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Documenting the Traditional Medical Plants in Zambia: A Case Study of Motel Compound Mazabuka, Southern Province

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Abstract

This study, titled "Documenting Traditional Medicinal Plants in Zambia: A Case Study of Motel Compound, Mazabuka, Southern Province," aims to identify and document traditional medicinal plants used in treating diseases in Mazabuka. The objectives of the study are to record conventional medicinal plants, identify commonly used species and their traditional applications, describe harvesting methods and preparation processes, and investigate the perceived efficacy of traditional medicine in treating illnesses. The research employs a qualitative ethnobotanical approach, utilizing interviews, observations, and field surveys with local traditional healers and community members to gather information.

The study revealed that the community relies on a variety of medicinal plants, including Vernonia amygdalina, Azadirachta indica, and Aloe vera, which are used to treat ailments such as malaria, gastrointestinal infections, skin diseases, and respiratory conditions. Harvesting and preparation methods are largely traditional, involving drying, decoction, and topical application, with knowledge typically transmitted orally across generations. Respondents reported high perceived efficacy of these medicinal plants, particularly in managing common ailments, although some conditions require combination with formal healthcare.

The research concludes that traditional medicinal plants remain vital for primary healthcare in Motel Compound, yet there is an urgent need for systematic documentation and preservation of indigenous knowledge. The study recommends creating community-based databases of medicinal plants, promoting collaboration between traditional and formal health practitioners, integrating ethnobotanical knowledge into local health policies, and encouraging further scientific validation of plant efficacy.

Keywords: Traditional Medicinal Plants, Indigenous Knowledge Systems, Ethnobotany, Healthcare Practices, Mazabuka

1. Introduction

1.1 Background

Traditional medicine has long been an integral part of Zambia's cultural and healthcare system, especially in rural areas where access to modern medical facilities is limited. For centuries, Zambians have relied on medicinal plants for treating various ailments, with this indigenous knowledge passed down through generations. The continued reliance on herbal treatments is largely due to their accessibility, affordability, and the trust communities place in traditional healers (Chinsembu, 2016). Globally, the World Health Organization (WHO) estimates that about 80% of people in parts of Asia and Africa depend on medicinal plants for primary healthcare (WHO, 2003; Sato, 2012) [57, 50]. Despite advances in modern medicine, the demand for traditional and complementary medicine continues to rise (WHO, 2005; WHO, 2013 [58]). Southern Africa, rich in biodiversity with over 66,000 plant species, provides a wide range of medicinal plants that are perceived to be safer and more acceptable than conventional medicines (Krug *et al*., 2002; Mshana *et al*., 2008; Sato, 2012) [33, 45, 50]. Zambia alone hosts more than 4,600 flowering plant species, with over 70% of its population benefiting from medicinal plants (Cumming, 1999). However, traditional medicine remains under-documented, and much of the knowledge is transmitted orally, making it vulnerable to loss due to modernization and cultural shifts. This study, therefore, seeks to document the traditional medicinal plants, their preparation methods, and their perceived effectiveness in Mazabuka District, Southern Province.

1.2 Statement of the problem

Traditional medicinal plants remain a vital component of healthcare in Zambia, particularly in rural areas such as Mazabuka, where access to modern medical facilities is limited. However, despite their widespread use, there is inadequate scientific documentation and validation of these plants, and the indigenous knowledge surrounding their use is at risk of being lost due to its oral transmission and lack of systematic recording. The gap between traditional and modern healthcare systems further hinders the integration of both approaches for improved healthcare delivery (WHO, 2003 [57]; Waldram, 2000). The World Health Organization estimates that between 70% and 95% of populations in many developing countries rely on traditional medicine as their primary source of healthcare, often due to accessibility, affordability, and cultural acceptability (WHO, 2003) [57]. Yet, limited empirical research exists on the specific medicinal plants used, their preparation methods, and their perceived effectiveness. This discrepancy between the extensive use of traditional medicine and the paucity of scientific documentation presents a critical research gap. Addressing this gap is essential for preserving cultural heritage and for identifying safe, effective, and affordable treatments that could complement conventional healthcare systems.

1.3 Research Objectives

1.3.1 General Objective

To investigate and document the traditional medicinal plants used in the treatment of ailments within Mazabuka, Southern Province, Zambia.

1.3.2 Specific Objectives

1. To identify the commonly used medicinal plants, their traditional uses, harvesting methods and preparation processes.
2. To document the traditional medicine plants used in the treatment of aliments in Mazabuka.
3. To investigate the perceived effectiveness of traditional medicine in curing the ailments.

1.4 Theoretical Framework

This study is guided by the Indigenous Knowledge Systems (IKS) Theory, which emphasizes the value of community-based knowledge passed through generations. The theory posits that indigenous knowledge is a legitimate, complex, and dynamic system of understanding that is specific to cultural contexts.

In this study, the theory supports the exploration of traditional medicine as a valid knowledge system capable of contributing to health care solutions. This framework acknowledges the legitimacy and value of indigenous knowledge in the management of health and natural resources. It emphasizes that traditional healers and elders possess rich oral knowledge passed through generations, which is context specific and adaptive to local environmental conditions, C.A. (2002). Key variables include:

Indigenous Knowledge (traditional plant identification, use, and preparation).

Modern Health Integration (the potential to blend traditional and modern practices).

These variables align with the study objectives and will be reflected in the literature review, methodology, and analysis.

