JOURNAL OF CLINICAL CARE AND MEDICAL ADVANCEMENT

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

ORIGINAL ARTICLE

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MJM 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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**Article History**

Submitted: 18th October 2023

Accepted: 7th November 2023

Published Online: 8th November 2023

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

# INTRODUCTION

Traditional medicine is an umbrella word for the practices and beliefs, indigenous to a community, used in health promotion, prevention and treatment (WHO, 2019). The practices have been passed down the generations by apprenticeship. Herbal medicines are the core of traditional medicine, as they are native to a particular community, country or culture (WHO, 2019). Herbal medicines include herbs or minerals used for their therapeutic benefit (WHO, 2019). Plant parts used in herbal medicine include seeds, bark, roots, stem, leaves and flowers. They may be ingested raw, infused in tea or water, inhaled, or applied topically (Woolf, 2003). About 40% of the pharmaceutical products in the market today (e.g. quinine, salicylates, artemisinin, contraceptive pills, and digitalis) are plant extracts (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).

Approximately 80% of the world's population utilize traditional medicine (WHO, 2022). Some of the reasons for herbal medicine use include their affordability, accessibility and being culturally acceptable. With the support of the WHO, many countries are embracing and promoting certified education in traditional medicine (WHO, 2013). Countries like China and Cuba have made great strides in integrating traditional medicine into the conventional health system (WHO, 2019). In Africa, South Africa, the Democratic Republic of Congo, Tanzania, among others, have introduced herbal medicine training at institutions of higher learning (WHO, 2013). In other developing countries, including Kenya, knowledge about herbal medicine is still passed down orally, which makes it difficult to identify truly qualified herbal medicine practitioners (WHO, 2013).

In a systematic review, 58% of the population in Sub-Saharan Africa used herbal medicine (James et al., 2018). The prevalence was even higher, at 94%, in a population study in Nigeria (James et al., 2018). In Kenya, more than 70% of the population depends on herbal medicine to meet their health care needs (Okumu et al., 2017). This is attributed to the scarcity of qualified health care workers, long distances to health care facilities, high cost of medical care and widespread cultural attitudes regarding safety and effectiveness of herbal remedies (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). The Kenyan Ministry of Health (MOH) recognizes traditional medicine. The Health Act of 2017 stipulated that MOH will formulate policies to govern traditional medicine practices and implementation carried out at the county level (The Health (Kenya) Act, 2017). 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. Similarly, the Pharmacy and Poisons Act, PA of 2012, prohibited the manufacturing or advertising of any unlicensed products and required that every product in the market have a label showing its 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 maybe potentially harmful (Chebii et al., 2020).

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 chances of errors during harvesting, preparation or even labelling of the drugs, and this could have fatal consequences on people. Kenya's cultural and ethnic diversity presents a wide array of plant species used in herbal medicine. The big numbers make studying each of these plants species as herbal remedies very expensive (Okumu et al., 2017).

The unregulated practice of traditional medicine poses a potential health risk due to toxicities that maybe experienced from herbal remedies. Children, in particular, are at a higher risk of these toxicities owing 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 conventional medicine. For instance, in a survey of children and adults who defaulted treatment for tuberculosis (TB) in Nairobi Kenya, about 27% of the patients cited herbal medicine use as the reason for defaulting

treatment (Muture et al., 2011). They opted for herbal medicine because of the belief that herbal medicines have less side effects.

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 (Gakuya et al., 2020). Owing to this, 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. 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. Very few studies have been done in Kenya to this effect and particularly in Bomet County. Therefore, this study's objective was to explore caregivers' beliefs on herbal medicine use among children under the age of five years.

# METHODOLOGY

## A. *Study Design*

This study employed a cross sectional qualitative phenomenological study design. It sought to understand caregivers' beliefs through their lived experiences (Fuster Guillen, 2019).

## B. *Study Location*

The study was conducted in Silibwet Sub-Location, Bomet Central Sub-County, in Bomet County, Kenya.

