen health systems, particularly at the primary care level. This is influenced largely by a people's belief system and culture (Vaughn et al., 2009). Some of the challenges listed by WHO member states for excluding herbal medicines in modern health care are: lack of research data on herbal medicines, minimal financial support from the government for research, and lack of methods for overseeing safety of herbal medicines (WHO, 2013).

According to World vision (2015), 75% of the population in Kenya live in the rural areas with some of these areas being extremely remote. This means that most health

needs will be addressed at the community level, either by traditional practitioners or health centers if available. As earlier stated, people tend to practice what they have been taught but also what they believe (Vaughn et al., 2009). Understanding a community's cultural beliefs about herbal medicines will help shed light on why they use herbal medicines, what they treat and could help develop strategies to ensure safe use. This will be in line with the WHO traditional medicine strategy of 2014-2023, which aims to build the research base on herbal medicines in order to promote safe use, especially in Kenya, where there is a dearth of such studies (WHO, 2013).

A qualitative approach is best suited to carry out this research in that it seeks to understand phenomena in peoples' own context. This includes culture, perceptions, and different views, and can lead to formation of theories that can later form a basis for quantitative research (Daniel, 2016). Use of semi-structured and open-ended survey questions to gather qualitative data allowed the researcher to gather diverse responses, enriching the data.

## **1.5 Purpose of Study**

The aim of this study was to explore the beliefs of the caregivers on herbal medicine use among children under the age of five years in Silibwet Sub-Location, in Bomet County, Kenya.

### **1.5.1 Specific Objectives of the Study**

- i To explore the beliefs of the caregivers on herbal medicine use among children under the age of five years in Silibwet Sub-Location Bomet County, Kenya.
- ii To describe the self-reported outcomes of herbal medicines used by caregivers among children under the age of five years in Silibwet Sub-Location, Bomet County, Kenya.

## **1.6 Significance of the Study**

This study will develop understanding of this particular rural community and their beliefs regarding herbal medication. Since beliefs have been shown to influence behavior and choices, knowledge about beliefs of this community concerning herbal medicines could inform future interventions to educate.

The Health facilities in Bomet County will also benefit from this information, as local healthcare workers will be able to access information about what medicines children are being given, and what influences the choice of caregivers. This will help inform the patient education given by the healthcare workers to patients when they bring their children for treatment.

The MOH may use this information to develop public health measures to promote safe use of herbs and intervene where there are harmful beliefs through education. By extension, The Bomet County Department of Medical Services and Public Health can share this information with the MOH to build up the research base and influence policy at that level.

## **1.6 Limitations of the Study**

Participants' knowledge of the principal researcher's medical background may have made them not give their true views/perceptions regarding herbal medications. This was mitigated by using a trained research assistant during data collection and participants were guaranteed that the data gathered was not going to be used against them in any way and will remain anonymous.

Purposefully including mothers, frontline health care workers and local opinion leaders only may have limited the possibility of getting the whole community's perspective.



This being a qualitative study, the sample size was limited and may therefore not be representative. This can be mitigated by in future conducting a larger mixed methods study that will be representative of the whole population.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter contains a review of the literature concerning beliefs on herbal medicine use in children. The latter part of it will include the theoretical framework

#### **2.2 Literature Review**

##### **2.2.1 General Literature Review on Herbal Medicine**

Health policy at the national level begins with public participation at the grassroots level and is influenced by a people's socio-cultural, economic, and political status and views then cemented by scientifically sound methods. As a way of recognizing people's beliefs and values, The Declaration of Alma Ata described traditional practitioners as a component of the primary health care team (WHO, 1978). This was also to aid in promoting accessibility of health care services as the then doctor patient ratios, especially in developing countries did not permit all individuals to see a qualified health care worker (WHO, 2018). For this reason, the WHO has continued to encourage its member states to develop policies that will promote safe trade and use of herbal medications. Since then, the use and practice of complementary medicine has grown tremendously with over 58% of WHO member states having a policy on complementary medicine by 2012. By 2019, about 30% of the states had introduced training on complementary medicines at institutions of higher learning and countries like China and Cuba had fully integrated complementary medicine into the national health system (WHO, 2019).

Given the global situation of herbal medicine, international collaboration is vital. Sharing best practices, research findings, and safety standards can enhance the quality

and safety of herbal remedies for children worldwide (Mildred 2015). Continuous monitoring and surveillance of the herbal medicine markets is essential. This includes assessing the safety and quality of products available both in physical stores and online marketplaces.

### **2.2.2 Historical Context of Herbal Medicine**

The origin of herbal medicine is a rich tapestry woven throughout centuries, reflecting the deep-rooted relationship between humanity and the healing power of nature (WHO, 2019). Dating back thousands of years, herbal medicine has played a pivotal role in treating various ailments and maintaining well-being, especially among children. Ancient civilizations, such as those in Mesopotamia, Egypt, China, and India, documented the use of herbs and plants for medicinal purposes (Sundler et al., 2019). Hieroglyphs on Egyptian papyri reveal a profound understanding of herbal remedies, showcasing treatments for conditions ranging from digestive disorders to skin ailments. In China, the *Shen Nong Ben Cao Jing*, a seminal text on the use of herbal medicine traces its origin to the Han Dynasty (206 BCE – 220 CE), emphasizing the importance of herbs in maintaining health.

Similarly, the Ayurvedic tradition in India has relied on herbs for thousands of years, with ancient texts like the *Charaka Samhita* and *Sushruta Samhita* detailing the use of plants and herbs for pediatric healthcare (John et al., 2015). Herbs such as turmeric, neem, and ginger have been integral to Ayurvedic remedies for children's health. In Europe, herbal medicine thrived during the middle ages, with monasteries serving as centers of herbal knowledge. Herbalists like Hildegard of Bingen, a 12<sup>th</sup>-century Benedictine abbess, made significant contributions to herbal medicine, advocating for the use of herbs to treat various childhood ailments.

During the Age of Exploration, the exchange of botanical knowledge between the Old World and the New World led to the discovery of numerous medicinal plants. This global exchange introduced herbs like quinine and coca, which had profound effects on pediatric healthcare, as quinine became a vital treatment for malaria. In more recent history, indigenous cultures worldwide have preserved their traditional herbal remedies, passing down knowledge through generations (Sundler et al., 2019). These practices often involve the use of specific herbs to alleviate common childhood conditions, such as colic, fever, and skin irritations.

### **2.2.3 Current Trends in Herbal Medicine Use**

Current trends in herbal medicine use reflect a resurgence of interest in natural remedies and a growing awareness of holistic approaches to healthcare. Traditional medicine often takes a holistic approach to health, considering the whole person rather than just symptoms. This approach can contribute to overall well-being, even if direct, immediate effects are not always apparent. In recent years, herbal medicine has gained popularity as people seek alternatives to conventional pharmaceuticals, particularly for pediatric care. There is a heightened awareness among parents and caregivers regarding the potential benefits of herbal medicine for children's health. Access to information through the internet and social media has played a significant role in educating the public about herbal remedies (Henninck & Kaiser, 2022). Many individuals are turning to herbal medicine as an alternative or complementary approach to conventional treatments (Sundler et al., 2019). They perceive herbal remedies as safer and having fewer side effects, especially for minor childhood ailments like colds, coughs, and digestive system issues. The market for herbal supplements has seen substantial growth. Parents are increasingly incorporating herbal supplements into their children's daily routines,

believing they can support overall health and well-being. Popular supplements include elderberry for immune support and probiotics for digestive health. Herbal teas and tinctures designed for children have become more widely available (James et al., 2018). These products are formulated with baby-friendly flavors and are promoted as natural solutions for various health concerns.

Some healthcare providers are open to integrating herbal medicine into their practices, collaborating with herbalists or naturopathic doctors to offer a more comprehensive approach to pediatric care. The diverse cultural backgrounds of populations have led to the incorporation of traditional herbal practices into children's healthcare (Sundler et al., 2019). Families from cultures with deep herbal traditions often pass down knowledge and practices for generations. As herbal medicine gains popularity, there is a growing emphasis on product quality and safety. Consumers are increasingly looking for products that are backed by scientific research and manufactured by reputable companies. Governments and health agencies in some regions are adapting to the increasing use of herbal medicine (Hanan et al., 2019). They are working on regulations to ensure the safety, quality, and appropriate labeling of herbal products for children. Many parents are embracing a holistic approach to children's health, which includes herbal medicine alongside nutrition, lifestyle, and mindfulness practices. This approach focuses on treating the whole child rather than just symptoms.

#### **2.2.4 Beliefs on Herbal Medicines**

Culture is fluid and there is no one point where a person, especially from a different culture, can claim to be fully culturally competent (Vaughn et al., 2009). A person's culture influences their belief system, and consequently influences their health attributions, impacting their health-seeking behavior. In Ethiopia, for example, mental

illness was often attributed to supernatural forces. For a health care provider to deliver care satisfactorily, herbal medicines and spiritual intervention was needed (Vaughn et al., 2009). For health care workers to deliver holistic care, they must attempt to understand the person in their context, their beliefs, and why they behave as they do. This aids in creating an environment of mutual trust and understanding, which is crucial in any doctor-patient relationship and impacts how the patient follows the doctor's recommendation (Vaughn et al., 2009).

Beliefs and perceptions surrounding herbal medicine use in pediatric care are multifaceted and deeply influenced by cultural, social, and individual factors. Understanding these beliefs and perceptions is crucial in assessing motivations behind the utilization of herbal remedies for promotion of children's health. Cultural beliefs often play a central role in shaping attitudes toward herbal medicine (Anheyer et al., 2017). Many cultures have a long history of using herbs as a primary means of healthcare, passing down knowledge and traditions through generations. These cultural ties instill a sense of trust and confidence in herbal remedies. Some parents and caregivers are drawn to herbal medicine because it aligns with their belief in holistic and natural approaches to health (Hennink & Kaiser, 2022). They perceive herbs as gentle, harmonious with the body, and free from synthetic chemicals commonly found in pharmaceuticals. Beliefs about herbal medicine often center on prevention. Many individuals view herbal remedies as a means of strengthening a child's immune system and preventing illnesses rather than solely as treatments for existing conditions. This preventive approach is particularly prevalent in certain cultures.

The belief in the effectiveness of herbal medicine is a significant driver. Parents may have witnessed positive outcomes or heard anecdotal evidence from family and friends, reinforcing their faith in these remedies (Nwaiwu & Oyelade, 2016). Cultural contexts

influence which herbs are used and for what purposes. For example, herbs used for child healthcare in traditional Chinese medicine may differ from those in Ayurveda or Native American traditions. These cultural variations reflect diverse beliefs about health and wellness.

In some regions, the cost-effectiveness of herbal medicine is a key factor. Families with limited access to conventional healthcare may turn to herbal remedies due to their affordability. In areas where traditional healers are respected and trusted members of the community, their recommendations regarding herbal medicine carry significant weight. Parents may consult these healers for guidance on their children's health care.

Some individuals have concerns about the side effects and long-term impacts of conventional pharmaceuticals (Hennink & Kaiser, 2022). They may perceive herbal medicine as a safer alternative, particularly for chronic conditions. Media, including online sources and social networks, can shape beliefs and perceptions. Positive testimonials and articles advocating herbal remedies can sway individuals' opinions. On the flip side, there may be a lack of awareness about potential risks and contraindications associated with herbal medicine use in children. This lack of information can contribute to positive beliefs about its safety.

One of the main reasons herbal medicines were used is that it was believed to help with prevention of diseases. A community of female Somali immigrants in Rochester, United States of America, believed that herbal medicines prevented them from getting diseases. Also, in the event they developed symptoms of a particular disease, the herbal preparations would prevent them from getting more severe disease (Carroll et al., 2007). In rural Zambia, a special fire is sometimes prepared with a mixture of herbs and 1-month-old infants placed near the fire to inhale the smoke. They believed that the smoke

cleared the lungs and prevented the infants from getting a cough and contracting pneumonia (Buser et al., 2020).

Herbal medicines have also been used in the belief that they cure diseases and provide relief of symptoms of in patients with chronic diseases. In the aforementioned immigrant population of Somali women in the USA, mothers would reportedly give their children a mixture of herbs together with garlic and lemon, to treat abdominal pain (Carroll et al., 2007). In Germany, parents gave their children herbal preparations for the treatment of cough, common colds, and acute upper respiratory tract infections because they believed they worked better than conventional medicines (Du et al., 2014). In a study done in Sierra Leone among breastfeeding women, one third of the mothers used herbal medicines to treat their medical conditions because they held the belief that they were more efficient and cheaper than conventional medicines (James et al., 2019). Adult patients with hypertension in South Africa used local brews and other herbs to lower blood pressure because they believed they brews and herbs were natural and worked better (Sengwana & Puoane, 2004).