1.5 Significance of study

Documenting traditional medicinal plants is vital for preserving indigenous knowledge that is at risk of extinction due to modernization and the aging of traditional healers (Cunningham, 1993; Mshigeni, 2005) [17, 46]. It contributes significantly to academic literature by providing valuable ethnobotanical data that enhance understanding of pharmacological properties, efficacy, and potential for new drug discovery (Gurib-Fakim, 2006 [25]; Balick & Cox, 1996 [6]; Bussmann, 2017). Furthermore, well-documented information can inform policy formulation and health planning by facilitating the integration of traditional medicine into national healthcare systems and supporting intellectual property protection and biodiversity conservation (Correa, 2001; WHO, 2013) [16, 58]. Scientific validation of traditional remedies ensures safer and more effective use, minimizing risks through pharmacological and toxicological studies (Fabricant & Farnsworth, 2001; Willcox *et al*., 2011; WHO, 2019) [20, 60, 59]. Lastly, such documentation fosters collaboration between traditional healers and formal healthcare practitioners, promoting a more holistic and culturally sensitive healthcare system that enhances accessibility and patient outcomes (Mokgobi, 2014; Green, 1999) [42, 24].

2. Literature Review

2.1 Identification, uses, harvesting, and preparation

Zhang *et al*. (2013) [62] highlighted decoction as the most prevalent method of preparing traditional Chinese medicine due to its ability to extract both water-soluble and non-water-soluble active compounds. Similar findings were reported by Srinivas and Gulab (2023) [54], who found decoction, extracts, and pastes to be central in Indian ethnomedicine, while Negi *et al*. (2020) [47] and Kunwar *et al*. (2012) [34] also identified boiling, crushing, and powdering as common preparation methods in the Himalayas and Nepal. Conversely, Pandey and Savita (2017) [48] noted that poor harvesting and post-harvest handling practices compromise quality, suggesting the need for improved collection standards.

Negi *et al*. (2020) [47] documented 164 medicinal species in Ethiopia, emphasizing the use of herbs and leaves for respiratory and gastrointestinal ailments, aligning with findings by Lulesa *et al*. (2025) [37] who recorded 274 species mostly from wild sources. Similarly, Maroyi (2013) in Zimbabwe identified 93 medicinal species used for gastrointestinal and respiratory infections, reinforcing the global reliance on herbal therapy. However, both studies noted limited phytochemical validation, differing from Sphamandla (2025) [53], who focused on bioactive extraction to enhance potency, suggesting that African ethnomedicine remains under-researched scientifically.

Regionally, Maroyi (2013) found shrubs and trees as primary medicinal sources in Zimbabwe, comparable to the Ethiopian studies by Lulesa *et al*. (2025) [37] and Negi *et al*. (2020) [47], which reported herbs and leaves as dominant forms. These similarities confirm a shared dependence on natural forest flora for traditional healthcare. However, both studies cautioned against unsustainable harvesting and loss of indigenous knowledge due to deforestation and modernization, echoing Pandey and Savita (2017) [48] who called for sustainable collection practices.

In Zambia, Chansa-Kabali *et al*. (2019) [11] documented that

traditional healers prepare remedies by pounding roots and boiling leaves, consistent with the methods observed by Zhang *et al*. (2013) [62] and Srinivas and Gulab (2023) [54] globally. Chinsembu (2016) identified 94 plant species used in managing HIV/AIDS-related diseases in Livingstone, mostly from Fabaceae and Combretaceae families, while Chimbwali (2022) [12] recorded 17 species used for lymphatic filariasis. These findings mirror regional and global trends but also reveal insufficient pharmacological testing and a lack of sustainable harvesting strategies (Chinsembu, 2016; Chimbwali, 2022 [12]; Pandey & Savita, 2017 [48]).

2.2 Traditional medicinal plant identification

Globally, Agidew (2022) [2] revealed that phytochemical analyses of Ethiopian medicinal plants identified key compounds such as phenolics and tannins, which are essential for validating traditional medicinal uses. Similarly, Kahan *et al*. (2023) [31] found that rural communities in Pakistan rely heavily on herbal medicine, documenting 65 plant species across 27 families, emphasizing the cultural and pharmacological significance of medicinal flora. Simbo (2010) [51] also reported that 107 plant species were used in Cameroon, with leaves being the most utilized parts, reflecting a global trend toward reliance on plant-based treatments. Conversely, Adidaru Kifilie (2022) [1] highlighted that while traditional identification methods remain dominant, technological integration such as deep learning is increasingly crucial for plant classification, indicating a global gap in digitized ethnobotanical databases.

Regionally, Simbo (2010) [51] noted that ethnobotanical documentation in Cameroon showed rich medicinal knowledge but emphasized risks of cultural loss if not preserved. This aligns with findings from Ssegawa and Kasenene (2015) [55] in Uganda, who identified 190 medicinal species with high fidelity levels for malaria treatment, suggesting regional homogeneity in plant use patterns. Maroyi (2011) [41] in Zimbabwe similarly documented 61 plant species used for primary health care, showing that roots and decoctions were predominant in herbal preparations findings consistent with Kahan *et al*. (2023) [31] and Simbo (2010) [51]. However, William Hunter (2024) [29] differed by stressing scientific validation and pharmacognostic studies rather than ethnobotanical preservation, indicating a shift from cultural documentation toward biochemical exploration in Southern Africa.

In Zambia, Muyenga *et al*. (2018) [44] found 26 plant species used for diabetes treatment in Ndola, predominantly utilizing roots and maceration techniques, reflecting reliance on indigenous medical systems. Similarly, Akapelwa *et al*. (2017) [3] documented Erythrina abyssinica, Kigelia africana, and Carica papaya among the most cited medicinal plants, affirming traditional healers' central role in community healthcare. These findings are consistent with Kalirajam *et al*. (2021) [32], who identified 45 plants used for gastrointestinal disorders in Lusaka, where roots were again the most used plant parts and decoction the common preparation method. In contrast, Hunter (2024) [29] emphasized that while Zambia's medicinal plant knowledge remains rich, there is limited biochemical validation, pointing to the need for pharmacological research to substantiate traditional claims and preserve indigenous medical heritage.