## C. *Study Population*

Caregivers of children under the age of 5 years encompassed the study population. Caregivers in this context included all those influencing or involved in decision-making for children under the age of 5 years when they needed medical attention. Medical attention meant falling sick or needing a wellness check. They included all those who made decisions on whether or not a child was to be taken to hospital, watch over them, or administer herbal medicines to them, and all who influenced decisions of parents of the children. It also encompassed those who treated (traditional or conventional practitioners) the children. These included parents, guardians, frontline healthcare workers, herbalists and local opinion leaders. Local opinion leaders (e.g. religious leaders) were persons who gained community trust through their works.

## D. *Sample Population*

Members of the target population sampled were defined based on the criteria below:

*Inclusion Criteria*

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

*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, as their experiences may not have been representative of the local culture.

## E. *Sample Size Determination*

A total of 31 caregivers participated in this study. Purposive sampling was used to select 10 caregivers for in-depth interviews. This was based on a systematic review of twenty-three studies which found that

saturation in qualitative studies is reached after nine to seventeen in-depth interviews (Hennink and Kaiser, 2022). Therefore, in this study, saturation was reached after 8 interviews. Two more interviews were done with no new codes and categories generated. Thus, a total of 10 in- depth interviews were done. 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. Two herbalists and one religious leader were selected through referral by the caregivers. The other three were done on frontline healthcare workers: one clinical officer, one nurse and one public health officer. All the three frontline healthcare workers work in Silibwet health centre.

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

## F. *Data Collection Tools*

Data 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.

### *F.1 Validity and Reliability of the Data Collection Tool*

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). To ensure reliability, the transcripts were shared with an independent reviewer to help generate codes and themes which were compared with the ones from the principal researcher. No major theme differences were noted except for different wordings which were harmonized with the help of a third reviewer with experience in qualitative research (Cypress, 2017).

## G. *Data Collection Procedures*

After seeking approval from all the relevant bodies, a research assistant was trained to assist in the data collection. Caregivers who met the inclusion criteria and had given their written consent were interviewed in their homes with a few exceptions. Two mothers were interviewed in the market at their grocery stores upon their request, 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.

CHWs consented verbally during a phone call to take part in the interview and agreed on a meeting date in Silibwet health centre. The Meeting was held in the hospital's meeting room. Written consents were signed by each interviewee before the exercise. 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.

### H. *Data Management*

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 using a voice distortion software.

### I. *Data Analysis*

Data analysis was by thematic analysis as described by Braun and Clarke (2006).

### J. *Ethical Considerations*

Ethical clearance was first sought and granted by the Tenwek Hospital Institutional Ethics Review Committee (IERC). Subsequently, a research license was obtained from the National Commission of Science, Technology, and Innovation (research license number NACOSTI/P/23/26831).

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 participants were informed that they were free to exit the study at any point in the process without any consequences. Confidentiality and anonymity was ensured by de-identifying the transcripts and labelling them by codes instead of names. The transcripts were stored in password-protected devices, and was only shared with the independent reviewer for data validation and analysis.

## RESULTS

### A. *Socio-Demographic Characteristics of the study participants*

Majority of the participants were female, aged between 30 and 49 years as shown in table 1 below. Twelve out of the total thirty-one had attained college level education while only three participants 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 of her religion category as demonstrated on table 1

***Table 1:***

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

| | Parents/Guardians | Health Workers | Herbalists | Religious Leaders | Community Health Workers | Total |
|---|---|---|---|---|---|---|
| **Gender** | | | | | | |
| Female | 10 | 2 | 2 | 1 | 11 | 26(83.9%) |
| Male | 0 | 1 | 0 | 0 | 4 | 5(16.1%) |
| **Age** | | | | | | |
| <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%) |
| **Highest level of education** | | | | | | |
| 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%) |

| | Parents/Guardians | Health Workers | Herbalists | Religious Leaders | Community Health Workers | Total |
|---|---|---|---|---|---|---|
| College | 2 | 3 | 0 | 1 | 6 | 12(38.7%) |
| **Religion** | | | | | | |
| Christian | 10 | 3 | 1 | 1 | 15 | 30(96.8%) |
| Other | 0 | 0 | 1 | 0 | 0 | 1(3.2%) |

## B. *Beliefs on Uses*

### 1. Protection

Caregivers believed that herbal medicines offered them protection as follows:

i. Evil eyes/ shadows

All caregivers that used herbal medicines believed that herbal medicines offered their children protection from evil eyes and evil shadows. They bathed their babies in herbal mixtures daily for this purpose, particularly when visiting public places like the churches or the market.

