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Which Factors Influence the Usage and Perceptions of Medicinal Plants in Kizanda Village (Lushoto District) and Ushongo Village (Tanga District)?

Callie Smith
SIT Study Abroad

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Dawa or Disillusion:

Which Factors Influence the Usage and Perceptions of Medicinal Plants in Kizanda Village (Lushoto District) and Ushongo Village (Tanga District)?

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Location: Africa, Tanzania, Tanga Region, Kizanda Village and Ushongo Mtoni Village

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Abstract

The objective of this study was to compare and examine which factors impact usage and perceptions of traditional medicine in Ushongo Mtoni and Kizanda villages. More specifically, this study aimed to gain an understanding of the usages, with a specific focus on gendered usages of medicinal plants in Kizanda village and Ushongo Mtoni village and to try to examine the differences in perceptions towards traditional medicine usage in Kizanda and Ushongo. Additionally, this study aimed to determine if there are any major themes that are constant with medicinal plants in both Ushongo and Kizanda. In order to conduct this study both participatory observations as well as interviews with traditional healers as well as the general population of the town were done. This study was conducted in Kizanda village in Lushoto district and Ushongo Mtoni village in Pangani district from the dates of 10/8/19-10/25/19. This study was done by using a snowball/convenience sampling method to conduct interviews in both villages. This study also included observatory practical in each area with a traditional healer. This study determined that traditional medicine is prevalent in both Ushongo Mtoni and Kizanda village. It is used very practically and for a number of ailments in each location. However, the depth of knowledge of traditional medicine is much deeper in Kizanda. In general, there are very positive perceptions towards traditional medicine in both areas. However, people in Ushongo use hospital medicine more often than people in Kizanda. The gendered usage of plants are fairly reflective of the greater gender dynamics of Tanzania in both areas. Finally, this study determined that the depth of knowledge of traditional medicine increases the conservation of medicinal plants. This study recommends that future literature explore how knowledge of traditional medicine increases conservation of traditional plants due to results which suggest this finding has significant impacts on conservation potential through traditional medicine.

Keywords: Traditional medicine, medicinal plants, conservation, factors, perceptions, usages, tourism, westernization, climate, gender dynamics

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Introduction

Objectives:

This study aims to gain an understanding of the usages (specific focus on gendered usages) of medicinal plants in Kizanda village and Ushongo. Additionally, this study seeks to examine the differences in perceptions towards traditional medicine usage in Kizanda and Ushongo (for example: preference for traditional or hospital medicine). Also, this study intends to examine what factors impact usage and perceptions towards medicinal plants in the two areas. Along with these, this study tries to explore the level of usage of medicinal plants in Ushongo and Kizanda villages. Next, this study attempts to determine the impact of usage of medicinal plants in Ushongo and Kizanda. Finally, this study aims to examine if there are any major themes that are constant with medicinal plant usage and perceptions in both the villages.

Background/ Literature Review:

Traditional medicine has been extremely important to human health throughout history. It has always been heavily implemented across the globe (Bookner & Ong, 2005). Even with the development of modern medicine, traditional medicine it is still relied on heavily today. It has been increasingly used as a complementary and alternative method to modern medicine in developing and developed countries (Bookner & Ong, 2005). For example, traditional medicine has been helpful in treating musculoskeletal diseases in Turkey (Kavadar et al., 2019). Traditional medicine has been a particularly important form of healthcare on the African continent. It is estimated that around 80% of the African region's population depends on traditional medicine for health care (Zhang, 2004). Additionally, traditional medicine has been so utilized and has proven to be an effective health care option to such an extent that WHO promotes the role of traditional medicine in health systems in the African region (Zhang, 2004). Romero-Daza states that traditional medicine is the main, and sometimes only, source of medicine for people in some regions of developing countries (2002). Additionally, some populations have very little access to hospital medicine because it is too expensive or there is a large amount of fear surrounding the chemicals contained in hospital medicine so traditional medicine offers a good alternative (Abdullahi, 2011). Traditional medicine is extremely important medicinally and culturally which can be seen through a daily dependence and a wealth of knowledge (Daddis, 2018). African traditional medicine is deeply intertwined in the culture of the population (Bookner & Ong 2005). Because of its importance and prevalence in

Africa, it is necessary that a protection method be designed for traditional medicine (Zhang, 2004). Additionally, it is the intention of this study to help to inform protection methods about utilization and perceptions of traditional medicine as well as what factors impact these.