Apart from prevention and treatment, herbal medicines have been used because they were believed to have other additional benefits. In a systematic review of studies done in Sub-Saharan Africa, participants reported satisfaction with the use of herbal medicines, in that it aligned with their religious beliefs (James et al., 2018). In the Niger Delta, caregivers of children reported that herbal preparations were free medicines from God, and all they had to do was to know how and when to use them. The caregivers used these herbal mixtures in their children to treat delayed milestones, ward off evil spirits that would cause illness, and stimulate appetite during weaning (Mildred E. John, 2015). Adults with hypertension in South Africa also believed that the herbal medicines and local brews provided them protection from evil spirits (Sengwana & Puoane, 2004).



In Egypt, both users and non-users of herbal medicines reported that they were influenced by the media and other patients' testimonies, while the largest percentage was influenced by the internet, family, and friends. Those that embraced herbal medicines considered them purer, better, safer and more effective (Fathy et al., 2019). A review by James et al. (2018) of studies in Sub-Saharan Africa noted that people took herbal medicines because they perceived them as natural and more effective compared to the conventional medicines. This was similar in Lagos, Nigeria, where mothers of infants gave their infants herbal concoctions for common conditions like malaria, convulsions and fever, because they considered them safer (Nwaiwu & Oyelade, 2016). In South Africa, community health workers (CHWs) said that members of their community thought it was inappropriate to take medication for hypertension daily, because they were toxic and their therapeutic effects did not last long. They therefore preferred to take alternatives like the local brews, which they perceived as safer and more effective (Sengwana & Puoane, 2004). A group of women attending an antenatal clinic in Nairobi, Kenya reported that they used herbal medications because they thought that the conventional medicines "did not work" (M.C., 2014).

Some patients combined herbal and conventional medicines to treat their illness. However, when it came to disclosing their use of herbal medicines to conventional health care providers, the majority of patients would withhold this information for various reasons. Up to 83% of patients did not disclose their usage of herbal medicine to the conventional practitioners because they thought that the doctors will judge them and offer them less quality care (James et al., 2018). In Sierra Leone, mothers who are nursing their babies did not disclose their use of herbal medicines to conventional practitioners despite being asked, because they thought it was not important (James et al., 2019). A recent study in Zambia noted similar findings. Mothers who administered

herbal medicines to their infants did not inform the health care workers the hospital of their practices, because they thought the nurses would scold them (Buser et al., 2020). The situation was different in a study from Saudi Arabia, in which 53% of patients with diabetes informed their clinicians that they used herbal medicines. Patients reported believing that the herbal formulations were not harmful and so thought that there was no problem with the doctor knowing (Hanan et al., 2019).

### **2.2.5 Outcomes of Herbal Medicine Intake**

Ensuring the safety and quality of herbal medicine use in pediatric care is paramount, as it directly impacts the well-being of children. Parents and caregivers often rely on herbal remedies as alternatives or complements to conventional treatments, placing a significant responsibility on regulators, manufacturers, and healthcare providers to guarantee the safety and quality of these products. One of the primary concerns in herbal medicine is the lack of standardized manufacturing processes. Quality control measures must be in place to guarantee the consistency and potency of herbal products. This includes proper identification of herbs, cultivation practices, and manufacturing standards. Regulatory agencies play a vital role in ensuring the safety of herbal products. They need to establish clear guidelines and standards for the manufacturing, labeling, and marketing of herbal remedies for pediatric use. This oversight helps prevent adulteration and contamination.

Clear and accurate product labeling is essential. Parents and caregivers should have access to detailed information about the herbal remedy, including its ingredients, recommended dosage, potential side effects, and contraindications for children (James et al., 2019). This empowers informed decision-making. Establishing a system for reporting adverse events related to herbal medicine use is essential. This allows for the

tracking of safety concerns and the prompt removal of unsafe products from the market. Parents and caregivers should have access to educational resources that help them make informed choices regarding herbal medicine use. This includes understanding potential risks, interactions, and Rigorous testing of herbal products is necessary to identify any contaminants, including heavy metals, pesticides, or microbial pathogens. These tests should be conducted at different stages, from raw materials to the final product.

The diversity of culture globally has made it difficult and expensive to study all herbal medicines in every region. As such, the evidence behind use of most herbal medicines today is observational then strengthened by culture, beliefs and attitudes. However, the effects of use of some herbs have been studied and the research base continues to grow. A study done in Brazil showed that about 32% and 24% of herbal medicines taken by the elderly exceeded the limits of the acceptable bacterial and fungal content respectively, as recommended by WHO, therefore posing a risk for infections in this population. Furthermore, this study demonstrated that there was no difference in the contamination levels in the herbs prepared at home versus those commercially prepared (de Sousa Lima et al., 2020). In Kenya, Maina et al, (2013) concluded that the safety of herbal preparations in the market could be affected by contamination or adulteration of the products. The study further noted that some of the imported Chinese natural contraceptives contained large quantities of the conventional medicine product Levonogesterol, which exposed women to the hormonal side effects. Further, in a commentary, Choonara (2003), noted that herbal preparations can be toxic in children because of their intrinsic constituents, interactions with other drugs, or inappropriate formulations. The herb Echinacea, when taken for more than 2 months in children, was shown to increase the risk for liver damage (Lucas, 2010).

In many countries, products of herbal medicines and herbal medicines themselves are advertised and distributed in the market without any description of their safety profile. For instance, an herbal mixture, Yoyo ‘cleanser’ bitters, that had been widely marketed and welcomed by people in Nigeria, was shown to cause liver failure and hypokalemia predisposing to life threatening arrhythmias. In the same review, another herbal mixture sold in Nigeria containing *Entandophragma Utile* and *Anacardium Occidentalis*, was shown to cause pulmonary tumors and enlargement of the spleen (Ekor, 2014). Herbal mixtures containing extracts of *Aristolochia* species, Aristolochic acids, have been shown to be carcinogenic and cause kidney toxicity. This led to the prohibition of production and distribution of products containing aristolochic acids in Europe, Australia and Canada (Ekor, 2014). St. John’s wort used for depression and as an antiviral remedy has been shown to cause palpitations, tremors, photosensitivity and dry mouth among other effects.

Some herbs have also been shown to be beneficial. A systematic review of randomized controlled trials (RCTs) on herbal medicine use for gastrointestinal disorders in children showed that herbs like fennel reduced the number of hours of crying in children with colic while herbs like *Potentilla Erecta* and *Matricaria Chamomila* reduced the duration of diarrhoea in children (Anheyer et al., 2017). Saffron, turmeric, and flaxseed were shown to have protective effects against cancer while some, like echinacea, activated the immune system and shortened the course of upper respiratory tract infections in children (Lucas, 2010). In a study by James et al. (2019), about 97% of breastfeeding mothers in Freetown, Sierra Leone reported that they did not experience any adverse effects with the herbal medicines they administered to their infants. The remaining 3% cited minor side effects including nausea, vomiting, skin rash, and itching. In Lagos, Nigeria, a study done on herbalists and mothers of infants less than six months of age

showed that 72% of the mothers used herbal medicines for common ailments e.g malaria, fever, skin conditions, and abdominal pain. Of these, only 4% reported adverse effects which was commonly vomiting. The other 96% reported that they were well-tolerated (Nwaiwu& Oyelade, 2016).

As described above, herbs, like conventional medicines, have their own benefits and risks. Some plants used in Kenya have been shown be associated with fulminant hepatic failure, liver cancers, cardiac and gastrointestinal toxicities and even genotoxicities, despite having known therapeutic benefits (Maina et al., 2013). More research needs to be done to identify herbal medicines, their clinical benefit and their adverse effects so that they can continue to be used safely.

Scientific research on herbal medicine safety and efficacy in pediatric populations is crucial. Clinical research should be undertaken to assess the risks and benefits of specific herbal remedies for children's health conditions. Healthcare providers, including pediatricians and nurses, should receive education on herbal medicine to facilitate open and informed discussions with parents and caregivers (James et al., 2018). This helps in identifying potential interactions with conventional medications and monitoring for adverse effects.

### **2.3 Theoretical Framework**

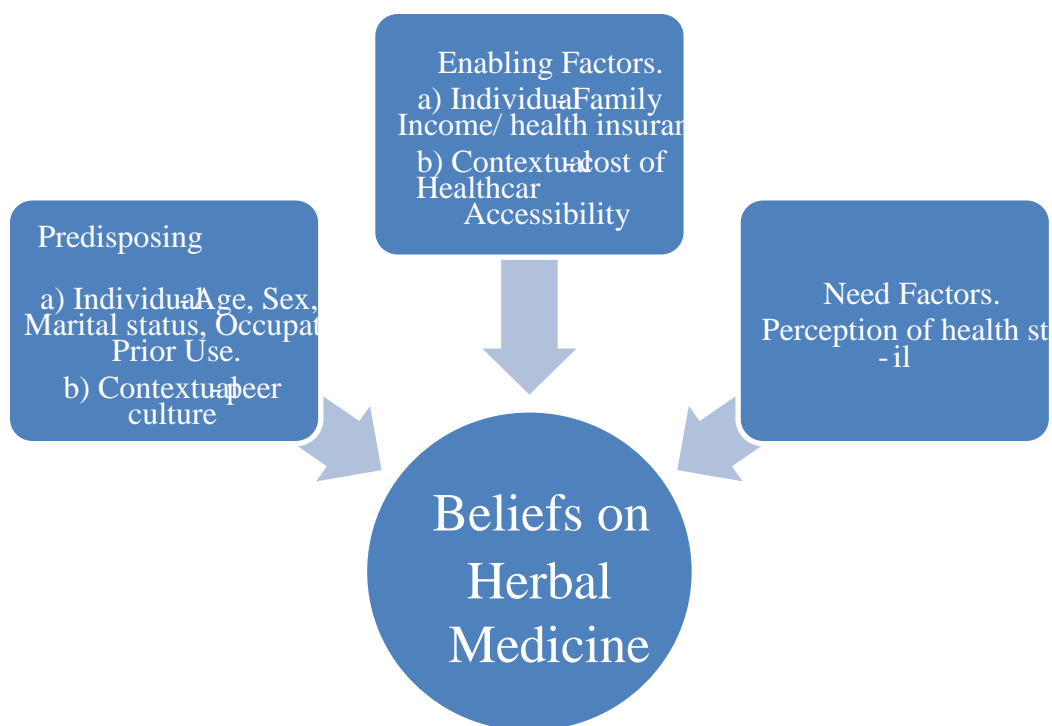
The behavioral model of health services use was developed by Andersen to help understand factors promoting use or lack of use of health services by families. It posits that health service utilization is affected by three factors: predisposing, enabling and need factors.

Predisposing factors describe the proclivity of an individual to use a service. These factors exist way before the illness. They include race, age, sex, religion, education, and

health beliefs. Enabling factors describe the resources and means that enable individuals to access health services. These include medical insurance, level of income, and location. Needs factors represent the immediate factors affecting health utilization. This represents the person's illness level and factors affecting it (Birgit et al., 2012).

**Figure 1**

*The Andersen Healthcare Utilization Model*



## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1 Introduction**

This chapter discusses how the research was conducted. It includes the research methodology, study location, target population, sample size, recruitment methods, sampling process, data collection techniques and tools, data collection procedures, and data analysis and management.

#### **3.2 Research Design**

This was a qualitative phenomenological study because it sought to explore the beliefs of the community regarding herbal medication use among children under five years of age. A phenomenological approach was best suited because it seeks to understand issues or phenomena through live experiences among the people (Guillen, 2019).