"*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 sometime, 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.

ii. Diseases carried by people

The caregivers believed that some people in the community carried a cultural illness called 'mirutik'. This is a condition where a child gets a widened, sunken fontanelle with oral ulcer. 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'.

*".....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

### 2. 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 with early fontanelle closure. 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. Ground herbs also served the same purpose of prevention.

### 3. Treatment

Caregivers believe that herbal medicine could be used for treatment for the following conditions:

i. Cultural diseases

Certain conditions were considered cultural and not to be treated at the hospital. They believed that if treated at the hospital they would not get better and for instance, if a patient got an injection, he or she 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 a herbalist.

*"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

Silibwet community members believed that chronic illness should be treated with herbal 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 that the child will not get well and it 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.

**4. Cleansing**

Children born to parents who had lost a baby before or got into contact with people carrying 'cultural diseases' had to be cleansed using 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.

**5. 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.

*"....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.

## C. *Beliefs on Handling*

**1. Medical Pluralism**

All caregivers used conventional medicines concurrently with topical herbal medicines. In their opinion, these medicines would not mix as they believed the topical herbs were not absorbed.

Participants differed in opinion when it came to oral herbal medicines. About 60% believed that they should not be used concurrently because 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.

The other 40% gave herbal medications concurrently with conventional medications as the believed that the effect would be synergistic. They also believed that it was safe to administer herbal medicines concurrently with conventional drugs as long as they were given at different times.

Most caregivers did not disclose their use of herbal medicines to health care workers for fear of being scolded or blamed for the child's illness.

"*.....no, no, no. when I bring the hospital medicines, I put my 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.

**2. 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 sexual intercourse with the husband. "Dirty handlers were required to bathe in herbs to cleanse themselves before handling the medicines.

### 3. 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. This is because they believed that the stranger's eyes would make the herbal medicines 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 to work*" – caregiver 4

## D. *Beliefs on How to Acquire*

### 1. Knowledge

Knowledge on herbal medicine was passed down the generations through apprenticeship. A mother would identify one of her daughters who was intelligent and interested and then taught her. Learning begun with observation from a young age but the proper intentional training would happen when the child was of age. None of the participants interviewed had received any formal training on herbal medicine, including the herbalists.

### 2. Acquisition

Herbal medicines for children were not sourced from the market as they believed that medicines found in the market were not as pure as those freshly gathered from the farm.

"*the market? nooooooo. 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.

## E. *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 gather them from natural forests. The cost of purchasing herbal medicines from a known herbalist regardless of the quantity was five hundred Kenyan shillings or an equivalent, in kind. This compared to conventional medicine was cheap as going to hospital included transportation cost, doctor's fee, laboratory charges and finally the drugs.

The caregivers also believed that herbal medicines were more efficient than conventional ones. Owing to this, many reported that one only needed a few days of taking herbs to get better as compared to conventional medicines.

# DISCUSSION

The study findings showed that caregivers used herbal medicines to protect their children from evil eyes and evil shadows. This is similar to a study done in Niger Delta where caregivers administered herbal medicines and charms to their children 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 originates from sinning against the ancestors, who would subsequently trouble people with evil spirits (Anizoba, 2023). On the contrary, in Germany a qualitative study of forty-nine participants recorded the main reason for use of herbal medicine among adults, as treatment of both acute and chronic diseases (Welz et.al, 2018). The difference maybe because the studies were carried out in different cultural backgrounds.