Traditional medicine usage can help to fill important gaps in healthcare in Africa. Traditional medicine has even been shown to help treat patients who test positive for HIV/AIDS if their CD4 counts are above 200 (Langwick, 2015). Because of its health benefits some governments, NGO's, and universities are taking an interest in traditional medicine (Langwick, 2015). Ghana tries to incorporate traditional medicine into its primary healthcare and 70% of Ghana's population relies on healthcare provided by traditional healers (Romero-Daza, 2002). Traditional medicine is a fairly legitimate institution in Africa and there are quite a few countries and organizations that are backing it and putting emphasis on it. This was especially prevalent in the early 2000s (Bookner & Ong, 2005). Traditional medicine has been and continues to be an extremely important piece of healthcare throughout the African continent.

Traditional medicine also has its own unique and important place in Tanzania, which is the area where this study is focused on. Much like the rest of Africa, the people of Tanzania often rely on traditional medicine to fill in the gaps where hospital medicine fails. Sometimes the hospitals in rural areas can be ineffective or difficult for people to use because they are not well stocked with medicine and they can be far away from the people they seek to treat (Alexander, 2012). Traditional medicine usage is very prevalent throughout all of Tanzania and each region and tribe has overlapping knowledge as well as knowledge specific to their culture. For example, the Makonde tribe has shown immense knowledge of traditional plants in regard to female reproductive health (Alexander, 2012). Traditional medicine usage in northern Tanzania, the area of focus of this study, is very high and is mostly used for chronic disease and symptomatic ailments (John et al., 2015). There are many important reasons that Tanzanians rely so heavily on traditional medicine. One study found that there are numerous motivations for the use of traditional medicine in northern Tanzania including biomedical healthcare diversity, traditional practices, strong cultural identities, individual health status, and disease understanding (John et al., 2015). Traditional medicine usage is strong in Tanzania and is used as a supplemental or single form of healthcare.

However, it is important to not only focus on the biological and hard data driven reasons to protect traditional medicine. Traditional medicine is rooted in humans and their cultural

traditions (Romero-Daza, 2002). In order to gain a full picture to create the most effective conservation strategy it is necessary to combine information from local knowledge and culture with that of scientific knowledge (Daddis, 2018). If outside financial powerhouses such as NGOs wish to contribute to the conservation of traditional plants, they should be aware of the oral textbook and cultural significance that these plants have (Daddis, 2018). This study aims to help to inform the cultural significance and perceptions of these traditional plants to aid in informing conservation efforts to protect the traditional plants.

Also, in order to preserve traditional medicine, it is important to understand the factors that influence usage and perceptions. This is the link that this study hopes to fill. This study hopes to investigate how institutions such as tourism impact traditional medicine usage. The institution of modern medicine is seen by some as a continuation of encroachment of westernization into Africa (Abdullahi, 2011). Additionally, it can be seen as an example of how colonialism has impacted indigenous knowledge, specifically medicinal knowledge and it can lead to unequal power relations (Abdullahi, 2011). It can also lead to very negative and fearful perceptions of traditional medicine, in some places traditional medicine has even been banned or seen as witchcraft (Abdhullahi, 2011). It is the belief that this study will reveal some of the impacts that westernization and tourism has had on traditional medicine which can help to further understanding of the important institution that is traditional medicine.