2.3 Investigating the perceived effectiveness of traditional medicine in curing the ailments

Globally, Ekpo, Ose, and Akyirem (2023) [19] found that the prevalence of traditional medicine use among diabetic patients in Africa ranged from 12.4% to 77.1%, reflecting widespread reliance on indigenous remedies for chronic illnesses. Similarly, Tasuia *et al*. (2022) [56] reported that over 80% of Bangladeshi students perceived traditional and complementary medicine as effective, despite limited inclusion in medical curricula. In agreement, Mothabi and Luthuli (2024) [43] revealed that traditional healing methods such as herbal therapy, rituals, and faith-based healing are globally common for treating schizophrenia, although standardization remains lacking. However, Sorsdahl (2010) [52] found that traditional healers in South Africa incorporated potentially harmful substances in treating psychotic disorders, showing that while perceived effectiveness is high, actual safety and efficacy often remain questionable.

Regionally, Leheluka *et al*. (2023) [35] reported that in Tanzania, most caretakers and healers perceived herbal medicine as harmless and effective for treating diarrhea in children, attributing its use to culture, accessibility, and failure of hospital drugs. This aligns with findings by D'Almeida *et al*. (2024) [18], who observed a persistent reliance on traditional medicine across West Africa due to cultural embeddedness and limited healthcare access. Likewise, Godoy *et al*. (2008) [23] found that the Tsimane people in Bolivia integrate traditional and Western medicine, suggesting perceived complementarity rather than conflict. However, Mothabi and Luthuli (2024) [43] highlighted that the absence of standardized healing approaches across regions poses a challenge to validating such perceptions, pointing to a gap between belief and biomedical evidence.

In Zambia, Maluma *et al*. (2017) [40] documented that 32% of pregnant women in Lusaka used traditional herbal medicines mainly to accelerate labor, driven by socio-cultural beliefs and limited health literacy. Consistently, Yang, Jin, and Wang (2023) [61] found that 78.6% of pregnant women in Fisenge, Luanshya, relied on herbal remedies, especially those above 35 years and with multiple children, citing cultural familiarity and accessibility as key motivators. Similarly, Skelemvarg *et al*. (2005) reported that 88% of Kalabo District residents visited traditional healers due to proximity, shorter waiting times, and trust in effectiveness, despite hospitals being accessible. However, Ekpo *et al*. (2023) [19] and Leheluka *et al*. (2023) [35] both cautioned that unregulated herbal use may cause adverse reactions or herb-drug interactions, emphasizing the need for integration and health education to improve safety and informed usage.

3. Research Methodology

3.1 Research Design

According to Smith (2020), a research design serves as the overarching plan that guides the process of data collection, analysis, and interpretation to ensure that the study remains coherent and purposeful. This study adopts a qualitative case study design, which is suitable for understanding lived experiences, cultural practices, and indigenous ways of knowing that are deeply contextual (Creswell, 2014). The qualitative approach facilitates an in-depth understanding of how traditional medicinal plants are identified, harvested,

prepared, and used within the community. It also allows the researcher to capture oral traditions and indigenous knowledge that are not easily quantifiable but crucial for preserving cultural heritage (Yin, 2018; Marshall & Rossman, 2016).

3.2 Target Population
The target population of this study comprises residents of Motel Compound in Mazabuka District, which has a total population of approximately 3,500 people, as reported by the 2022 Zambia Census (CSO, 2022). From this population, 60 participants will be drawn, representing a diverse group of elders, herbalists, and traditional healers. This diversity ensures gender balance and intergenerational representation, which is essential for accurately capturing the traditional healing knowledge systems (Kothari, 2014; Kombo & Tromp, 2013).

3.3 Sampling Design
The study will employ purposive sampling, which allows for the deliberate selection of participants who possess relevant knowledge and experience regarding traditional medicine (Creswell, 2014). This method is appropriate for qualitative research because it ensures that participants can provide rich, contextual insights into the subject matter (Etikan, Musa & Alkassim, 2016). Key informants such as traditional healers, elders, and herbalists will be identified through community leaders and snowball sampling techniques to expand participant reach (Palinkas *et al*., 2015; Bernard, 2017 [7]).

3.4 Sample Size
The sample size was 100 participants, based on data saturation the point at which no new information emerges from interviews (Guest, Bunce & Johnson, 2006). Given the qualitative nature of this study, the focus is on depth rather than breadth of data (Marshall, Cardon, Poddar & Fontenot, 2013). The chosen sample size aligns with qualitative research standards that emphasize the richness and relevance of the information obtained rather than statistical generalizability (Creswell & Poth, 2018).

3.5 Data Collection Methods
Data will be collected through semi-structured interviews, participant observation, and photographic documentation. Semi-structured interviews will allow flexibility for participants to elaborate on their experiences while ensuring consistency across responses (Bryman, 2016) [9]. Participant observation enables the researcher to witness firsthand how medicinal plants are harvested, prepared, and administered (Patton, 2015) [49]. Photographic documentation will supplement the verbal data by visually capturing plant species and preparation methods (Silverman, 2015). Audio recordings will also be transcribed verbatim to enhance accuracy and reliability.

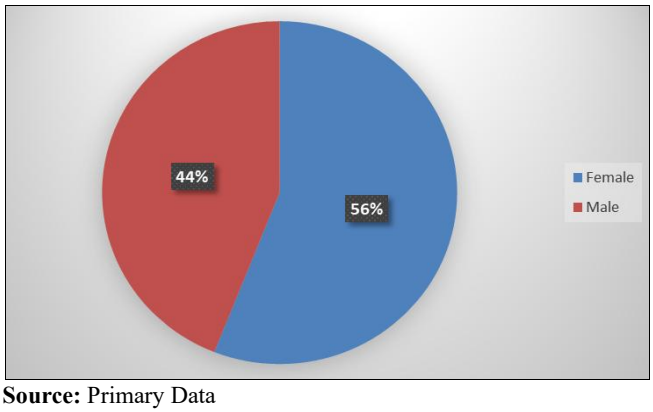
3.6 Data Analysis
Data will be analyzed using thematic analysis, an iterative process of identifying, analyzing, and reporting patterns within data (Braun & Clarke, 2006) [8]. The process will begin with familiarization through repeated reading of transcripts, followed by coding and theme development. Both inductive and deductive approaches will be used to ensure comprehensive coverage of emerging and predefined themes. Qualitative analysis software (such as NVivo) will be used to manage and analyze the data efficiently (Gibbs, 2018; Miles, Huberman & Saldaña, 2014).