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). Herbal medicines in Silibwet were used to treat

conditions like fever, constipation, diarrhoea, and measles, among others. This was also seen 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 primarily depended on using traditional medicine as a means to fulfil their health needs. Similarly, the caregivers in Silibwet, Kenya, use herbal medicines for the 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 of 49 participants in Germany 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 another study in Germany where 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, heart disease and 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 (Apolot et al., 2023). This 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 the 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 and Aluko-Arowolo, 2022). On the contrary, the present study showed that most caregivers did not use oral herbal and conventional medicines concurrently. This was so because they were afraid of adverse effects from interaction of the two medicines. These study findings 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 present study did not look at factors associated with concurrent use.

In the present study, only one caregiver 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 those in German were processed herbal medicine products whereas the ones in Silibwet were raw herbs. Moreover, doctors in Germany received some training on herbal medicine products (Mwangi et al., 2005). The findings of this study differ with a study done in Eastern Cape, South Africa which found that 56% of herbs given to children were sourced from herbalists, 24% from vendors and 17% sourced by mothers and grandmothers (Dambisya and Tindimwebwa, 2003). This South African study results may be attributed to the fact that it involved children up to 18 years of age and could therefore have herbs sourced from herbalists as they were not as sensitive as the children under five years of age. The present study also differs from a study done in western Kenya where parents sourced their herbal medicines from a local market for treating diseases like measles and diarrhoea (Ngere et al., 2022).

Caregivers from Silibwet Sub-Location believed that herbal medicines were cheap, effective and had

minimal side effects compared to conventional medicines. Drivers for the use of herbal medicine in Sub-Saharan Africa include: lower cost, are natural and their better efficacy compared to conventional medicines (James et al., 2018). This study agrees with a study done in Uganda where caregivers administered herbal medicines to their children with sickle cell disease 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 and Aluko- Arowolo, 2022). The studies above were all done in Sub-Saharan Africa and may therefore explain the similarities particularly on cost, given that most countries are in the low income category. Contrary to these findings, breastfeeding mothers in Sierra Leone used herbal medicines despite having subsidized to free access to conventional medical facilities (James et al., 2019). The study carried out in Sierra Leone implies that herbal medicine use is driven by other factors other than cost and access to hospitals.

All the participants of the present study acquired knowledge on herbal medicines by apprenticeship. This was different in Uganda where caregivers of children with sickle cell anaemia 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. Furthermore, caregivers of children with chronic diseases are likely to find themselves in support groups and get 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 neighbours 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.

## CONCLUSION

All except two of the thirty-one caregivers interviewed in this study used herbal medicines on their young children. The herbal medicines were used for: protection against evil eyes and shadows, prevention of common paediatric 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, diarrhoea, constipation, measles and colic. Furthermore, there was a strong belief that cultural diseases were to be treated using herbal medicines. The average cost of herbal medicines was five hundred Kenya shillings and most of the times people would pay in kind. Children acquired knowledge on herbal medicines from their mothers and grandmothers. 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.

## RECOMMENDATIONS

The following are recommendations from the study's findings:

### A. *Policy Recommendations*

i. The Ministry of Health should implement the policies governing herbal medicine trade and distribution.
ii. 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

B. ***Recommendations for Further Research***

i. A larger quantitative or mixed methods study be done in this region so as to make the findings generalizable
ii. An interventional study should be done regarding herbal medicine use with a focus on dangers of using unstudied medicines to help people to make informed choices.

**CONFLICT OF INTEREST**

All authors declare no conflict of interest.

**AUTHOR CONTRIBUTIONS**

FK: Conceived and designed the study
Wrote the proposal and sought ethical approval
Collected and analysed data
Compiled the data
Wrote the final version of the manuscript

MM: Critical review of the work
Approval the manuscript for publication

MW: Reviewed the manuscript drafts
Approved the manuscript for publication

EK: Critical review of the work
Approved the manuscript for publication

**FUNDING**

No external funding was received towards supporting this study.

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