Overall, this study is relevant in gaining a general understanding of the usages and perceptions of traditional medicine in Ushongo Mtoni and Kizanda. It can help to gain and understanding of the prevalence of medicinal plant usage and the role it plays in the daily livelihoods of people in both of these areas. It can be helpful for government officials and hospital workers to better understand if people will turn to hospital medicine or traditional medicine first so that they can accurately understand their patients. Also, in the area of usages, it could show how the social dynamics that are present in Tanzania are carried out in different areas of life such as traditional medicine. This can give other researchers ideas of how medicine in Tanzania could be biased and how deeply some of the sexism that are present are ingrained into all areas of peoples livelihoods. More broadly, this study can help to inform on the social dynamics that surround people and traditional medicine as well as the deep bond and history of the two. It is essential that the conservation of the plants be looked at through a hard science lense as well as a social science perspective. It is very important to study traditional medicine in

a way that acknowledges scientific as well as cultural significance because it is such an important part of healthcare and culture in so many areas.

Methods

Site Description:



This map shows the Eastern Arc Mountains which the West Usambaras are located in

Source: Wikipedia

Kizanda village: Kizanda village is a town of around 2,000 people that is nestled in the West Usambara mountains of the Lushoto region of Tanzania. It is about a two hour drive from the larger town of Soni. It is around 4 miles away from the Mazumbai forest reserve. Kizanda is a breathtakingly beautiful place that is scattered throughout the steep hills of the mountains. It has numerous lush green plants due to the wet and cool climate. It is a community that mainly relies on farming for income. There are very few tourists and the majority of the tourists that they do have remain in Mazumbai forest reserve and do not venture into the village very often. It is cooler and more rainy than other areas of Tanga region. It is a primarily Muslim region where people mostly work as farmers. The majority of homes in this area are made from a combination of branches and mud, some of the homes have metal roofs.



This map shows Ushongo Mtoni's Location

Source: Google Maps

Ushongo Mtoni: Ushongo Mtoni is located in the Tanga Region of Tanzania. It is about 3 hours away from the city of Tanga or around 62 kilometers south of Tanga. It is a small beach community that is made up of 684 people. This area is very hot and humid and is located directly next to the Indian Ocean. The people in this area are primarily Muslim. This area is a large tourist destination located directly on the beach so much of the activities are influenced by the numerous lodges and bars located in the area. The people in the town have diverse forms of occupation, some associated with tourism and others not. Also, because this village is directly next to the ocean fishing is a large source of livelihood. The homes in this area are mainly made out of plant materials such as palm fronds that are woven together by the mamas.

Methodology:

In order to conduct this study a variety of methods were used. The study was conducted in both Kizanda village in the Lushoto district as well as Ushongo Mtoni Village in Tanga District. Data was first taken in Kizanda village from November 7- November 14. Interviews using convenience and snowball sampling techniques were the primary method used to achieve the objectives of this study. These methods are supported by Johnson who found that snowball

and convenience sampling were effective qualitative research methods (2014). Snowball sampling was used more in Kizanda because it was dependant on the people that the translator knew in the area, as well as some convenient sampling depending on which people were present in the area at the time of the interviews. In Ushongo Mtoni the data collection took place from November 17- November 25 and was primarily conducted through convenience sampling where interviewees would just be approached on the street and asked to participate and given the opportunity to give verbal consent.

In Kizanda village 27 interviews were conducted with a variety of villagers. Fourteen women were interviewed and thirteen men, the ages of the interviewees ranged from 18-90 years old. There are nine streets in Kizanda village and three people were interviewed from each street. One street was visited per day over the course of 9 days. Each interview lasted anywhere from 20 minutes to an hour and a half depending on the depth of the answers received. The interviewees were asked 12 questions pertaining to the usages, perceptions, and other data surrounding traditional medicine. These interviews were conducted between the hours of 10 am to 1 pm. The interviews were done with the help of a translator who ensured effective communication. Villagers were given an asante for their time ranging from a value of TSH 2,000-4,000. The interviewees were given an overview of the project and the reasons for interviewing them, verbal consent was obtained before the interviews proceeded, they were told that they did not have to participate in the interview and could stop at anytime. Transportation from Mazumbai guest house to the village and throughout the village consisted of walking anywhere from 6-10 miles per day. After the completion of 27 interviews a practical observation was conducted. This practical allowed the study to increase in depth and understanding of traditional medicine by creating a hands on experience to make dawa.