3.7 Triangulation
Methodological triangulation will be employed to enhance the validity and credibility of findings by comparing data collected through interviews, observations, and photographs (Denzin, 2012). This approach enables cross-verification and helps reduce bias arising from single-method data collection (Flick, 2018). Triangulation also strengthens the trustworthiness of results by capturing both verbal and non-verbal expressions of indigenous knowledge (Carter *et al*., 2014; Patton, 2015) [10, 49].

3.8 Limitations
Potential limitations include participants' reluctance to share sacred or secret knowledge related to traditional healing (Babbie, 2020) [5]. Seasonal variation may also affect the visibility and accessibility of certain medicinal plants (Bernard, 2017) [7]. Language barriers may arise since some participants may prefer to speak in local dialects, requiring translation and risking minor loss of meaning (Kvale & Brinkmann, 2015). Logistical constraints such as limited access to remote areas or poor weather conditions could also restrict data collection. However, community engagement and careful planning will help mitigate these challenges.

3.9 Ethical Considerations
Ethical clearance will be obtained from the Research Ethics Committee of the Information and Communications University before fieldwork. Participants will provide informed consent, and confidentiality will be maintained throughout the research (Israel & Hay, 2006) [30]. Data will be anonymized using pseudonyms and securely stored. The study will adhere to principles of respect for persons, beneficence, and justice (Creswell & Creswell, 2018). Given the cultural sensitivity of indigenous knowledge, the researcher will ensure respect for local beliefs, traditions, and intellectual property rights (UNESCO, 2017; Smith, 2012). No data will be used for commercial purposes without community consent and benefit-sharing agreements.

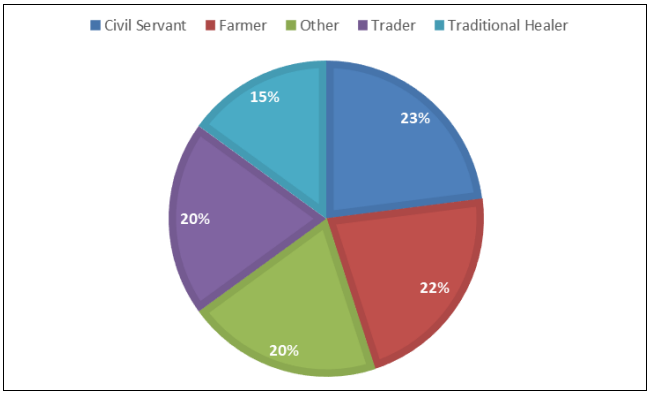
4. Results/Findings
4.1 presentation of results on background characteristics of results



Source: Primary Data

Fig 4.1.1: Gender

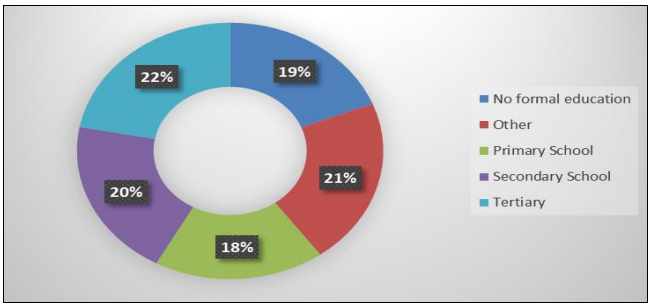
The gender distribution of the respondents reveals that 56% of the entire sample of 100 participants were female, while 44% were male. This means that females constituted the majority of responders, outnumbering males by 12 percentage. The cumulative percentage demonstrates that, when combined, both groups accounted for the complete sample size (100%).



Source: Primary Data

Fig 4.1.2: Occupation distribution

Respondents were engaged in diverse occupations, including civil servants (23%), farmers (22%), traders (20%), other occupations (20%), and traditional healers (15%). The presence of traditional healers is particularly important, as they are key custodians of indigenous knowledge regarding medicinal plants. The mix of occupations suggests that knowledge of traditional medicine is not limited to healers but is also practiced and valued by members of various professional and livelihood groups within the community.



Source: Primary Data

Fig 4.1.3: Level of Education

The results on education levels show that the respondents came from a variety of educational backgrounds. Approximately 19% of the participants had no formal education, while 21% had "other" education, which could include informal or vocational training. An additional 18% had completed primary school, while 20% had completed high school. The largest group, 22%, had completed tertiary education. These findings indicate a reasonably balanced distribution across education levels, with no single group dominating the sample. However, the somewhat greater number of respondents with university education suggests that the study included a better educated sector of the population while also included valuable opinions from people with little or no formal education. This variation improves the findings' representativeness by reflecting the different levels of literacy and expertise among respondents.

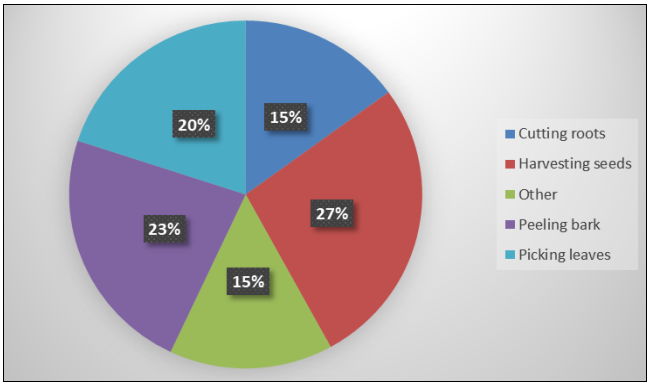
4.2 To identify the commonly used medicinal plants, their traditional uses, harvesting methods and preparation processes