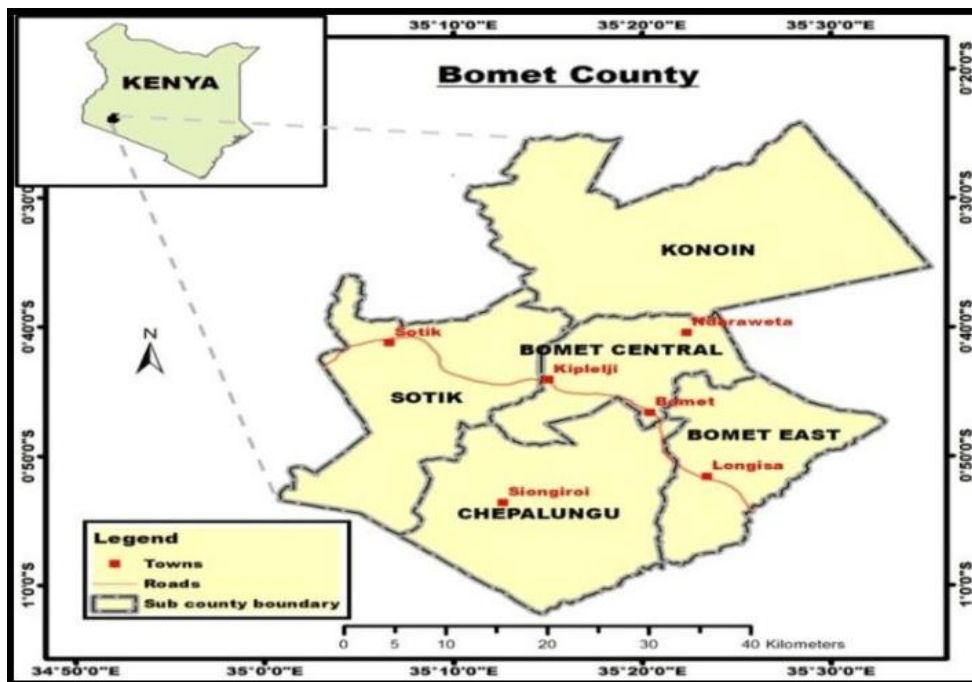
#### **3.3 Location of the Study**

The study location was Silibwet Sub-Location, Bomet Central Sub-County in Bomet County, Kenya. Bomet County covers 1997 square kilometers and had a population of 875,689 people in the 2019 census. The main economic activity in Bomet is farming. Bomet has five sub counties, namely Bomet Central, Bomet East, Konoin, Chepalungu, and Sotik.

Silibwet Sub-Location had a population of 12,572 in 2019 during the census and covers 12.7 square kilometers. It has ten villages. Silibwet Sub-Location was selected because it has one of the biggest markets in Bomet Central Sub-County and has a mixed population which gave the researcher a chance to survey both the rural and the semi-urban population. It has a health center near the main market.

**Figure 2**

*Map of Bomet County*



*Source:* County Government of Bomet,( 2023)

### **3.4 Study Population**

The target population was caregivers of children under the age of five years living in Silibwet Sub-Location. Caregivers in this context included those influencing or involved in decision-making for the children under the age of five years when they needed medical attention. Medical attention in this context meant falling sick or needing a wellness check. They included all who made the decision on whether to take children to hospital, watch them, or give them herbal medicines, and all who influenced their decisions. It also included the ones who saw/diagnosed the children, whether traditional or conventional, and those who administered treatment. These included parents, guardians, frontline health care workers, herbalists and local opinion leaders. Local



opinion leaders were persons that had worked with this community and that the community trusted such as religious leaders.

### **3.5 Sample Size**

Quality data in qualitative studies is based on how rich the data generated is, more than how many interviews are done to generate the data (Gill, 2020). A systematic review of twenty-three studies found that saturation in qualitative studies saturation is reached after nine to seventeen in-depth interviews (Henninck & Kaiser, 2022). Purposive sampling was used to select 12 caregivers for in-depth interviews. Eight interviews were conducted before reaching the point of saturation with parents and guardians, two more interviews were done with no new codes and categories generated, thus reaching saturation. Thus, a total of 10 in- depth interviews were done as it is unlikely that we would have gathered further information with more interviews. This was informed by Hennink and Kaiser (2022), who recommended that after reaching saturation, two or three more interviews should be conducted to ensure no further theme redundancy.

Six key informant interviews were done. Three were done on two herbalists and one religious leader through referral by the caregivers. The other three were done on frontline health care workers: one clinical officer, one nurse and one public health officer. All the three frontline health care workers worked in Silibwet health center. Front line health care workers were selected because they are the first contact of patients with the health care system and thus get to hear patients' experiences first hand.

Fifteen out of the total twenty CHWs in Silibwet Sub-Location participated in the focused group discussions (FGDs). The other four did not show up on the interview days and cited unavoidable circumstances as their reasons through text messages. The fifteen CHWs were grouped into two groups. The first group had nine CHWs while the second

group had six CHWs. The lead CHW served as a research assistant and was not part of the FGDs.

### **3.6 Recruitment Procedure**

After receiving ethical approval from Tenwek Institutional Scientific Ethical and Review Committee (ISERC) and National Commission for Science Technology and Innovation (NACOSTI), authorization was requested from the health director of the county, who is also in charge of research, who wrote a letter of introduction to the local administration in Silibwet Sub-Location and health center head.

The principal researcher met with the facility head at the Silibwet health center who in turn gave permission to interview the staff. He also introduced the head of the CHWs to the principal researcher. The CHWs' head helped contact all the CHWs covering Silibwet Sub-Location and invited them to meet at the facility on a day that had been agreed upon, after briefly explaining the aim of the meeting. She divided the CHWs into two groups of ten and nine according to the year they were employed. The first group of CHWs met in the health center on the agreed date and the principal researcher provided a description of the research's objectives and took them through the consent process. Nine out of ten CHWs showed up on the first meeting. Each CHW signed the consent form after the process. The CHWs requested to have the FGD on the same day and so the discussion followed immediately after the consent process. The second group of CHWs met two weeks later in the health center and were taken through the same process and had the FGD on the same day. Six CHWs out of ten showed up for the second meeting.

Mothers and grandmothers were recruited from their homes. The lead CHW, who also became the research assistant, identified homesteads in the villages that had children

below the age of five years. She informed the families prior but the consent process was done by the principal researcher on the actual day of the interviews.

Three Key informants were identified through referrals from the in-depth interviews and FGDs. This included two herbalists, and one religious leader. The principal researcher and the research assistant visited their homes and took them through the consent process. All agreed to be part of the study and requested that the interviews be done on the same day as the consent due to time factors. Three frontline health care workers working in Silibwet Health Center, one nurse, a clinical officer and a public health officer were selected purposively and consented at the health center. Their interviews also took place in the health center at the office of the clinical officer in charge.

### **3.7 Sampling Process**

All the CHWs serving in Silibwet Sub-Location were included in the study. CHWs were selected because they belonged to the Silibwet Sub-Location culture and also because they interacted with the individuals residing within the community often in their homes when conducting prevention and educative campaigns. Purposive sampling was used to select parents and guardians of children under the age of 5 years given that they are the primary decision-makers in matters health for these children.

Snowball sampling was used to select three key informants: two herbalists and one religious leader. They were recommended by parents, guardians and the CHWs during their interviews. Purposive sampling was also employed to select the other three key informants: one nurse, one clinical officer and one public health officer. Members of CSOs were not included since the principal researcher found no organization that had a project or worked with children in the Sub-Location during the research period.

### **3.8 Study Population**

#### **3.8.1 Inclusion Criteria**

This study included caregivers of children less than 5 years of age who spoke English, Kiswahili, or Kipsigis, and were above the age of 18 for legal consent purposes.

#### **3.8.2 Exclusion Criteria**

All caregivers that participated in the pilot study were excluded. People who had lived in Silibwet for less than five years and were not from the Kipsigis community were also excluded, as their experiences may not have been representative of the local culture (Iman, 2013).

### **3.9 Data Collection Tools**

Information was gathered using researcher developed semi-structured interview guides. Three semi-structured interview guides were prepared, one for the in-depth interviews, another for the key informant interviews, and one for the FGDs. The questions in the interview guide were based on the study objectives and also informed by literature. The in-depth interview guide was initially drafted in English and subsequently translated to Kiswahili and Kipsigis. The FGD guide was also written in English and translated to Kipsigis. The tools were piloted in Silibwet Sub-Location but on different participants. The piloting helped the researcher clarify some questions which were ambiguous and also helped improve the researchers' interviewing technique.

The researcher ensured data credibility by employing reflexivity during the data collection process. A journal with the researcher's thoughts, feelings, ideas, and frustrations was kept in order to minimize bias of the researcher's preconceptions on the topic. Further credibility was ensured by triangulation of data sources and investigators (Krefting, 1991). Data was collected by both the principal researcher and a research

assistant while data was collected from caregivers, front line HCWs and local opinion leaders. The data gathered was peer-reviewed by an external researcher with experience in qualitative research.

### **3.10 Data Collection Procedure**

#### **3.10.1 In-depth Interview data collection procedure**

Before commencing data collection, the principal researcher provided training to one research assistant. The caregivers who met the inclusion criteria and had given their written consent were interviewed in their homes. Most home interviews were done in the main house with only the researchers and the participant present and other members of the household waiting outside. Some were done outside the house, under a tree because that was the quietest place. Two mothers were interviewed in the market in their grocery stores as they requested that since they could not be available at home during the day. All interviews that were done in Kipsigis were conducted by the research assistant while the ones in English or Kiswahili were conducted by the principal researcher. This is because the principal researcher was not proficient in Kipsigis. The interviews lasted 30-45 minutes each and were recorded using an audio recorder.

#### **3.10.2 FGD Data Collection Procedure**

The CHWs who consented verbally to be a part of the interview during the phone call met in the Silibwet health center on the agreed date. The Meeting was held in an empty room that is used for hospital meetings that is off the clinic area. The CHWs each signed their written consent that morning. Rules of the FGD were explained to them, especially etiquette when wanting to speak and muting their phones. The FGD was conducted by the principal researcher initially but after 15 minutes the research assistant took over

because most CHWs preferred to use Kipsigis. The first FGD took 1 hour 30 minutes while the second one took 1 hour 10 minutes. The two focused group discussions happened on different days, two weeks apart. Refreshments were served during the session. Audio recording devices were used to capture the sessions.

### **3.10.3 Key Informant Interview Data Collection Procedure**

The community health workers, mothers and grandmothers that were interviewed referred the researchers to one ninety-nine-year-old herbalist. Three other caregivers and some CHWs gave the referral to the second 43-year-old herbalist. The research assistant led the researcher to the home of the old herbalist and were welcomed to sit outside under a tree. It took over thirty minutes for the herbalist to agree to talk to the researchers as her suspicion was that they had come with ill motives of knowing their “secret”. After agreeing to speak the research assistant led the interview and it lasted only twenty minutes as her family claimed that she was tired. The researchers proceeded to the home of the second herbalist who consented to take part and signed the consent form. The interview was done in the kitchen as the main house was occupied. The interview lasted about 45 minutes and also involved the herbalist pointing out some medicinal plants that were in her farm. The session was recorded with an audio recorder.

The religious leader was also selected as a referral from the in-depth interviews. The principal researcher met her in her office and obtained consent from her which she granted and agreed to have the interview on the same day. The interview lasted 30 minutes and was recorded with an audio recorder.

The nurse, clinical officer and the public health officer were interviewed in the health center on different days because there had to be coverage in the hospital. The interviews

took place in the office of the clinical officer in charge over lunch hour as that was the only time the staff were free. Lunch was served during the sessions. The interviews lasted 30-45 minutes each and were audio-recorded.

### **3.11 Data Management and Analysis**

The information acquired from audio recordings was transcribed verbatim by a transcriptionist and confirmed by the principal researcher, then translated to English by a translator. The transcripts were kept in a password-protected device. After all the data from the audio recorder had been transcribed, voice distortion was done on the audio recordings.

The process of data analysis then begun. The six stages of thematic analysis by Braun and Clarke (2006) were employed. They included the following:

- i Familiarizing yourself with your data – the researcher read and reread the transcripts and re-listened to the audios to get a good grasp of the data. Early notes were made from the data.
- ii Generating initial codes- here the researcher begun to organize the data into meaningful subsets.
- iii Searching for themes – The codes were then put together and split according to the emerging themes.
- iv Reviewing themes- this step involved rechecking the themes noted above and confirming the data supporting the themes from the transcripts.
- v Defining and naming themes – this was the refinement step. The themes were rechecked against each other and whether there were any that appeared as subthemes. The aim was to produce final concise themes.
- vi Producing the report.

### **3.12 Ethical Considerations**

Ethical approval was sought from Tenwek ISERC and a research permit obtained from NACOSTI. Permission was also sought from the Bomet county director of health who is also in charge of research in the county. The local administration, sub-chief, was informed of the researcher's presence in the community through a letter from the County director of health.

An explanation of the study aims and the interview process was given to all participants both verbally and in written form and time for questions and clarifications allowed before the willing participants signed the informed consent forms. The principal researcher gave autonomy to the participants by informing them of their freedom to exit from the study at any point in the process without any consequences. Confidentiality and anonymity were ensured by de-identifying the transcripts and labelling them by codes instead of names. The audio recordings were subjected to voice distortion using a software after the transcription process was complete, to protect the participant's identity. The transcripts were stored in password-protected devices, and was only shared with the independent reviewer for independent data analysis to ensure validity.