The next section of the study was conducted in Ushongo Mtoni Village in Pangani District, Tanga Region. The same methods that were used in Kizanda village were repeated in Ushongo Mtoni. 27 people were interviewed 14 women and 13 men. The interviewees in Ushongo ranged from 23-75 years old. Because there are not 9 specific streets in Ushongo Mtoni interviewees were chosen at random from the village with the only focus being on trying to speak with 14 women and 13 men who covered a wide range of ages. These interviews were generally conducted from the hours of 9am to 11am. Some afternoon sessions were also

conducted depending on the availability of the translator in Ushongo Mtoni. The Ushongo Mtoni section of interviews also had a single male translator who helped to ensure effective communication throughout the processes and found the villagers to interview.

The data for this study was analyzed using descriptive analysis. Some data was put in charts and tables to make analysis and representation of data more efficient and other pieces of data were simply stated through a descriptive analysis.

Results

There were 27 people interviewed in Kizanda village, 14 women and 13 men. The ages ranged from 18-90 years old. In the village the most predominant occupation is farming, 66.7% of respondents said that their occupation and income was farming. 25.9% of respondents said that their occupation was farming along with something else (tailoring, traditional medicine, selling chapati and more). Finally, 7.4% of interviewees said that their occupation was owning a small business. This can be seen in the appendix.

In Kizanda Village 100% of people interviewed said that they used traditional medicine (see chart 1). When asked if they preferred traditional medicine or hospital medicine 70.4% of participants said they preferred traditional for various reasons, 22.2% preferred hospital medicine, and 7.4% said that they preferred hospital medicine (see chart 2). When asked if they treat themselves or go see a traditional healer 51.9% said that they treated themselves, 44.4% said that they both see a traditional healer and treat themselves, and 3.7% said that they saw a traditional healer only (see chart 3). Most of the people in Kizanda village learned traditional medicine from their community. They learned it from their grandfathers, fathers, mothers, grandmothers, friends, and other traditional healers in their community. Many of the people in the community have been using traditional medicine their whole lives. People mostly get their plants from the nearby area such as farms, shrubs, the forest, and home gardens. People do not seem to have a large fear of the plants disappearing. Many of the interviewees said that they conserve the plants and love them because they are important. Only a few said that the plants can disappear due to climate.

Table 1 refers to all of the medicinal plants that were mentioned throughout the interviews conducted in Kizanda Village. The table shows the common english name of the plant

when available as well as the scientific names that could be found. The table also shows the Kisambaa name as well as what issue the problem treats, how the plant is used, and how many times the plant was mentioned throughout the interviews. The table is sorted in accordance with number of times each plant was mentioned. It also includes some items which are not plants but that were mentioned very often and were necessary to include. Overall, the chart has 147 entries. The plant that was mentioned the most often (25 times) throughout the interviews was the *Datula* species that also goes by the name of “sodom apple”. The next most highly mentioned plant was the “mzugwa” (sambaa) which was mentioned 20 times. The large majority of the plants (112) were only mentioned once during the interviews and the rest were mentioned 2 or more times.

In Ushongo Village there were 27 people interviewed, 14 women and 13 men. Their ages ranged from 23 years old to 75 years old. There were 7 types of occupations that were mentioned in Ushongo Mtoni village including tailoring, farming, business, making building materials out of plants, being a chef, fishing, and one witch doctor. It can be seen in Chart 4 that 28% of the respondents said that they were farmers, which was the most common occupation. The next most common occupations were making building materials for houses and fishing which were both 20%.