Table 4.2.1: Identification of plants

S. No	Plant Name	Local Name	Use	Preparation Method
1	Discorea hirtiflora	Lusala	Treating wonds	Crushed leaves into paste
2	Vernonia amygdalina	Bitter leaf	Boosting immune system	Boiled in water
3	Zingiber officnale	Ginger	Treating indigestion and bowel movement	Decoction of the rhizome
4	Azadirachita indica	Neam tree	Treating acne and pimples	Crush seeds into paste
5	Manihot esculenta	Katapa	Treating anemia	Boiled in water
6	Mucuna pruriens	Mucenye	Treating burns	Ground into powder
7	Terminalia mollis	Mubimba	Toothache	Boiled in water
8	Banana leaves	Nkonde	Treating Cough	Boiled in water
9	Carica papaya	Pawpaw	Treating Cold	Infusion of the leaves
10	Aloe vera	Tembusha	Treating high blood pressure	Crushed into paste
11	Allium sativum	Garlic	For flu	Boiled in water
12	Saccharum officinarum	Sugar cane	For asthma	Crushed into paste
13	Annona muricata	Soursop	For anemia	Boiled in water
14	Ximenia	Manomba	For headache	Boiled in water
15	Avocado leave	Kotapela	Immune system booster	Boiled in water
16	Potato	Air potato	Heart problem	Boiled in water
17	Carissa macrocarpa	Pricaser fruit	To treat infertility	Boiled in water
18	Syzyguim aromaticum	Cloves	To improve blood flow	Boiled in water
19	Cinnamomum	Cinnamon	Treating gases, diarrhea, gastric irritation	Decoction of the bark
20	Citrus aurantium	Cungwa	Strengthening the stomach	Extraction of juice
21	Cocos nicifera	Amalasha/Activated charcoal	Treating gases and diarrhea	Infusion of the powder
22	Coffea arabica	Kofi	Treating diarrhea	Infusion of the powder
23	Combretum zeyheri	Muzyula	Treating diarrhea and dysentery	Decoction of the leave
24	Cucmis sativus	Ichipushi	Treating constipation and stomach pains	Infusion of the peels
25	Cucurbita	Ichipushi	Treating indigestion	Decoction of the seeds
26	Cynodon dactylon	Ichani	For vomiting	Infusion of the plant
27	Fragaria vesca	Strawberry	For diarrhea, and indigestion	Direct eating
28	Hibiscus sabdariffa	Lukukwa	For cough	Infusion of the leaves
29	Phoenix dactylifera	Palm tree	For constipation and indigestion	Infusion of the fruit and seeds
30	Psidium guajava	Guava	For gastroenteritis, diarrhea and	Decoction of the roots, bark and

			indigetstion	leaves
31	Solanum melongena	Impwa	Ulcers	Decoction of the plant
32	Solanacease	Potato	For stomach acidity and stomach ulcers	Decoction of the tubers
33	Abelmoschus esculentus	Okra	For gases and constipation	Infusion of the fruit
34	Capsicum annuum	Impilimpili	For gastric, ulcer and stomach pain	Infusion of the fruit
35	Ananas cosmous mill	Ichinanazi	For constipation, digestion, sore throat, and expels worms	Infusion of the leaves, extraction of the fruit
36	Citrus medica	Indimu	For indigestion	Decoction of the rind, and extraction of juice

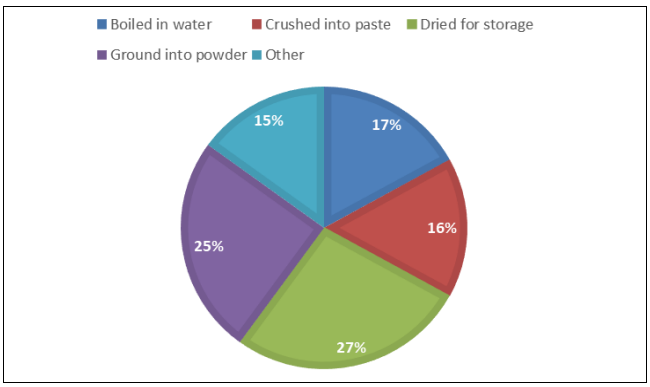
Source: Primary Data



Source: Primary Data

Fig 4.2.1: Harvesting of the medical plant

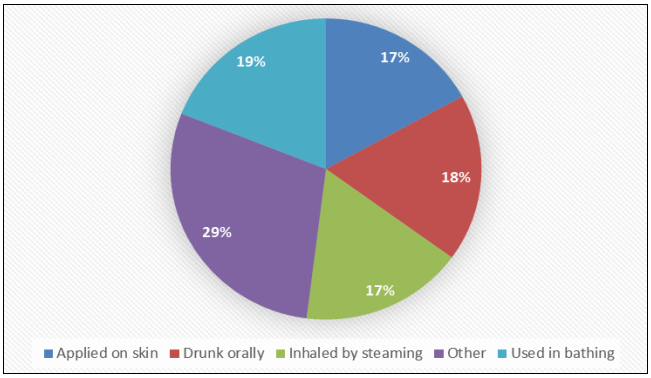
The pie chart provides a complete summary of the various methods used to harvest a medicinal plant, emphasising the frequency of each technique. Cutting roots is the most widely used method, accounting for 27% of the total, indicating that this procedure is essential for accessing the plant's medicinal compounds. Picking leaves comes in second at 20%, showing that foliage is an important resource in the plant's use. Harvesting seeds and peeling bark, on the other hand, are less common procedures, accounting for only 15% of total production. This could imply that these approaches are not as important in the harvesting process, or that they are used in limited instances. The "Others" group, which accounts for 23%, demonstrates a significant variation in harvesting processes, implying that practitioners use other methods, possibly suited to unique needs or conditions.