## **CHAPTER FOUR**

### **DATA ANALYSIS, PRESENTATION AND DISCUSSION**

#### **4.1 Introduction**

In this chapter, the study results are presented alongside their interpretation in alignment with the stated objectives. Further, a discussion of the findings in comparison with other similar and different findings from literature is given.

#### **4.2 General Information**

Of the 32 participants who consented to be a part of the study, one male caregiver dropped the interview midway citing lack of knowledge in the area. He said that he realized he had scanty knowledge on herbal medicines in children and referred the researchers to a neighbor. The other 31 participants fully participated in the interviews.

#### **4.3 Demographic Data**

Majority of the participants were female while 61.3% were aged between 30 and 49 years. Twelve out of the total thirty-one had attained college level of education while only one had not had any education. The CHWs and the healthcare workers contributed to the number of individuals with tertiary level of education. Over 96% of the participants identified themselves as Christians while only one participant was not sure what to call herself as shown in Table 1 below.

**Table 1***Socio-Demographic Characteristics of the Study Participants (N=31)*

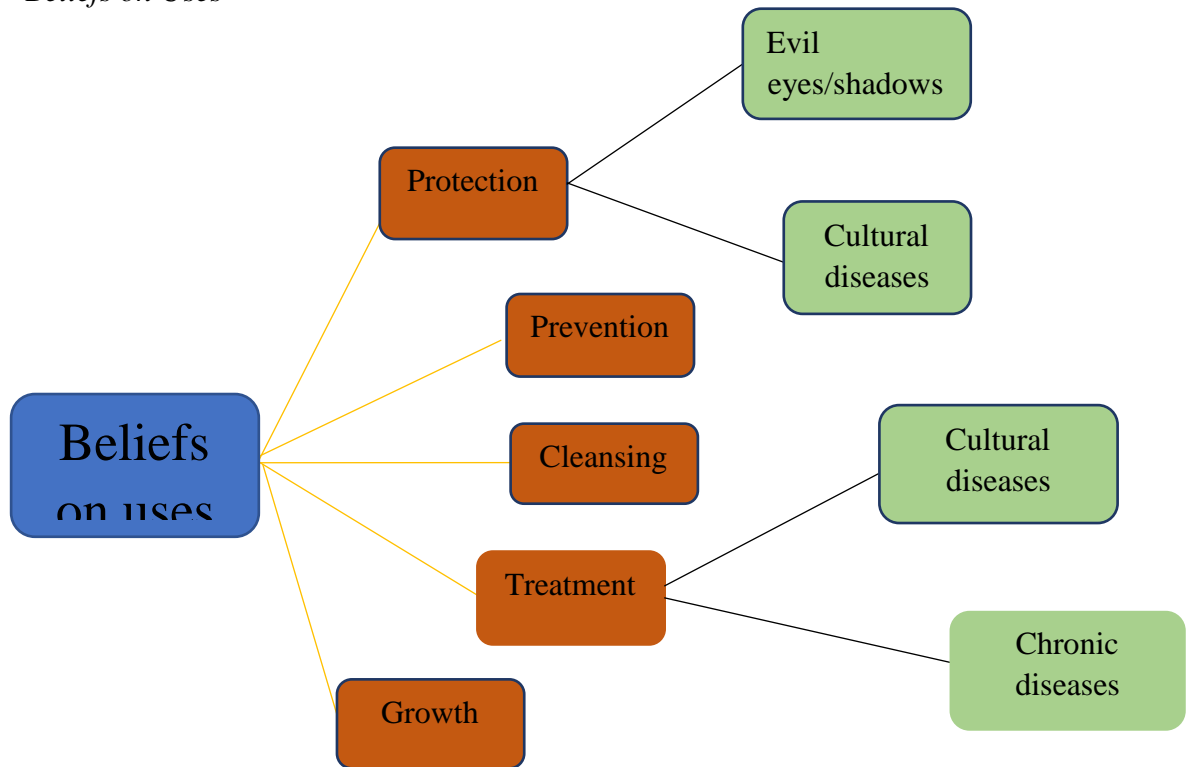
	Parents/ guardians	Health workers	Herbalists	Religious leaders	Community Health Workers	Total
<b>Gender</b>						
Female	10	2	2	1	11	26(83.9%)
Male	0	1	0	0	4	5(16.1%)
<b>Age</b>						
<30 years	3	1	0	0	0	4(12.9%)
30-49 years	5	2	1	1	10	19(61.3%)
>50 years	2	0	1	0	5	8(25.8%)
<b>Highest level of education</b>						
None	2	0	1	0	0	3(9.7%)
Primary	3	0	1	0	5	9(29.0%)
Secondary	3	0	0	0	4	7(22.6%)
College	2	3	0	1	6	12(38.7%)
<b>Religion</b>						
Christian	10	3	1	1	15	30(96.8%)
Other	0	0	1	0	0	1(3.2%)

## 4.3 Findings for Objectives

### 4.3.1 Beliefs on Uses

**Figure 3**

*Beliefs on Uses*



#### i **Protection**

##### i. Evil eyes/ shadows

Majority of the caregivers believed that herbal medicines offered their children protection from evil eyes and evil shadows. They would mix roots and leaves of different trees and boil them then allow to cool and bathe the baby in it. They noted that the medicines would repulse any persons with evil eyes and that their children would be safe in case they crossed shadows of evil persons. All children under one year of age would be washed daily with the herbal mixture and more so when the mother would go to the market, hospital, church or any public place. After one year of age, they would bathe their children with the herbs every other day or at least once a week. In the event that mother and baby travelled and could not carry the herbs, they would carry with

them ground herbs and give the babies a small amount to lick for the same purpose of protection. The caregivers believed that failure to do this, their children would get disturbed by the spirits and cry endlessly.

*“People have bad spirits and maybe they have seen baby and you know a child who has been washed with medicine and who has not been washed are different. If for example you look at a baby today, tomorrow when you see that baby’s face or maybe after some time, you will see it is yellow. Then people will wonder, who looked at this child and the mother will say I don’t know because I was just walking, then they will say she was looked at by one with bad eyes” – caregiver 3.*

Only one participant reported not to be using herbal medicines. This is because she believed that it is God who gives protection to children and not the herbs. She reported that their pastor advised them not to use herbs. She admitted to using herbal medicines herself when she got sick but said she would not use it on children.

*“They are not even safe on small children. I cannot give my baby herbal medicine to take orally. It is God who protects them, I don’t believe in that” – caregiver 2*

*“No, it’s not all people who use the herbs for protection, it depends on the religion, those who have gone to church don’t use but us we go to church and we still use, it depends on the person” – CHW 2*

ii. Diseases carried by people

The caregivers believed that there were some “unclean” people in the society who carried cultural illnesses called ‘*mirutik*’. This is a condition where a child gets a widened, sunken fontanelle with oral ulcers. Once someone is a carrier of this illness, they never stop being a carrier and some are known in the community. They believed that when a baby came into contact or close to someone with ‘*mirutik*’ then they would

get it too. So, the baby would be washed daily with the herbal mixtures or given a small amount of the ground herbal mixture to lick to protect them from getting ‘mirutik’. Parents of the young child who came into contact with a person carrying the disease were also to take the herbal mixture used to bathe the baby orally to cleanse themselves so as not to transfer the disease to the baby.

*“.....you see, do you know mirutik? There are people who carry this mirutik, when you meet them your baby will get the mirutik and die because hospital cannot treat that, like the baby of the house of .....She died the other day and everyone knows why”– caregiver 4*

## **ii Prevention of Common Illnesses**

Caregivers believed that all young children should be bathed with herbal mixtures to prevent common childhood illness like common cold, colic, constipation, oral ulcers among others. They also believed that the herbs would help the fontanelle close early. For prevention, the children would be bathed with water from boiled herbs and also be given half a teaspoon of the same mixture prepared for bathing. The ground herbs also served the same purpose of prevention.

*“The moment you are removed from hospital, the first thing you do is bathe your baby with the herbs. You mix leaves and roots from almost five different trees then boil and bathe baby. The baby will definitely drink some when being bathed and that will help. They will not get sick” – CHW 6*

### iii Treatment

#### I) Cultural Diseases

Certain conditions were considered cultural and were not to be treated in the hospital. They believed that if treated in hospital they would not get better and if they got an injection, they would die. Grandmothers and herbalists were the ones trusted to make the diagnosis of whether the disease was a normal one or cultural. Cultural diseases included false teeth, *mirutik* and for some families, oral thrush. Delayed closure of the fontanelle was also considered a cultural disease. Treatment would begin at home and when the child would not get better they would take them to an herbalist.

*“Those teeth are from devils, so things from Satan are dealt with differently. No one in the community should even see those teeth, it is hidden and dealt with fast by old women. The old woman will take some leaves and scrub the gum till the teeth disappear. In the hospital it will not go away, they will cut and some will remain under the gum”*–  
CHW 8.

*“I am not sure, I just know that babies with oral ulcers should not be injected, they will die. I just take my child to the grandmother and she will decide, if she sees wounds in the mouth she will give her Kipsigis medicine”* – caregiver 9

#### II) Chronic Illnesses

The Silibwet community members believed that chronic illness should be treated with herbal medicines. This is because they believed that they could not be cured by conventional medicines. They believed that diseases would become chronic because the doctors were not able to find a diagnosis and as such the herbalist would diagnose and treat. Conditions listed included asthma, constipation syndromes, allergies and

malnutrition. They did not name similar plants for particular conditions. The herbal mixtures used varied from family to family.

*“.....the hospital doesn't know. It doesn't know. The child will not get well and they will die. The child has to be given herbal medicines. I just mix some herbs boil and the baby is covered with a blanket and inhales the steam and the chest opens up” – caregiver 5.*

#### **iv Cleansing**

Children born to parents who had lost a baby before or got into contact with people carrying ‘cultural diseases’ had to be cleansed by herbal medicines. The mother of the baby would take herbal medicines all through pregnancy and when the baby was born, the grandmother would come and cleanse the baby with herbal medicines. The baby would be bathed with herbs then given some to drink. This was performed to make sure that the new baby did not continue to carry the cultural disease or die. Other family members including siblings and the father were also cleansed because they came into contact with the dead child.

*“....do you remember mama.....?They had to be cleansed by the herbalist after their baby died. Now the new baby they have is clean and will need to be washed with herbs every day. She is very healthy.eeeeeeh.....everyone in the family had to take some herbs because they had come to contact with the baby who died”- caregiver 3.*

#### **v Promoting Growth**

All participants of the study including those who did not give their children herbal medicines believed that herbal medicines built immunity and promoted physical growth. They believed that children with stunting or delayed milestones had not been given

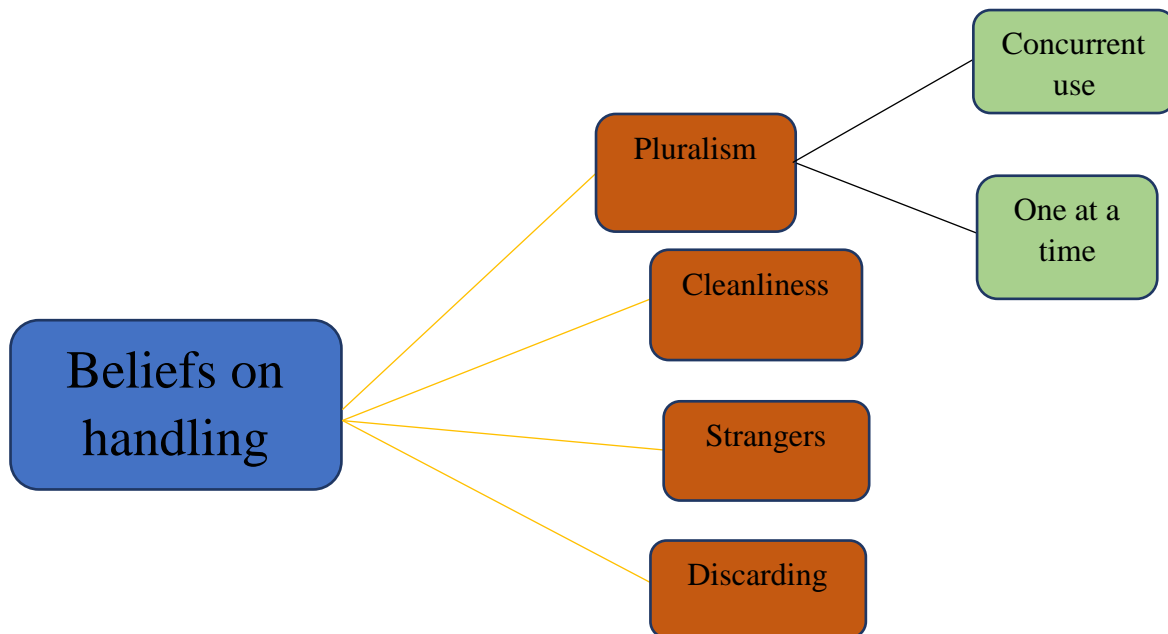
herbal medicines and needed to be given to promote growth and build their immunity. Topical herbs used in bathing and on the mouth served this purpose.