In Ushongo Mtoni village 96.2% of 26 interviewees said that they used traditional medicine. 3.8% of interviewees said that they did not use traditional medicine. One interviewee first said that they did not use traditional medicine then changed their answer to say that they did use it. The person who changed their response was not included in the data analysis because it was inconsistent. When asked if they liked traditional medicine or hospital medicine better 44.4% of respondents said that they liked traditional, 44.4% said that they liked both and 11.1% said that they preferred hospital medicine. This can be seen in chart 6. In Chart 7 it can be seen that 48.7% of interviewees in Ushongo said that they treat themselves, 29.7% said that they both see other people who know the plants such as their bibi or babu or witch doctor, finally 22.2% said that they go see people who know more and do not treat themselves. The interviewees learned traditional medicine from many different places such as their mothers, fathers, friends, grandparents, friends, and also from witch doctors. Most people said they get their plants from the forest, farms, and from around the town. There were very mixed responses on whether or not the plants were easy to get. Many people said the plants were easy to find while some said that they were hard or that some plants are easy to find while others are difficult. Almost all of the

interviewees in Ushongo seemed to have the perceptions or fears that the medicinal plants are disappearing or threatened because people go into the forest and cut and burn trees and plants without knowing that they could be medicinal.

Table 2 shows the types of medicinal plants that were mentioned throughout the interviews conducted in Ushongo Mtoni village. It is organized in the same way as Table 1, however the plants are given in Kiswahili names rather than Kisambaa. This chart is also sorted according to how many times the plants were mentioned. It is sorted in descending order. Overall, there were 42 plants that were spoken about during the interviews. The plant that was mentioned the most often in Ushongo Mtoni was Mtura. It was mentioned 13 times throughout the interviews and was used to treat stomach issues, menstrual cramps and hernias. The plant that was spoken about the second most often was marubaini, which was mentioned 11 times and it is used to treat a multitude of ailments. The rest of the plants were mentioned anywhere from 1-6 times.

Practical Observations

In order to deepen this study two practicals observations of traditional healers were done, one in Kizanda village and one in Ushongo area. These practicals were not meant to add to the hard data of this study, instead, they were meant to give a deeper understanding of the connection between people and medicine as well as the knowledge of traditional healers. These practicals are both reported in the first person because they are the account of a personal experience interacting with the healers in the areas. Additionally, the practicals both encompass different activities because they were left up to the discretion of the traditional healers who were being interacted with. By allowing the healers to lead the direction of the experience the study was able to get a less artificial and confined observation. These practicals were conducted mostly through participatory observation.

Kizanda Village:

My practical in Kizanda village included actually making the traditional medicine using the plants I had been learning about and discussing for 9 days. During this practical I shadowed Beatrice, the Mazumbai cook, who is also a traditional healer. We gathered some of the plants we used together and she found some of them by herself. We squeezed, cooked, burned, mixed,

boiled, and crushed many different plants in numerous pots, plates, and with our hands for an hour or so in the kitchen. The concoctions we produced were brown, green, white and yellow and were then promptly drunken by some of the forest guides who enthusiastically told me how much they loved traditional medicine. Below are the three types of traditional medicine that we made during the practical as well as my own narration of the experience. The names of the plants used are given in Sambiaa.

1. “muungu” → use the bark and cut and skin it then boil it in a special pot and wait until it is cool then mix with milk and eggs and oil. This dawa should be drunk 2x per day for 3-5 days. This dawa is used as a treatment for chango, which is a virus that attacks your body everywhere and causes back pain
2. “eza” - especially for women and pregnant women. This plant is natural growing but can disappear because of environmental disturbance said the woman I did my practical with. This dawa can also be used for constipation or blood in feces. It is helpful for menstrual cramps as well. First you should use warm water (not hot or cold) and squeeze it to get juice and mix it with cool milk and make sure mixture is cool. You can then drink the dawa morning and evening.
3. This dawa treats an illness which is caused by weather and is called called “pahazi”. You use “m’hongo”, “wgwiashigi”, and “mntango” and these can purify tooth or liver. “Mzugwa” can treat for weather and “mchango” which is very bitter and strong, cures malaria. The healer told me pregnant women shouldn’t drink this because it can cause abortions. The healer told me that this medicine is stronger than an injection for curing malaria.