Source: Primary Data

Fig 4.2.2: Preparation for treatment

The pie chart illustrates the various methods for preparing plant medicine treatments, highlighting the frequency of each technique. The most common method is drying for preservation, which accounts for 27% of the total, reflecting a great emphasis on preserving the plant's therapeutic characteristics for later use. Closely following is the process of crushing the plant into a paste, which accounts for 25% of its value for direct application or combining with other ingredients. Boiling in water accounts for 17% of the preparation methods, highlighting its importance in extracting the plant's beneficial chemicals, although it is less common than drying and crushing. Grounding the plant into powder accounts for 16%, indicating that it is used but not as often as the other procedures. Furthermore, the "Other" category (15%) represents many alternative preparation processes that practitioners may use, demonstrating a diversified approach to medicine preparation.

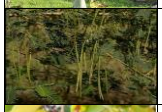


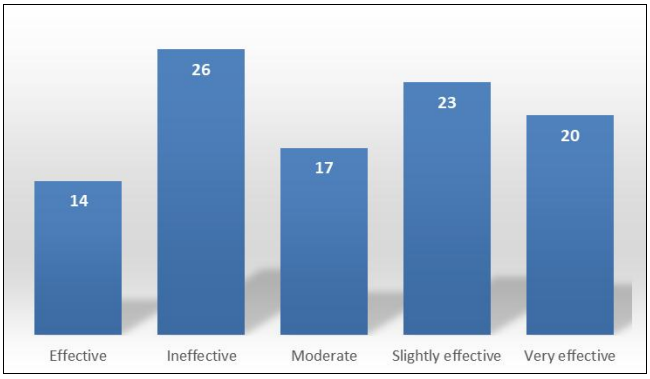
Source: Primary Data

Fig 4.2.3: Administration of the medication

The pie chart depicts the many methods of giving plant-based drugs, emphasising their relative frequency. The most prevalent form of delivery for these treatments is oral ingestion, which accounts for 29% of the total. Steam inhalation is closely followed by 18%, indicating its popularity, particularly for respiratory disorders or to improve the absorption of therapeutic ingredients. Topical use on the skin and use in bathing each account for 17%, emphasising their importance for localised treatments and therapeutic advantages, like as relaxation and skin health. Furthermore, the "Other" group accounts for 19%, indicating a variety of alternate administration methods that practitioners may use, demonstrating the versatility of plant medicine.

4.3 To document the traditional medicine plants used in the treatment of aliments in Mazabuka

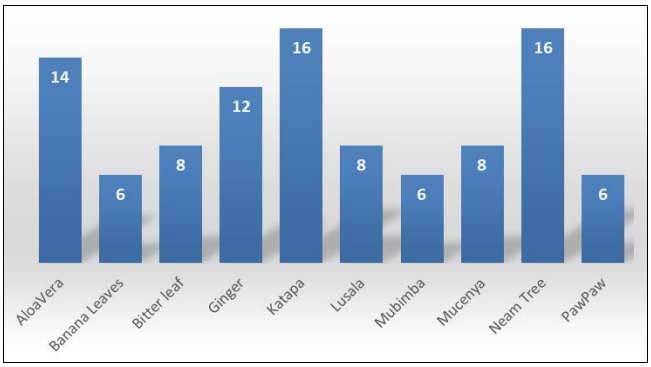
Image	Use	Name
	Boosting immune system	Bitter leaf
	Treating anemia	Katapa
	Treating acne and pimples	Neem tree
	Treating indigestion and bowel movement	Ginger
	Treating wonds	Lusala
	Treating Cold	Pawpaw
	Treating high blood pressure	Aloa vera
	Treating Cough	Banana leaves
	Toothache	Mubimba
	Treating burns	Mucenye



Source: Primary Data

Fig 4.3.1: Effectiveness of traditional medicine

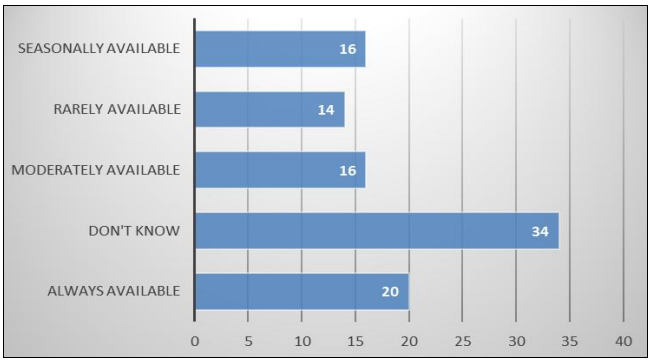
The bar chart depicts respondents' assessments of the efficacy of a specific intervention. The results show that 26 respondents assessed it as ineffective, which is the most common response, followed by 23 respondents who considered it slightly effective. Meanwhile, 20 respondents ranked it very effective, 17 as moderately effective, and only 14 as effective. This distribution indicates that, while a significant number of respondents saw some level of success, a larger proportion voiced dissatisfaction with the intervention's performance. The predominance of "ineffective" and "slightly effective" replies indicates that the intervention may not be meeting expectations for many users.



Source: Primary Data

Fig 4.3.2: Traditional plants frequently used

The table depicts the frequency of use or mention of various natural or herbal medicines. The findings suggest that Katapa and the Neem tree are the most often used, with each registering a frequency of 16, demonstrating their widespread appeal among respondents. Aloe vera follows closely with a frequency of 14, indicating that it is also a well-known and used natural medicine. Ginger rates moderately high (12 replies), indicating its regular use for medical or nutritional purposes. Bitter leaf, Lusala, and Mucenye each had 8 responses, indicating moderate use, whilst Pawpaw, Banana leaves, and Mubimba received only 6 responses.