“.....you see those two children there?The younger one was not given herbal medicine because their mother went to a strange church. He becomes sick many times and has not been gaining weight. See the other one is strong and health. He can never get sick. I don't know what is wrong with the mother” – caregiver 3.

#### 4.3.2 Beliefs on Handling

**Figure 4**

*Beliefs on Handling*



##### i **Medical Pluralism**

All caregivers used conventional medicines concurrently with topical herbal medicines. They reported that there was no relationship between herbal medicines used to bathe children and conventional medicines taken orally. In their opinion, these medicines would not mix as they believed the topical herbs were not absorbed.



*“...there is no problem at all. You have to bathe the baby with herbs because they are small. That will not affect the hospital medicine. You give the hospital medicine according to what the nurse said. You just continue as usual” – 25-year-old mother.*

Participants differed in opinion when it came to oral herbal medicines. Majority believed that they should not be used concurrently. This is because they believed that herbal medicines were too strong and would make the conventional medicines weaker or potentiate their toxicity through drug to drug interactions. Some also mentioned that one would overdose their children as the two medicines may be having similar active ingredients.

*.....no, no, no. when I bring the hospital medicines, I put my herbal oral herbal medicines aside. I will wait until they finish their dose then continue with mine. Or when I see the hospital one is not working, I stop and start my herbal. I fear giving them together, it may be too strong for the baby...but there is no problem with bathing them, so I just continue to wash the baby with herbs” – caregiver 7.*

*“When you touch the hospital medicine you don’t give the herbals,like when they immunize or they do what, you just bathe with the herbs only. They don’t eat the topical orals. Because they said the two don’t go together” – caregiver 5.*

The remainder gave herbal medications concurrently with conventional medications. They believed that it was safe to give concurrently as long as they were given at different times. They believed that one should not stop giving herbal medicines as they continued to boost immunity while the conventional medicines treated the disease. Others reported that the two given together would work better as they were treating the same condition.

*“We normally give together. I thought we normally give...I just make sure I give my baby the oral herbs early in the morning and I just give a little. For the rest of the day I follow what the doctor said. I don’t think there is a problem because the herbs continue to make the baby health. I have been doing that for my children” - CHW 4.*

Healthcare providers were not informed by caregivers about their utilization of herbal remedies. Most reported that they were afraid to do that since they had been told during delivery not to use herbs at home. Others reported that they would be scolded and would rather not have the experience. One participant said that the healthcare providers would claim that the child got sick because of the herbal medicines and would therefore feel blamed.

*“Hahahahaha.....definitely no. Those doctors are not friendly. They will shout at you and remind you the instruction they gave you when you came to deliver. I wonder why they are like that and even them they are using. I better just keep quiet” – caregiver 7*

## **ii Cleanliness**

The caregivers believed that herbal medicines used on children were sacred and pure and were not to be handled when one was ‘dirty’. They defined ‘dirty’ as “being seen by many people” or having intercourse with the husband. Mothers would be required to take a shower after having intercourse with their husbands before boiling the herbs to wash their babies. When coming from the market they would bathe first because they had interacted with many unknown people on the road and believed that they were dirty. They believed that if the herbs were handled when dirty they would not work.

*“.....when a woman who has given birth comes from the hospital, she lives in the kitchen until the baby is big and walking. This is because in the kitchen she will not mix with other people or her husband. But in case she sleeps with the husband, she has to*

*bathe first before boiling herbs to wash her baby because she is dirty. If she does not do that the herbal medicines will not work to protect her baby” – caregiver 3.*

*“You see when I come from the market, I have to bathe first so that I can touch any herbal medicines for my child. If I don’t have time to bathe then I must lick some of those herbs to make myself clean, otherwise the medicines I give my baby will not work” – 33-year-old mother.*

### **iii Strangers**

Caregivers believed that when people from another household or a stranger visited when they were boiling the herbs, the herbs were to be covered so that the stranger would not see them. The visitor/stranger was also not supposed to leave the kitchen until the herbs had boiled completely and taken off the fire. This is because they believed that the stranger’s eyes would make the herbal medicines not work and if they left while they were still boiling, they would “take away the strength” of the medicine. The same applied for when they were bathing their children with the boiled herbal mixtures, they were to do this in a private room where no visitor would access. They believed that the visitor would render the medicine ineffective.

*“It is good to boil these medicines when no one is there, if a visitor comes you cover the pot so that they don’t know what is cooking. Their eyes will make the medicines not work” – caregiver 4*

*“.....when a visitor sits down and the herbs are boiling, they have to sit until the herbs are ready. If they leave they leave with all the strength of the medicines and the medicines became weak” – CHW 1*

#### iv Discarding

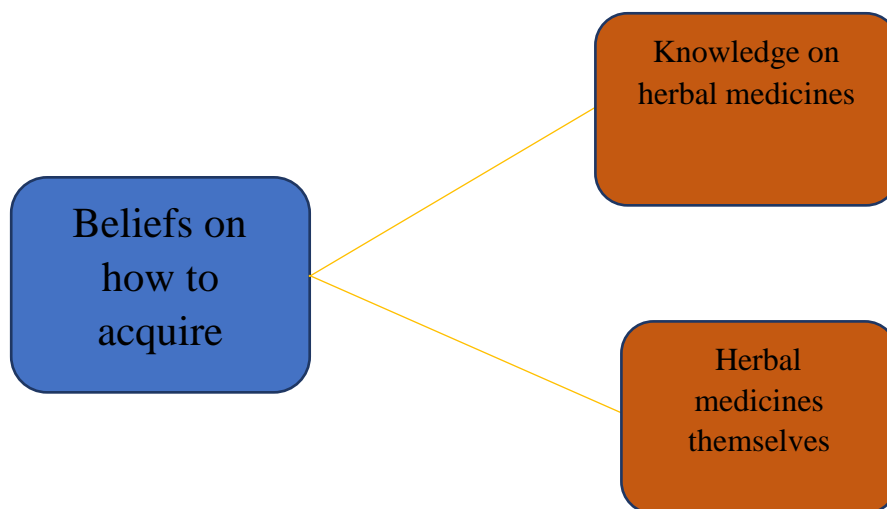
The herbal mixture used to bathe the baby was to be poured on hedge. This was to avoid anyone crossing where the medicine had been poured. Caregivers believed that if anyone except the mother crossed the place the herbal medicines had been poured, the medicines would not work and therefore baby would not be protected. Discarding would also be done at a time when no visitor or the child's father were around for similar reasons

*“You pour the water on the fence or at the end of the shamba. You can't just pour like this this. If you pour outside the house and someone comes and steps on or crosses that area, your medicine will not work” – CHW 11.*

#### 4.3.3 Beliefs on How to Acquire

**Figure 5**

*Beliefs on How to Acquire*



## **i Knowledge**

Knowledge on herbal medicine was passed down by the generations by apprenticeship. A mother would identify one of her daughters who seemed sharp and interested and then would teach them. Learning begun with observation from a young age but the proper intentional training would happen once a mother got children. Further training would happen in the young mother's matrimonial home since different herbs were used in different families. A mother would however be allowed to source for herbs from her own mother even when married. None of the participants interviewed had received any formal training on herbal medicine, including the herbalists.

*“I was taught by my mother and her friends when I got my own children. I used to see her picking them when I was young. I don't know the names but I know the trees to pick. Mama.....also taught me”- caregiver 5.*

## **ii Acquisition**

Herbal medicines for children were not sourced from the market as they believed that medicines found in the market were not as pure. They believed that small children were so sensitive and their medicines should be harvested directly from their own farms or farms of trusted persons. Further, herbal medicines for children under five years of age were mostly known by women because they are the immediate caretakers. Male herbalists were believed to handle adult medications.

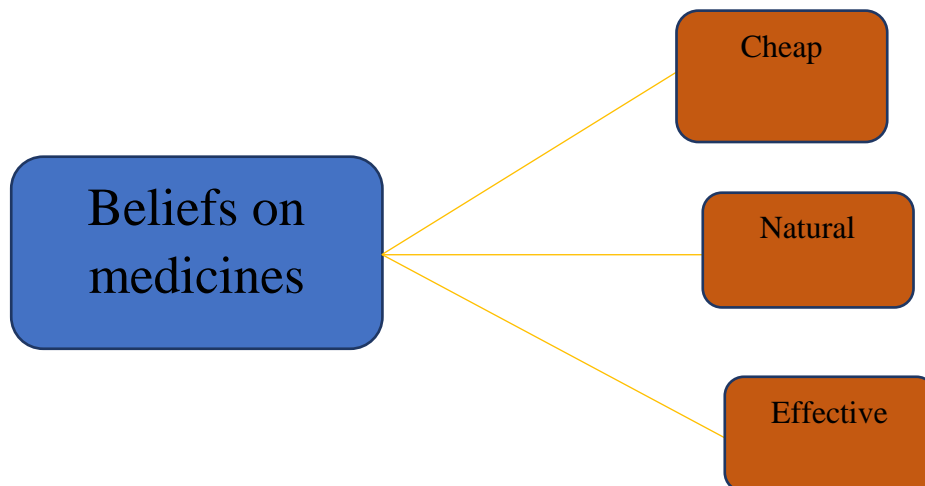
*“The market? Nooooooooo. You can never find medicines for children in the market here. No one would buy. Small children are sensitive. You only get medicines from people you know or your own farm. We also believe that they may not work well if you don't know where they come from” – CHW 10.*

*“Men only have medicines for gonorrhoea, they don’t know much about children. It is mothers and grandmothers who know about herbs for children” – CHW 13.*

#### 4.3.4 Beliefs on Medicines

**Figure 6**

*Beliefs on Medicines*



Caregivers held the belief that herbal medicines were cheap, natural and effective compared to conventional medicines. Most of them grew these medicines in their farms or would find them in the natural forests around. The cost of purchasing herbal medicines from a known herbalist regardless of the quantity was five hundred shillings or an equivalent, in kind. This compared to conventional medicine was cheap as going to hospital included transport, doctor’s fee, laboratory charges and finally medicines. Some would pay for this medicines in installments or make a pledge and pay over months. They believed in honoring the payments as incomplete payment was associated with a curse.

*“Kipsigis medicines are everywhere, even on the road. Almost all of us have them in our farms or in the forests there. They are free or at most five hundred shillings. You can also take sugar or anything” – CHW 7.*

*“We have a standard price for herbs but people of nowadays love money. Can you imagine another guy wanted to charge three thousand shillings for herbal medicines? We should chase away such people. Five hundred is the maximum price”- caregiver 6.*

The caregivers also believed that herbal medicines were more effective in comparison to conventional medicines and many reported that one only needed a few days of taking herbals to get better compared to conventional medicines.