Also, we made a soup of oyster nut which treats chango for women and can give to a woman when she gives birth or is pregnant. Additionally, it and can moisturize the skin (Beatrice then rubbed it all over my arms). You make the concoction by first adding water and boil until it looks like porridge then add more water. This practical was helpful in putting the methods of making dawa into practice and I feel like it gave me a better and deeper understanding of the process that is used to create the medicine.

Ushongo Mtoni Village:

The Practical in Ushongo took a very different form from Kizanda. My translator here said that we should first interview the traditional healer with the questions I had used throughout the rest of the study, this interview is included in the appendix in the same form it was written down.

The answers from the witchdoctor were not included in the table made for Ushongo Mtoni and the total plant count because they did not come specifically from the 27 interview participants. The rest of the experience with this practical is included below in a narrative format as I experienced the day.

Narrative story:

For this practical my translator said that we would go to visit his Bibi and emphasized to me that she was a traditional healer. I agreed and so at 7:15 am we set out to go to his Bibi's house. We journeyed away from the beach into the mangrove forests. As we continued further inland we were able to see where some of the mangroves had been burned down. We zig zagged over many small footpaths and were surrounded by tall grasses and palm fronds. We finally reached the Bibi's house where we were asked to wait outside for a while. We were then invited inside and we conducted our interview. The house inside was simple but hanging from the ceiling were many black, red, and white clothes which my translator explained to me were for the spirits and people who were present but we could not see. There was a mat that covered the floor and a man lay curled in the corner and the snoring noises sounding from him suggested that he was sleeping. The Bibi then lead us to the back of the house into a small room that was covered with black and red and white clothes. As I entered the room I was overcome with the smell of incense and I was told this was the room where she summoned satan. She showed me the plants on the ground and the powders that were contained in the clay pots arranged throughout the small room. It was explained to me that these clay pots and plants were the woman's instruments that she used to summon satan. She then took one of the pots that had a finely ground white powder and proceed to put this powder on the foreheads of me, my translator, and another older woman. She said that this would protect me against bad people. Once we left the room the traditional healer showed me the stash of books outside the room and pulled out the Quran and the Bible and said that she got some of her medicine from those books and included that she used all religions to inform her. Next the traditional healer took a gourd off the ground which I was told was called a "tungurie" and she poured out a dawa called

“mangumbe” which is supposed to help to protect against people who intended to do harm. She then fed this dawa to my translator and myself and then placed some of it in her own mouth. After this whole process we wandered around her farm and she showed many many different plants and told me what they treated and how they were used. These are plants that, to me, would have simply appeared as weeds but everything that was being grown there was important and was used to treat some problem. We then went back in her house where we were fed yams and given a very sweet lemon tea, which I was told was a traditional healing tea. While this was happening she also was given the chance to ask me questions. She told me that she feared that the knowledge of these plants would soon be lost because she was old and no one was coming to learn like I was. After this my translator and I journeyed back to the beach once again zig zagging through the footpaths and desolate sandy areas that had once been dense mangrove forests.

Discussion

Kizanda:

It is very apparent from the data collected in Kizanda village that there is a deep and wide knowledge of traditional medicine there. Every single person that was talked to had at least some understanding of traditional medicine and used it in their own life. They use it to treat a very large number of ailments such as stomach problems, ulcers, hernias, asthma, typhoid, and menstrual issues. This is consistent with other research such as a study conducted in 2002 by Mahonge et al. in Tanzania which found that traditional medicine was used for convulsions and stomach issues, urogenital issues, respiratory issues, and skin eruptions. Some of the people in Kizanda even said that they thought the traditional medicine they use to cure malaria worked better and was stronger than the injections they give in the hospital. This was also consistent with a study that stated that traditional medicinal plants in Tanzania were found to have significant impacts in reducing malaria parasites in mice populations (Gessler et al., 1995). Many people in Kizanda have been using traditional medicine for their whole lives and they can treat themselves with it. The way that the villagers talked about traditional medicine shows how incredibly important traditional medicine is for the people of the village and how ingrained it is into the community. Some of the villagers even mentioned that they prefer traditional medicine to hospital medicine because of cultural reasons, which shows how closely woven the people and

traditional medicine practices in Kizanda are. This is consistent with Romero-Daza's point that traditional medicine is rooted in human culture (2002). Traditional medicine is not only a form of healthcare it is a part of the community and it is passed down throughout the community through generations

Most people in Kizanda village learned about traditional medicine from their family and community members. The knowledge of traditional medicine is passed down from family members to their children and grandchildren. Many people also learned about traditional medicine from their friends. There is such a wide breadth of knowledge that is obtained from all corners of the village. It is shared and expanded upon throughout the lifetimes of the local people.