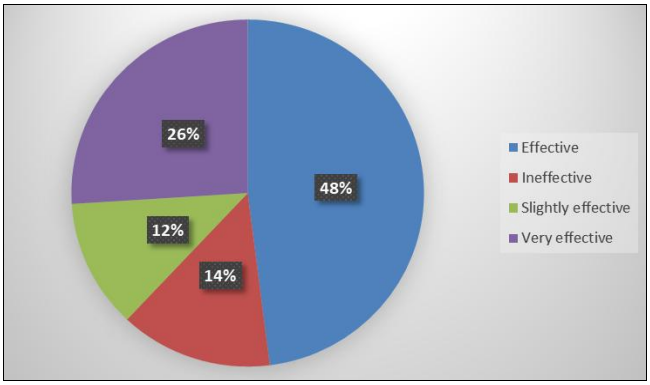


Source: Primary Data

Fig 4.3.3: Plant availability throughout the year

The bar chart shows respondents' perceptions of the plant's availability throughout the year. According to the data, most respondents (35%) were unsure about the plant's availability, indicating a lack of understanding or inconsistent awareness of its seasonal rhythms. Approximately 20 respondents answered that the plant is always available, meaning that it can be reached all year in certain regions or under certain situations. Both the seasonally available and moderately available categories received 15 replies apiece, indicating that some respondents believe the plant is only accessible during specific times or that its availability varies based on environmental circumstances. Only 13 respondents said that the plant is rarely available, indicating that scarcity affects a smaller proportion of the population.

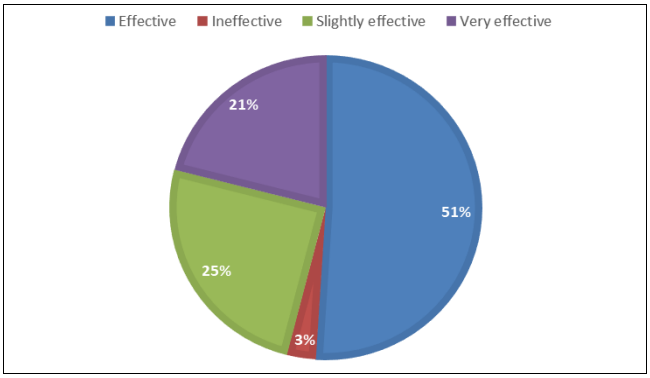
4.4 To investigate the perceived effectiveness of traditional medicine in curing the ailments



Source: Primary Data

Fig 4.4.1: Effectiveness of traditional medicine in recovery from illness

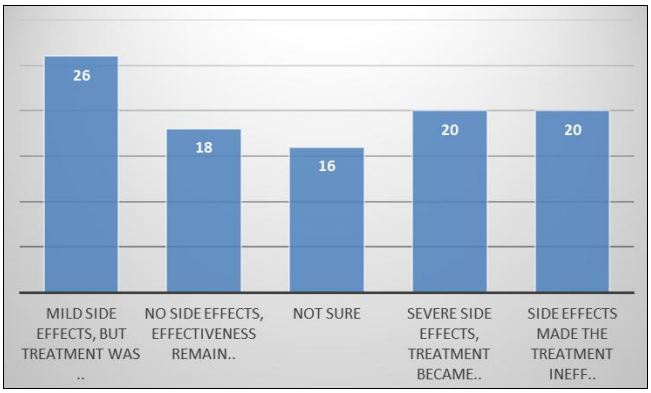
According to the findings, respondents believe traditional medicine is successful in helping them recover from disease. Only 1.2% regarded it as ineffective, indicating little uncertainty about its benefits. Meanwhile, 12% deemed it slightly effective, demonstrating some recognition of its value but insufficient to consider it highly useful. The most significant conclusion is that nearly half of those polled, 48%, feel traditional treatment is effective, with an additional 26% rating it highly effective. This combined total of 74% indicates the participants' great belief in traditional medicine, emphasizing its beneficial significance in their healing processes.



Source: Primary Data

Fig 4.4.2: Effectiveness of traditional medicine compared to traditional medicine

The findings show that respondents have a generally good attitude about traditional medicine when compared to modern medicine. Only 3% judged it unsuccessful, indicating minor doubt, while 25% considered it slightly effective, implying some benefits without a significant impact. A considerable majority, 51%, feel traditional medicine is effective, with 21% rating it as extremely effective, indicating a strong belief in its efficacy. This yields a total of 72% (51% effective + 21% very effective) who believe in the benefits of traditional medicine. Such findings show that many people see traditional medicine as a valuable complement or alternative to modern medical methods, emphasizing its relevance and value in the larger healthcare environment.



Source: Primary Data

Fig 4.4.3: Side effects experienced after the administration of traditional medicine

The findings reveal a wide range of respondents' experiences with the side effects of traditional medicine and their impact on effectiveness. A sizable proportion, 16%, were unsure whether anyone they knew had experienced side effects, showing some ambiguity in this area. Meanwhile, 20% indicated that side effects rendered the treatment ineffective, indicating that adverse reactions might greatly reduce the efficacy of standard medicines. Another 20% said that severe side effects reduced effectiveness, raising additional concerns. On a more positive note, 26% admitted to having mild side effects but still found the treatment effective, demonstrating that these side effects do not always outweigh the benefits. Finally, 18% reported no negative effects, indicating that traditional medicine is still useful for certain people without causing harm.

4.5 Discussion of Results

The findings of this study provide valuable insights into the use, preparation, and perceived effectiveness of traditional medicinal plants in Motel Compound, Mazabuka, Southern Province. The demographic analysis indicates that the sample was reasonably diverse, with a slightly higher proportion of females (56%) than males (44%). This suggests that women may be more engaged in traditional medicinal practices or more willing to participate in studies related to health and household care. The age distribution, ranging from 18 to 69 years with an average of 48.08 years, reflects a broad representation of both younger and older adults, ensuring that perspectives from different life stages were included. Similarly, the educational background of respondents ranged from no formal education to tertiary education, demonstrating that knowledge and use of traditional medicine cut across educational levels, though the slight predominance of tertiary-educated participants suggests that even the more educated population values indigenous healthcare practices.