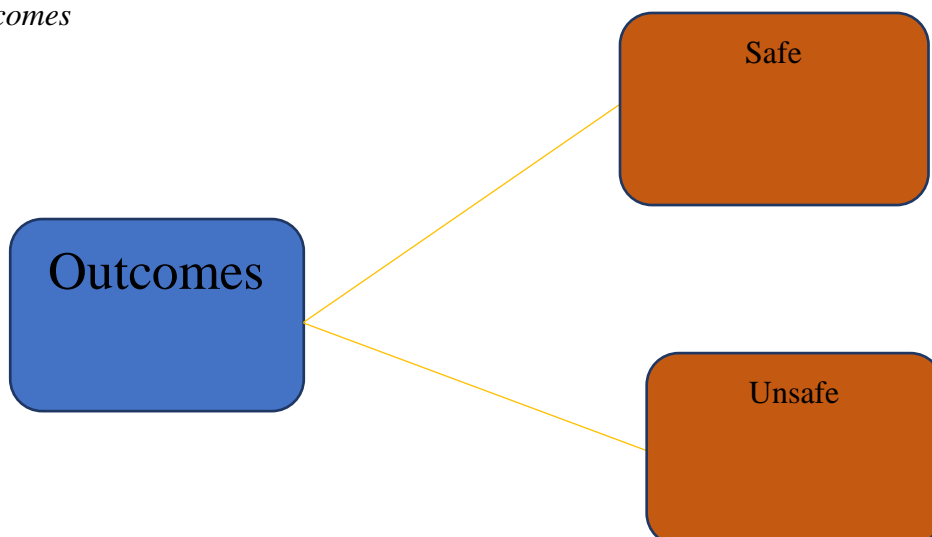
*“Let me tell you, this medicine the baby licks for only two days. On the third day they are well”- caregiver 8.*

*“My daughter had taken hospital medicines for a week and was getting worse, her grandmother called and asked for her. We took her to her grandmother and after taking herbal medicines for 3 days, her oral thrush was healed. These medicines are very strong” – CHW 9.*

#### **4.3.5 Outcomes**

**Figure 7**

*Outcomes*



About 94% of the participants believed that herbal medicines consumed by children had no side effects. They attributed this to the fact that they mostly used it topically and would give very little amounts when giving orally. They described the effects as great, as they noticed growth and healing in their children. Some described some effects seen as part of healing. For instance, when a baby was given topical oral herbs for oral thrush, bleeding on the tongue would be considered a sign of healing rather than a side effect. Further, when children had measles and were given oral herbs to drink, worsening of the rash on the body would be described as the disease “leaving” rather than a reaction to the drug.

*“Eeeeh eeeh, there is no effect at all. We don’t give a lot, just with the little finger. Their bodies are strong, they are not like the children of today” – caregiver 3*

*“When you give the powdered medicine, they bleed on the mouth, which means the oral thrush is healing. Eeeeh, you should give until you see some bleeding”- caregiver 7.*

Only two participants reported herbal medicines as toxic for small children. One explained that the topical herbs used to bathe babies were safe but the oral ones were toxic to the internal organs. The other reported that some children may react to the topical herbs by getting a generalized rash that looked like burns. She noted that in such children they would bathe with water only and give topical oral herbs for protection from evil eyes. Another participant noted that herbal medicines used by children were safe because they only mixed less than 10 herbs in one but explained that in adults, herbal medicines caused kidney damage as some herbalist would mix up to fifty herbs. One CHW reported that side effects, especially kidney failure, were seen in adults as adult herbal medicines contained up to fifty different herbs mixed together.



*“One baby’s skin peeled so badly after he was washed with the herbal mixture. They repeated again and the skin became bad. So, for that child they stopped using the herbs to wash. They only give him oral on the tongue to cover him from evil eyes” – CHW 15*

*“You see these medicines they mix very many types, sometimes up to 50. Nowadays, this sickness of the kidney, when people go to hospital they are told they have kidney disease because they used herbs. This is because they have used it for a long time. That is why many people in Bomet have Kidney disease. At least in children they don’t mix more than 10 herbs” –CHW 8.*

*I heard one who died of tetanus, they just gave the herbal medicines but he died. Now it is hard to know if he died of tetanus or from the herbal medicines – CHW 13*

#### **4.4 Discussion of the Findings**

More than 90% of caregivers interviewed in Silibwet Sub Location used herbal medicine on their young children. They used herbal medicine for protection from evil eyes, prevention of common diseases, for better growth of their children and also because they were cheap, natural and easily available. About 68% of fifty Nigerian parents living in the Turkish republic of Northern Cyprus used complementary medicine. Out of these, 48% used them on children younger than five years of age. Of these, 57.9% used herbal medicines specifically for proper growth of their children (Christopher & Ozturk, 2022). The Nigerian parents in the Turkish Republic of Northern Cyprus used mostly ginger, garlic, lemon cinnamon and honey while in Silibwet parents used raw herb from trees including leaves, barks and roots. This could be because the Nigerians were an immigrant population in the Turkish republic of Northern Cyprus and thus did not have the luxury of getting all the fresh raw herbs as the parents of children in Silibwet did. Elsewhere in Germany, the frequency of herbal medicine usage products in children was

only 5.8%, in the last seven days, with more use seen in children under six years of age (Du et al., 2014). The difference could be because the German study was large, 17450 participants, compared to the present study which was done on 31 subjects and that it was within a specified time frame.

The findings of this study show that all caregivers who used herbal medicines on their children did so to protect them from evil eyes and evil shadows. This is similar to a study done in Niger Delta where caregivers gave their children herbal medicines and other charms to ward off evil spirits, protect them from the 'evil eye' and shun bad luck and untimely deaths (John et al., 2015). The similarity could be because both studies were done in Africa, where many cultures believe that disease is thought to originate from sinning against the ancestors, who would trouble people with evil spirits. However, caregivers of Silibwet used herbal medicines only while the caregivers in Niger Delta used multiple ways including charms, to shun evil spirits. The situation was different in Germany where a qualitative study of forty nine participants recorded the main reason for use of herbal medicine among adults, as for treatment of both acute and chronic diseases (Welz et.al, 2018). This difference could have been because the study was done in the European culture, whose beliefs on cause of illness may be different and also because the German study was done among adults.

In Silibwet sub location, children under the age of five years were given herbal medicines to treat and prevent common childhood illnesses. Certain herbs, such as echinacea and elderberry, are believed to support the immune system (James et al., 2018). While research on their effectiveness in preventing or treating pediatric illnesses like colds is ongoing, there is some promising evidence. Many herbal remedies have been used for generations in different cultures to address various health issues, and their effectiveness is often based on long-standing traditional knowledge (Nwaiwu &

Oyelade, 2016). Herbal medicines were used to treat conditions like fever, constipation, diarrhea, and measles, among others. This was seen also in Kwale County, Kenya, where caregivers took their young children to traditional healers who gave them herbal mixtures or showed them how to prepare them to treat bad coughs, fever, stomach ache and fits (Matsuyama et al., 2013). In Niger Delta, caregivers gave their young children herbal mixtures in form of enemas, juices and tea to treat fever and convulsions. They gave herbs like yarrow, liver wort, Cannabis because they were commonly and freely available (John et al., 2015). The two studies above were all done in rural African populations where majority of the people depended on using traditional medicine as a means to fulfill their health needs primarily. All caregivers in Silibwet using herbal medicines used them for prevention of common illnesses and building of immunity. This was different in Germany where only 3.6% of herbal medicine products were used for prophylaxis (Du et al., 2014).

While caregivers in Silibwet preferred herbal medicine for treatment of chronic diseases like Asthma and others, people in Germany preferred conventional medicines. A qualitative study with 49 participants noted that herbal medicines worked in ‘mild’ diseases like cold, flu infections and gastrointestinal problems but did not work in ‘serious’ illnesses like asthma and cancer (Welz et al., 2018). The variation in results could be explained by the fact that in another study in Germany, parents considered herbal medicines less efficacious compared to conventional medicines and this could have led to the use of herbs in conditions they only considered as mild (Du et al., 2014). Like the caregivers of Silibwet, adults from fifty states of the United States of America (USA) used herbal medicines for chronic diseases like diabetes, cancer, arthritis, and heart disease as well as breathing issues. The use of HM was higher among patients with

these chronic diseases compared to those without chronic illnesses (Rashrash et al., 2017).

Herbal remedies are sometimes utilized in combination with standard medicine to enhance treatment outcomes or alleviate side effects. The present study showed that most caregivers did not use herbal and conventional medicines concurrently because they were afraid of adverse effects from interaction of the medicines. The findings of this study were consistent with a study done in Riyadh, Saudi Arabia, where 72% of herbal medicine users avoided concurrent use with conventional medicines (Suleiman, 2014). The Saudi Arabian study was quantitative and did not look into reasons why the participants avoided combined use. The same was observed in South west Nigeria where only 21.5% of mothers of children under the age of five years, used herbal and conventional medicines concurrently citing that the two worked effectively together to cure diseases. In this same study religion was considered the biggest factor that promoted concurrent use in that 78% of traditional worshippers practiced concurrent use while Christians and Muslims had a lower rate (Nwaobilor & Arowolo, 2022). The present study did not look at factors associated with concurrent use.

Only one caregiver in the present study reported to have informed the doctor of her use of herbal medicine on her child. This was similar in Nigeria where 84% of parents reported not reporting their use of herbs to doctors due to concerns that their children might not receive adequate medical care (Oshikoya et al., 2008). However this percentage may have been falsely high as some of the parents reported that they were not asked and would be willing to share in the event they were asked.

The current study found that herbal medicines were acquired from own farms and natural forests by mothers and grandmothers of the babies. Elsewhere in Europe, 44.5%

of herbal medicine products used in children and adolescents were prescribed by doctors (Du et al., 2014). This was probably because these were finished herbal medicine products whereas the ones in Silibwet were raw herbs. Also, doctors in Germany received some training on herbal medicine products. The findings of this study also differ with a study done in Eastern Cape, South Africa which found that about 56% of herbs given to children were sourced from herbalists and 24% from vendors. Only 17% were sourced by mothers and grandmothers (Dambisya & Tindimwebwa, 2003). This could be because the South African study was done on children up to 18 years of age and could therefore have their herbs sourced from herbalists as they are not as sensitive as the children under five years of age, as claimed by the caregivers of Silibwet Sub-Location. The present study also differs with a study done in western Kenya where parents sourced their herbal medicines for diseases like measles and diarrhea from a local market (Ngere et al., 2022). This could have been because most caregivers in the western Kenya study learned about herbal medicines from their friends and neighbors who probably referred them to the markets.

Caregivers of Silibwet Sub-Location believed that herbal medicines were cheap, effective and had minimal side effects compared to conventional medicines. In a comprehensive analysis of research studies done in Sub-Saharan Africa, stated drivers for herbal medicine use included: lower cost, their natural nature and their better efficacy compared to conventional medicines (James et al., 2018). This study agrees with a study done in Uganda where caregivers gave their children with sickle cell disease herbal medicines because they were effective and had fewer adverse effects when contrasted to conventional medicines (Lubega et al., 2021). Another study in South west Nigeria also found that 65% of nursing mothers gave their young children herbal medications mostly because it was cheaper compared to conventional medicines

(Nwaobilor & Arowolo, 2022). The studies above were all done in Sub-Saharan Africa and may therefore explain the similarity in findings particularly on cost, given that most countries are in the low income category. Breastfeeding mothers in Sierra Leone used herbal medicines despite having subsidized to free access to conventional medicine facilities (James et al., 2019). This study supports the fact that herbal medicine use is driven by many factors other than cost and access.

All the participants of the present study acquired knowledge on herbal medicines and were influenced to use them on their children by their mothers and grandmothers. This was different in Uganda where caregivers of children with sickle cell disease were mainly influenced to use herbal medicines by television advertisements (Lubega et al., 2021). This difference may be attributed to the fact that the Ugandan study majored on one chronic disease while the present study was not limited to a particular disease. Further, caregivers of children with chronic diseases are likely to find themselves support groups and ideas from other caregivers, pointing to why television was an important information source. In Western Kenya, caregivers mostly used herbal medicines on their children following advice from their neighbors and other trusted sources (Ngere et al., 2022). This difference could have been because the present study was in a rural population while in the Western Kenya study had mixed rural and urban participants. People in Silibwet live on their own pieces of land surrounded by natural and planted trees, allowing them the flexibility of farming their own herbs. In urban settings, pieces of land are small with minimal vegetation and would therefore explain why the caregivers sourced their herbs from the market.

About 93% of caregivers in Silibwet reported no adverse effects of herbal medicines on their children. These findings differ with a South African study by Dambisya and Tindimwebwa (2003), where 20% of caregivers reported adverse effects like death,

poisoning, diarrhea, skin rash, among others, on their children. This could have been explained by the fact that the study was done in health centers and thus most children who proceeded to come to hospital may have had side effects from the herbal remedies unlike the present study which was done in homes. Parents of children with chronic diseases, specifically epilepsy, sickle cell and Asthma, in Nigeria reported that they experienced side effects such as: over sedation, hyperactivity, frequent exacerbations of asthma, fever, vomiting and diarrhea (Oshikoya et al., 2008). In Lagos Nigeria, Nwaiwu and Oyelade (2016) found that 96% of 78 mothers who were interviewed reported no adverse effects of herbal mixtures on their children, concurring with the present study. In a study of 17450 participants in Germany, parents reported that they experienced more side effects with conventional medicines compared to herbal medicines. Only ten adverse reactions were recorded with HM compared to 125 reactions with conventional medicines in the German study (Du et al., 2014). The present study did not compare adverse effects of herbal medicines versus those of conventional but also the herbal medicines used in Germany were “herbal medicine products” which had undergone some processing, unlike in Silibwet where raw herbs were used.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter will compare the findings of this study with other studies cited in literature, it will also give the conclusions and later the recommendations on policy and areas for further research.