Generally, people prefer traditional medicine to hospital medicine in full or they use both traditional medicine and hospital medicine. Only two people who were interviewed answered that they would first choose hospital medicine alone. People will choose traditional medicine first because they tend to trust it more than hospital medicine many cases, they believe it is less harmful, that it is cheaper and that it is easy to find. This finding was consistent with the findings of a study conducted in 2006 which suggested that traditional medicine is important in Tanzania due to its accessibility and its safety (Mahonge et al., 2006).

One of the factors that could contribute to the extensive use of traditional medicine in Kizanda village is how prevalent and easily found the plants are. Almost all of the interviewees said that plants are easy to find in the area. The plants are both found naturally in farms and on the side of the road and footpaths or they are grown with the intent that they will be used. Many of the villagers that were interviewed had small home gardens where they grew medicinal plants. Some of these plants even made up the fences of the towns people. In summation, medicinal plants in Kizanda village are incredibly important and are deeply ingrained in the lives of the villagers. Traditional medicine not only makes up an essential part of the healthcare in the area treating everything from malaria to menstrual cramps, but it is also a beloved and respected part of the culture.

Gendered usage:

One of the aims of this study was to understand the usages of the plants in Kizanda village, and one of the focuses was the gendered usages. There was certainly a gendered way in

which some of the plants were used. Many of the plants and treatments that were used specifically for women dealt with issues of pregnancy and menstruation. The ailments that the people of Kizanda treated that had to do specifically with women were as follows; pain and excessive bleeding with menstruation, menstruation cycles abnormality, the inability to get pregnant, babies being overdue, getting soft skin. The ailments that were mentioned in regards to men specifically mostly had to do with becoming sexually aroused as well as having strength during sexual intercourse. The people also spoke about hydrocele for men. There was no mention of trying to increase sexual drive and power for women. This may show the general theme that men should enjoy sex and should feel sexually free while women should not, something that is consistent throughout Tanzania. Other studies have shown that Tanzania is a paternal and male dominated society where men show little interest in family planning and sexual health (Mosha et al., 2013). Additionally, Tanzania is a country that values women as mothers and wives, not as their own liberated and sexually free people. This is demonstrated in many areas of society and traditional medicine is no different. The medicines that are used for women are only in regards to menstruation cycles and to making women mothers and be able to conceive and deliver babies properly. While the medicine that is used for men is aimed at helping men to enjoy sex more and to be stronger and more successful during sex. This study believes that the gendered usages of traditional medicine in Kizanda village reflects the greater themes and norms that are present throughout Tanzania.

Another aspect of traditional medicine where gender seemed to be a factor was in the people who held the knowledge of the plants. The majority of the people who referred to themselves as traditional healers were male. It seemed that there was a general perception that men were the most knowledgeable in terms of traditional medicine. This could also be seen when asking who people learned traditional medicine from. People would often mention their grandfather or father. People mentioned their mothers and grandmothers as well, but many times it was the father and grandfathers that were mentioned first. Women often seemed to have an equally deep knowledge of traditional medicine but it did not appear that they were given the same legitimacy as the men who had a deep knowledge of traditional medicine.