Regarding harvesting and preparation methods, the results show that traditional medicine practitioners employ a variety of techniques. Cutting roots (27%) and picking leaves (20%) were the most common harvesting methods, indicating that both roots and leaves are considered important sources of medicinal compounds. Preparation methods such as drying (27%) and crushing (25%) were widely practiced, reflecting the need to preserve therapeutic properties and facilitate easy application. These findings underscore the rich practical knowledge involved in preparing herbal remedies

and the systematic approach used by local practitioners to maintain efficacy. The methods of administration were equally diverse, with oral ingestion (29%) being the most common, followed by steam inhalation (18%) and topical applications (17%). This variation highlights the flexibility of traditional medicine in addressing different ailments and the practitioners' understanding of appropriate administration routes to maximize therapeutic effects.

In terms of plant use and availability, the results identified Katapa (Vernonia amygdalina) and Neem tree (Azadirachta indica) as the most frequently used plants, followed closely by Aloe vera. These plants' popularity suggests that they are well-recognized within the community for their medicinal properties. However, the availability of medicinal plants throughout the year was inconsistent, with 35% of respondents uncertain about availability. This points to potential seasonal or ecological limitations that could affect access to key herbal resources, which could in turn impact treatment consistency and outcomes.

The perceived effectiveness of traditional medicine was generally high, with 74% of respondents rating treatments as effective or highly effective for recovery from illness. Similarly, 72% of respondents believed traditional medicine is effective compared to modern medicine, suggesting strong community confidence in indigenous remedies. However, responses also revealed some concerns regarding efficacy and safety, as 20% indicated that side effects reduced treatment effectiveness and 16% were unsure about side effects. Mild side effects were reported by 26%, yet these did not diminish the perceived benefits, demonstrating a nuanced understanding of risk-benefit considerations among users. These findings indicate that while traditional medicine is widely trusted, there is an awareness of limitations and potential adverse effects, highlighting the need for continued monitoring, documentation, and education on safe use practices.

Overall, the study demonstrates that traditional medicinal plants play a crucial role in the health and well-being of the Motel Compound community. The combination of diverse harvesting, preparation, and administration techniques, alongside strong perceptions of efficacy, underscores the cultural and therapeutic significance of traditional medicine. At the same time, challenges such as variable availability, potential side effects, and differing perceptions of effectiveness suggest that further research, preservation of indigenous knowledge, and possible integration with modern healthcare systems could enhance the benefits and sustainability of traditional medicine practices in the region.

5. Conclusion and Recommendations

5.1 Conclusion

The study of traditional medicinal plants in Motel Compound, Mazabuka, Southern Province, revealed the critical role these plants play in the health and well-being of local communities. Medicinal plants such as Vernonia amygdalina (Katapa), Azadirachta indica (Neem tree), and Aloe vera were frequently mentioned for their therapeutic capabilities, suggesting their enduring usefulness in treating a wide range of diseases. Their widespread use demonstrates the community's reliance on indigenous knowledge systems, especially in settings where access to formal healthcare is limited.

The study discovered that medicinal plants are obtained from a variety of sources, including household gardens, natural regions, and local markets, demonstrating the community's adaptive techniques for ensuring availability throughout the year. Seasonal fluctuations and environmental stresses, such as deforestation and agricultural growth, make it difficult to gather plants sustainably. Community strategies such as drying, boiling, crushing, and stockpiling demonstrate practical approaches to overcoming these challenges and ensuring consistent access to essential remedies.

The study also discovered a variety of preparation and administration methods, including oral ingestion, inhalation, topical application, and bathing, with dosages determined primarily by experiential knowledge and intuition. While these techniques reflect the cultural authenticity and depth of indigenous healing, they also highlight possible hazards to dosage accuracy and treatment safety, emphasizing the importance of awareness and thorough documentation.

A crucial finding is the steady loss of indigenous knowledge, which is influenced by urbanization, urban migration, and reliance on oral transmission. This trend jeopardizes both the continuation of traditional healing practices and the survival of culturally significant medicinal plants. Systematic documentation, conservation, and community education are thus required to preserve this unique information and assure its intergenerational transfer.

Traditional medicinal plants in Motel Compound not only provide treatment but also serve as a reservoir of cultural legacy and ecological knowledge. Their sustainable use and preservation necessitate a collaborative effort involving local communities, traditional healers, researchers, and policymakers. This study helps to the conservation of Zambia's rich traditional medicine history by documenting these practices and supporting their appropriate use. It also lays the groundwork for future research, policy formulation, and the integration of indigenous medicine into broader healthcare systems.

5.2 Recommendations

Based on the study's findings, several key recommendations are made to ensure the long-term use, preservation, and promotion of traditional medicinal plants in the Motel Compound, Mazabuka. First, it is critical to conduct comprehensive documentation of indigenous knowledge, including information on the plants utilized, preparation processes, routes of administration, and dosage patterns. Such documentation will prevent this knowledge from being lost due to modernity, urban migration, and the oral nature of its transfer. Second, there is an urgent need for conservation and sustainable harvesting procedures, especially given the challenges posed by deforestation, agricultural growth, and environmental deterioration. Communities should be encouraged to grow high-demand medicinal plants in home gardens and community nurseries, while wild plant populations should be maintained to support biodiversity and ensure availability year-round. Third, capacity building and community education initiatives should be created to teach local populations, particularly adolescents, about safe harvesting, correct storage, preparation skills, and responsible use of medicinal herbs. This will improve not only safety and efficacy, but also cultural continuity.

Furthermore, fostering collaboration among traditional healers, researchers, and formal healthcare practitioners could help to integrate scientifically validated traditional

remedies into mainstream health services, thereby improving accessibility, health outcomes, and public trust in Indigenous medicine. More scientific study and pharmacological investigations on commonly used species, such as Vernonia amygdalina, Azadirachta indica, and Aloe vera, are needed to assess their medicinal potential, guide safe use, and inform evidence-based policy formulation.

Finally, policymakers should create supportive regulatory frameworks that protect traditional knowledge holders' intellectual property rights, promote the long-term commercialization of medicinal plants, and ensure the preservation of cultural heritage and natural resources for future generations. Collectively, these measures will help to ensure the long-term use, conservation, and integration of traditional medicinal plants, preserving them as both a health resource and an important part of Zambia's cultural heritage.

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