#### 5.2 Summary

##### **5.2.1 To explore the Beliefs of the Caregivers on Herbal Medicine use among Children under the Age of five years in Silibwet Sub-Location Bomet County, Kenya**

All except two of the thirty one caregivers interviewed in this study used herbal medicines on their young children. They used them for: protection from evil eyes and shadows, prevention of common pediatric diseases, treatment, cleansing and promotion of growth. The main reasons for use of the herbs were protection from evil eyes and for better proper growth of their children. Some used them for treatment of common childhood conditions like fever, diarrhea, constipation, measles and colic. There was also a strong belief that cultural diseases like false teeth, oral ulcers and sunken fontanelle were not to be treated by conventional practitioners as the children would die upon receiving an injection. The average cost of herbal medicines was five hundred shillings and most times people would pay in kind. Knowledge on herbal medicines was acquired from mothers and grandmothers. The caregivers sourced their herbs mainly from their own farms and the nearby forests. There was a general belief that herbal medicines were more effective than conventional medicines especially when handled correctly



**5.2.2 To describe the self-reported outcomes of herbal medicines used by caregivers among children under the age of five years in Silibwet Sub-Location, Bomet County, Kenya**

Majority of the caregivers believed that herbal medicines are safe especially when sourced from their own farms or trusted herbalists. Two participants reported that some children bled when given topical herbal mixtures on the tongue but associated that with the disease escaping from the body as opposed to an adverse event. Only two participants reported that they witnessed severe skin reactions on children using topical herbs to bathe.

**5.3 Conclusion**

There was wide use of herbal medicine on children under the age of five years in Silibwet sub location. This was fueled by the strong belief that it offered protection from evil eyes and promoted better growth. The caregivers interpreted some common childhood symptoms like jaundice and having a sunken fontanelle as cultural diseases. This could lead to delay seeking of care, which is harmful to the children. The general perception that herbal medicines are largely safe was also a major factor and since most of those herbs are unstudied, it becomes difficult to draw conclusions on whether or not they are toxic, medically speaking. Affordability and accessibility was also a key factor. None of the users of herbal medicines in Silibwet had received any formal training, reflecting the situation in most of Africa where knowledge on traditional medicine is passed down orally.

## **5.4 Recommendations**

### **5.4.1 Policy Recommendations**

These are in line with the WHO strategy of 2014-2023

- i) That the Ministry of Health should implement the policies governing herbal medicine trade and distribution.
- ii) That training on dangers of use of drugs with unproven benefits be given to the CHWs during their induction so that they can pass it on to the members of the community
- iii) That preliminary training on complementary medicine be introduced to the medical school curricula

### **5.4.2 Recommendations for Further Research**

- i) That a larger quantitative or mixed methods study be done in this region so as to make the findings generalizable
- ii) An educational interventional study be done in the Silibwet community on the matter concerning herbal medicine use focusing on dangers of using unstudied medicines to see the net effect in the community.
- iii) That a study on the effect of religious beliefs on health choices be done in this Silibwet community.

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## APPENDICES

### Appendix I: Research Instruments

#### Interview guide for Caregivers

##### Introduction

“Thank you for agreeing to participate in this interview”. It should take about 45-60 minutes. Please let me know if you would like to stop or take a break at any point. If you want any questions repeated or clarified, please ask. I am going to ask about beliefs that make you choose herbal medicines for your children.

##### BIODATA

Age.....Village.....Occupation.....Level of  
education.....Religion

<b>Guiding question</b>	<b>Possible follow up questions</b>
Are you familiar with herbal medicines?	What are they?
How did you come to learn about HM?	
What are some of the common herbs used on children in this region?	What are they used for?
Where do you get the medicines from?	
Have you ever used HM on your child/children?	For what purpose?
What do you first do when your child gets sick?	Please tell me what influences your decision
Do you ever use HM and hospital medicines together on your children?	Why?
Are there any reasons that make you not take your child to hospital?	Please explain them
When you go to hospital, do you inform the doctor on your HM use?	Why?
Have you noted any adverse effects or benefits on your child after using HM?	If yes, which ones?
Is there anything else you would like to say concerning herbal medicine use in children?	



Kipsigis Translation

**Kanamet**

Kongoi amun keriyen iwolu tebutik. Kiboisien 45-60 mins. Kigonin rusa ye imokyigei.  
Ye itinye tebutik iteb kewolun . Atebenin tebutik konamkei ak kerichek kab kipgaa.

---

TEBUTIK CHE INDOUN

---

1.Ingen agobo kerichekab kipgaa/timin?	Anchon choton
2.Kinaite an kerichekab kipgaa/timin?	
Anchon kerichekab kipgaa /Timin che nootin missing en kebeberi ng'wong	Kiboisyoitoi ano?
4.Inyorunen ano kerichek chuton?	
Kiriboisien kerichek chuton en lakwet/ lagok cheguk ii?	Boisienywan konee
Fos kiriboisien kerichekab kipgaa/ Timin ak chebo sipitali en kasarta agenge en lagokcheguket ii?	Amunee?
7.Amune chuton che yoe komemut lago chguket sipitali?	Asomin iarori chton
Ƙin iwe sipitali, kiimwochi daktari agobo kerichekab kipgaa cheboisien?	Amune?
9.Kiriiger kaimutikalak tugul anan kelchinoik alak tugul yon koboisienlagok chekeget kerichekab kipgaa?	Ngo Iman, ko achon choton?
.Miten ngolyon age ne imwoe agobo kerichekab kipgaa che kiboisien en lagok?	

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## Interview guide for frontline HCWs

### Introduction

“Thank you for agreeing to participate in this interview”. It should take about 45-60 minutes. Please let me know if you would like to stop or take a break at any point. If you want any questions repeated or clarified, please ask. I am going to ask about beliefs that inform the choice of herbal medicine use in children in this county.

### DEMOGRAPHIC DATA

Age.....Gender.....Village.....Cadre.....

.....Level of education.....Facility.....

<b>Guiding Question</b>	<b>Possible follow up questions</b>
What are the common herbs used in children in this region?	What are they used for?
Do you ever recommend HM to your patients?	If yes, for what purposes?
Do your patients ever report use of HM?	How do you respond to their answer?
Do you know some of the Herbal practitioners in this region?	How did you get to know about them?
Do you use herbal medicines on your children?	If yes, for what purposes?
Have you handled a child who has had adverse events from HM use?	Please tell me the experience
How do you handle patients who use HM and conventional medicines concomitantly?	What are the reasons for your response?
Is there anything else you would like to say about herbal medicine use in children?	

**Interview guide for the opinion leaders**

I appreciate your willingness to participate in this interview. It should take about 45-60 minutes. Kindly inform me if you would like to stop or break at any point. If you want any questions repeated or clarified, please ask. I am going to ask about beliefs and that inform the choice of herbal medicine use in children in this county.

DEMOGRAPHIC DATA

Age.....Gender..... Location.....Level of education.....

<b>Guiding questions</b>	<b>Possible follow up questions</b>
What are the common herbs used among children in this region?	What are their uses?
Where are these medicines sourced from?	Do you know some vendors?
Does your department have a record of these medicines?	
Are there any governing laws on herbal medicines that you know of?	Please expound
As a department, what measures have you placed to ensure safety of the HM being distributed?	
In your opinion, what are some of the benefits/advantages and disadvantages of using HM?	

## **Interview Guide for the FGD.**

### **Introduction**

I appreciate your presence here today. The goal of today's meeting is to understand the beliefs that inform your choice of herbal medicine use in children. The session is expected to last 60-90 minutes. The rules for today's discussion will be the following;

- a) We encourage everyone to actively engage and participate
  
  - b) There are no right or wrong answers.
  
  - c) Speak freely but do not to interrupt others while they are talking.
  
  - d) Note taking is for reporting purposes only and will be used for analysis. No names will be attached to the notes.
  
  - e) To safeguard anonymity, any feedback provided today will be kept confidential
- 
1. Do children caregivers around here use herbal medicines? Which ones and for what?
  
  2. Do caregivers prefer herbal medicines or conventional medicines? Why?
  
  3. Are there any benefits to herbal medicines that you can think of?
  
  4. Have you noted any bad outcomes?
  
  5. What are your personal opinions on these herbal medicines compared to conventional medicines?
  
  6. Any other comments?

*Thank you for participating in the study.*

## **Appendix II: Consent Form**

**STUDY TITLE:** Caregivers' Beliefs on herbal medicine use among children under the age of five years in Silibwet Sub-Location, Bomet County.

PI: Fridah Kiptui                      Affiliated Institution: Kabarak University

### **Introduction**

You are invited to participate in this study. This form will help you understand the study aim so that you can voluntarily decide whether you want to participate or not. After you have understood the aim, you will be requested to either agree or decline to participate. Upon agreeing to participate in the study, you will be further requested to affirm that by appending your signature/thumbprint on this form. You will receive a copy of this form for your personal records. This study has been approved by Tenwek Institutional Scientific Ethics and Research Committee (ISERC).

### **Purpose**

The primary objective of this research is to investigate Caregivers' beliefs on herbal medicine use among children under the age of five in Silibwet Sub-Location, Bomet County

### **Eligibility**

All Caregivers of children under the age of five years who live in Silibwet Sub-Location will be invited to participate. Caregivers include all those who make decisions on what to do when a child gets sick, prescribers of treatment and those who influence decisions of the caregivers. They will also have to be 18 years and above for purposes of legal consent and to be speaking either English, Kiswahili or Kipsigis.

### **Design and duration of Study**

This will be a qualitative study and will involve the participants being interviewed by the principal researcher and the interviews recorded by an Audio recorder. The study will take place between June 2023 and August 2023

### **Voluntary Participation**

Participation in this study is voluntary and you have a right to quit at any point in time in the research process with no consequences.

### **Possible Risks and Discomfort**

In case you feel uncomfortable with the research process at any point in time you have a right to quit. In case you have any further questions concerning this research you can contact the principal investigator on 0708411583. If you feel that any of your rights have been violated in the process of the research please contact Tenwek ISERC at [ierc@tenwekhosp.org](mailto:ierc@tenwekhosp.org).

### **Benefits**

There will be no benefits given

### **Compensation**

For the interviews that will take place away from the homes or offices of the participants, transport cost will be reimbursed by the principal researcher.

### **Confidentiality**

The information you give will not be shared with any other persons except those involved in data analysis. The interview guides do not contain names and the principal researcher will use codes to track the participants in the event further clarification is needed.

### **Dissemination of Findings**

The findings of this study will be shared to you through the community health volunteers in Silibwet

**Sub-Location. Statement of Consent**

I have comprehensively read the consent form or/the information has been comprehensively read to me by the researcher and have understood what the study is about. I fully understand that my decision to participate in this study is voluntary and I can choose to leave the study at any time.

**I freely consent to participate in this study.**

I agree to participate in this research YES .....NO .....

I agree to provide my contact details for follow-up YES .....NO

..... Participant's Name .....

Participant's Signature/Thumb print .....

Date .....

Witness 'Name .....

Witness' Signature/Thumb print .....

Date .....

## **Swahili Translation of the Consent**

**KICHWA CHA KUJIFUNZA:** Imani za Walezi kuhusu matumizi ya dawa za mitishamba miongoni mwa watoto walio na umri wa chini ya miaka mitano katika Eneo Ndogo la Silibwet, Kaunti ya Bomet.

**Mtafiti:** Fridah Kiptui

**Taasisi Shirikishi:** Chuo Kikuu cha Kabarak

## **Utangulizi**

Unaalikwa kushiriki katika utafiti huu. Fomu hii itakusaidia kuelewa lengo la utafiti ili uweze kuamua kwa hiari ikiwa unataka kushiriki au la. Baada ya kuelewa lengo, utaombwa kukubali au kukataa kushiriki. Baada ya kukubali kushiriki katika utafiti, utaombwa zaidi kuthibitisha kwamba kwa kuambatisha sahihi/alama yako ya gumba kwenye fomu hii. Nakala ya fomu hii itatolewa kwako kwa rekodi zako mwenyewe. Utafiti huu umeidhinishwa na Kamati ya Maadili ya Kisayansi na Utafiti ya Kitaasisi ya Tenwek (ISERC).

## **Kusudi**

Madhumuni makuu ya utafiti huu ni kuchunguza imani za Walezi kuhusu matumizi ya dawa za mitishamba miongoni mwa watoto walio na umri wa chini ya miaka mitano katika eneo ndogo la Silibwet, Kaunti ya Bomet.

## **Kustahiki**

Walezi wote wa watoto walio na umri wa chini ya miaka mitano wanaoishi katika Eneo Ndogo la Silibwet wataalikwa kushiriki. Walezi ni pamoja na wale wote wanaofanya maamuzi juu ya nini cha kufanya wakati mtoto anapougua, maagizo ya matibabu na wale wanaoathiri maamuzi ya walezi. Pia watalazimika kuwa na umri wa miaka 18 na zaidi kwa madhumuni ya kupata kibali cha kisheria na wawe wanazungumza Kiingereza, Kiswahili au Kipsigis.



## **Ubunifu na muda wa masomo**

Huu utakuwa ni utafiti wa ubora na utahusisha washiriki wanaohojiwa na mtafiti mkuu na mahojiano kurekodiwa na kinasa sauti. Utafiti huo utafanyika kati ya Juni 2023 na Agosti 2023

## **Kushiriki kwa Hiari**

Kushiriki katika utafiti huu ni kwa hiari na una haki ya kuacha wakati wowote katika mchakato wa utafiti bila matokeo yoyote.

## **Hatari Zinazowezekana na Usumbufu**

Iwapo unahisi kutoridhika na mchakato wa utafiti wakati wowote una haki ya kuacha. Iwapo unamaswali zaidi kuhusu utafiti huu unaweza kuwasiliana na mpelelezi mkuu kwa nambari 0708411583. Ikiwa unahisi kuwa haki zako zozote zimekiukwa katika mchakato wa utafiti tafadhali wasiliana na Tenwek ISERC kwa [ierc@tenwekhosp.org](mailto:ierc@tenwekhosp.org)

## **Faida**

Hakutakuwa na faida zitakazotolewa

## **Fidia**

Kwa usaili utakaofanyika mbali na nyumba au ofisi za washiriki, gharama ya usafiri italipwa na mtafiti mkuu.

## **Usiri**

Taarifa utakazotoa hazitashirikiwa na watu wengine wowote isipokuwa wale wanaohusika katika uchanganuzi wa data. Miongozo ya usaili haina majina na mtafiti mkuu atatumia misimbo kufuatilia washiriki katika tukio ufafanuzi zaidi unahitajika.

## **Usambazaji wa Matokeo**

Matokeo ya utafiti huu yatashirikiwa kwako kupitia wajitolea wa afya ya jamii katika Eneo Ndogo la Silibwet.

## **Taarifa ya Idhini**

Nimesoma kwa kina fomu ya idhini au/habari imesomwa kwangu kwa kina na mtafiti na nimeelewa utafiti unahusu nini. Ninaelewa kabisa kuwa uamuzi wangu wa kushiriki katika utafiti huu ni wa hiari na nina haki ya kujiondoa wakati wowote wakati wa utafiti. Ninakubali kwa uhuru kushiriki katika utafiti huu.

Ninakubali kushiriki katika utafiti huu NDIYO .....HAPANA .....

Ninakubali kutoa maelezo yangu ya mawasiliano kwa ufuatiliaji NDIYO ..... HAPANA .....

Jina la Mshiriki .....

Sahihi ya Mshiriki/Alama ya kidole gumba .....

Tarehe .....

Shahidi 'Jina .....

Sahihi ya Shahidi/Alama ya kidole gumba .....

Tarehe .....

## **Kipsigis Translation of the Consent**

### **FOMITAB KONUNETAB GE**

**KIT NETONONEN SOMANET:** Kayanetab Biik cheribei lagok Agobo Kerichetakab Kipgaa Che Kiboisien En Lagok chetinyei kenyishiek mut ak kebwa gwony En Silibwet, Kounti Nebo Bomet.

### **ARORUTIK CHE NDOU**

Kitochin inye iigu agenge che yoe somanani. Fomit inoni kotoretin iguye amune si igonuge inyegen en tilengúng imoche iyay anan acha. Ye ka iguye amune ini, kesomin iyan anan iesie iigu agenge cheyoe somanani, kesomin kora iyan ye inde siyet en kalamit anan siyetab eungung en fomit inoni.

Fomit ne kergei ak inoni kegonin inye igornorchigei si koik kabwatengung. Somanani ko kian komitee chebo Tenwek chebo atebet nebo chikilosiek (Tenwek Ethics Research Committee) chebo ngomotik.

### **Tokyinetab somanani**

Tokyinet neo nibo somanani ko kechigil koyonutikab nganaset agobo kerichetakab ketikab timin che kiboisien en lagok chebo kenyisiek che mosire mut en kokwet ne mingin nebo Silibwet, en Bomet kounti.

### **Chamchinet**

Biik cheribei lagok chetinyei kenyishiek mut ak kebwa gwony che menyei kokwet ab silibwet kuchamat kuchut chigilishoni. Biik cheribei ko boto icheget chetilei yon kagomyan lakwet ole kinyoito lakwet ye kamyani. Bichuton ko yochei kotinyei kenyisiek chesirei taman ak sisit ak komuchei kongalalal kiingereza ,Kiswahili anan ko kipsigis.

### **Betusiek chebo chigilisiet**

Chigilisyoni kinamei arawet ab lo ag ketar eng arawetab sisit, kenyit ab 2023

## **Konunet ab gei**

Chametab chi tugul koik agenenge en chekitepsen and chigilisyoni ago tinnyei chitugul broindo kumanda en kasarts agetugul

## **Ngoiset ak kamutik**

Angot igere ile itinyei kaimutyet age tugul kotyengei olekatestai chigilisyoni nemuchei koimin ko miten chamet ibirchi netonchin somanani en 0708411583.ana ko offisit netonon chi chigilisyet en Tenwek ISERC at [ierc@tenwekhosp.org](mailto:ierc@tenwekhosp.org).

## **Borotet**

Mamiten kii agetugul negochin biik lasi kage en che kichigili

Biik che kayan ketepsen en chilisyoni, che kbwa en ole loi, kiwekyin rabisiek che kaboisien kobun en oret

## **Siri**

Ngelek che kemwoyech en chigilisi komagichpteoi komamiten chamdaet

## **Pyetaet ab logoiwek**

Logowek chetun kinyoru en chigilisyoni kokiibun inyii

## NGALEK AGOBO KONUNENGUNG BO GE

Karasoman kotugul fomitab konunetab ge anan/ ngalek chemi orit ko kagesomanuan anee inendet ne yoe chikilisioni ak koroguye tokyinetab ge nebo somanani.

Karaguye nebo iman ale tilet nebo oik agenge ne konugey koma kisigyi koyai somanani ak atinye imanda oesio komangany ngólyon en kasarta netesetai somanani.

Akonugei ko mo en kasigyinet oik agenge che kiyoen somanani. Oyoni oik agenge che kiyumen ngalek agobo somanani.

Ee..... Achicha.....

Oyoni agon ngalek agobo ole kinyorchon agobo tuguk che kimuche kisib ya kagobata somanani.....

Kainenyun.....

Siyetab kalamit/ siyetab eungung..... Tarigit.....

Baoryat.....

Siyetab kalamit/ siyetab eungung..... Tarigiit.....

## Appendix III: Ethical Clearance Letter from Tenwek Hospital



### TENWEK HOSPITAL

A Ministry of Africa Gospel Church

Postal Address:  
P.O Box 39-20400  
Bomet-Kenya

Telephone: (254) 728-091900, 20-2045542  
E-mail: [info@tenwek.hosp.org](mailto:info@tenwek.hosp.org)  
Website: [www.tenwekHospital.org](http://www.tenwekHospital.org)

**Date: May 31<sup>st</sup> 2023**

**Dear Dr. Fridah,**

**RE: 2023-0009; "Caregivers' beliefs on herbal medicine use among children under the age of five years in Silibwet sub-location, Bomet County."**

This is to inform you that the Tenwek Hospital ISERC Executive Committee has reviewed all the documents submitted for the corrections to the subject matter above and now approves your proposal. The approval period is from **31<sup>st</sup> May 2023-30<sup>th</sup> May 2023**.

This approval is subject to compliance with the following requirements.

- i. Only approved documents including informed consent, proposal, and study instruments to be used.
- ii. All changes including amendments, deviations, and violations are submitted for review and approval by the Tenwek Hospital ISERC.
- 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 the Tenwek Hospital ISERC in writing within 72 hours of notification.
- iv. Any changes anticipated or otherwise that may increase the risk affected the safety or welfare of study participants and others or affecting the integrity of the research must be reported to the Tenwek Hospital ISERC within 72 hours.
- v. Clearance for export of biological specimens must be obtained from relevant institutions if applicable.
- vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Fill out an annual renewal form from the website and 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 the Tenwek Hospital ISERC.

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

Upon publication, ensure to indicate Tenwek Hospital affiliation in your writeup.


Blessings in your study.  
Sincerely,


Dr. Miriam Wanjala  
ISERC Chairperson on behalf of the ISERC Committee.



*Tenwek Hospital is a Christian community committed to excellence in compassionate healthcare, spiritual ministry and training for service.*


**Appendix IV: NACOSTI Research Permit**

  
**REPUBLIC OF KENYA**

  
**NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION**

Date of Issue: **30/June/2023**


**RESEARCH LICENSE**




**This is to Certify that Dr. Fridah Jephchirchir Kiptui of Kabarak University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Bomet on the topic: Caregivers' beliefs on herbal medicine use among children under the age of five in Silibwet Sub Location, Bomet County for the period ending : 30/June/2024.**

License No: **NACOSTI/P/23/26831**

**623279**  
 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.**


**See overleaf for conditions**



## Appendix V: List of Publication

JOURNAL OF CLINICAL CARE AND MEDICAL ADVANCEMENT

 <https://doi.org/10.58460/jcma.v1i01.61>

 Open Access

**ORIGINAL ARTICLE**

MJ&M BIOLABS

### Caregivers' Beliefs on Herbal Medicine Use among Children under the Age of Five Years in Silibwet Sub-Location, Bomet County


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To read this paper online, please scan the QR code below.



### ABSTRACT

The Declarations of Alma Ata and Astana recognized traditional medicine as part of primary health care. About 80% of people in the world today depend on traditional medicine to meet their health needs, because they are considered easily accessible, safe, cost-effective, and culturally acceptable. For this reason, the World Health Organization (WHO) devised a strategy to help member states formulate policies for regulation of herbal medicine production, use and practice. Many countries, in response to the WHO strategy, have formulated policies, research centres, and training institutions for herbal practitioners. In Kenya, the Ministry of Health has developed policies for regulation and registration of herbal practitioners. However, the policies are yet to be implemented. As such, the practice of traditional medicine in Kenya is unregulated and the products sold could potentially pose harm to the population. Children are at the highest risk of harm because of their developing body systems which are susceptible to toxicity. Since literature has shown that beliefs influence behaviour, this study aims to explore caregivers' beliefs on herbal medicine use among children aged 5 years and below in Silibwet Sub-Location, Bomet County. This was a qualitative phenomenological study that was done in Silibwet sub-location. Purposive sampling was used to select 10 caregivers for in depth interviews and 15 community health workers for focused group discussions. Snowball sampling was used to select 6 key informants. A researcher-administered semi-structured interview guide was used to collect data. Thematic data analysis was used. The study found that over 90% of caregivers used herbal medicines on their children for protection from evil eyes and for promotion of growth. Others used them for treatment of cultural, common and chronic illnesses and for cleansing. They considered herbal medicine safe, cheap and easily available.

**Keywords:** Beliefs, Caregivers, Children, Herbal Medicine



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**Appendix VI: Evidence of Conference Participation**



**KABARAK UNIVERSITY**

**Certificate of Participation**

**Awarded to**

*Fridah Kiptui*

for successfully participating in the 13<sup>th</sup> Annual Kabarak University International Research Conference held from 23<sup>rd</sup> – 24<sup>th</sup> June 2023 and presented a paper entitled “*Caregivers' beliefs on herbal medicine use among children under the age of five years in Silibwet Sub-Location, Bomet County*.”

1 PETER 3:15

**Conference Theme**

**Bridging the Gaps in Global Health**

**Dr. Pamela Kimeto**  
Dean, School of Medicine and  
Health Sciences

**Dr. Moses Thiga**  
Director - Research, Innovation  
and Outreach

**Kabarak University Moral Code**

As members of Kabarak University family, we purpose at all times and in all places, to set apart in one's heart, Jesus as Lord.

(1 Peter 3:15)



Kabarak University is ISO 9001:2015 Certified