Ushongo:

Much like Kizanda, traditional medicine usage is fairly prevalent in Ushongo Mtoni village as well. Again, this is consistent with findings that traditional medicine usage is heavy in Northern Tanzania (John et al., 2015). People in Ushongo use traditional medicine in their everyday lives and have some knowledge of how to treat ailments. Some of the most common problems that people treated in Ushongo were stomach problems, fevers, malaria, skin problems, head pains, chest pains, and sexual desire and ability to engage in sexual activities for men. Once again, this was similar to previous findings about ailments that are treated by traditional medicine in Tanzania (Gessler et al., 1995). Almost every person that was talked to said that they used traditional medicine. About half of the people said that they preferred traditional medicine over hospital and the other half either preferred hospital medicine or would use both traditional medicine. This finding was similar to findings from a previous study which stated that most rural Tanzanians use a mixture of traditional and hospital medicine (Fierman, 1981). People knew enough to treat a few small things for themselves such as plants that could treat stomach problems or fevers. Many people said that they preferred to go see a traditional healer or a “bibi” who had more knowledge of traditional medicine. Overall, people used traditional medicine to a small extent and almost everyone that was interviewed had at least some small knowledge of traditional medicine. Additionally, people had positive perceptions towards traditional medicine. The one interviewee who said they did not use traditional medicine said that they had a deep respect for traditional medicine and that they thought it was good.

There was definitely a gendered usage of plants in Ushongo as well as Kizanda. Many of the plants that were used by women specifically were used for problems with pregnancy and menstrual problems. Many of the plants that were used by men specifically had to do with curing impotence and giving strength during sexual intercourse. However, there were also plants that were mentioned to help with other issues facing men rather than simply their ability to enjoy sexual intercourse. Additionally, one woman mentioned a plant that women could use to increase their own sexual drive. However, this was mentioned in reference to being a special treat that was done to please the husband or boyfriend of the woman who used the plant. Ushongo Mtoni does seem to have a more equal usage gendered plants, however, there are still an unequal usage of gendered plants.

Comparison of Ushongo and Kizanda villages

In order to compare Ushongo and Kizanda villages it must first be mentioned that they are drastically different places. Kizanda sits high in the West Usambara Mountains. It is a cool and wet climate that lends itself to having lush and diverse plant population. The people in Kizanda are very far from the closest large towns and cities. Most people in that area rely on farming for their source of income. The climate of Ushongo Mtoni is very different. It is much warmer and sits next to the ocean and does not rain nearly as much. While it is still a very small town, it is less isolated than Kizanda because there are a large number of tourists that come to visit the area. Additionally, there are many more occupations in Ushongo Mtoni including farming, fishing, and making building materials for homes.

Usages:

In both Kizanda and Ushongo Mtoni traditional medicine is used by a large amount of the population. Additionally people use traditional medicine for a large variety of problems and ailments in both places. People in both places use traditional medicine to treat stomach problems, muscle pains, problems of sexual arousal and much more. Once again, this was consistent with previous findings on types of ailments treated by traditional medicine in Tanzania, such as stomach issues (Mahonge et al. 2006). In Kizanda village there were about 28 types of problems or illnesses that were treated with traditional medicine and in Ushongo there were about 25 different types of illnesses or problems they use traditional medicine for. So there are about the same number of ailments that are treated in each location. However, in Kizanda village the number of plants that are used to treat these problems are much greater. There were over 145 plants that were gathered through 27 interviews in Kizanda village, while there were 42 types of plants that were spoken about in Ushongo. The people in Ushongo tended to give answers where they would mention one plant that they used to treat one specific illness. Alternatively, in Kizanda people would give very lengthy and in depth answers that included many different types of plants and plants that could be mixed together to create medicine. While the interviews in Ushongo Mtoni were very short, the interviews in Kizanda village could take up to an hour and a half simply because of the depth of the knowledge the people in that area have surrounding medicinal plants. Traditional medicine was used by most of the interviewees in both areas however it appears that traditional medicine was used more widely in Kizanda village because

more people answered that they preferred traditional medicine in this area as well as the depth of the knowledge of traditional medicine.

One important piece of the knowledge pertaining to traditional medicine that was found through this study is who uses traditional medicine in these communities. Both men and women of all ages had knowledge of traditional medicine in both areas. In both areas of study it seemed that the older generations had a better comprehension of traditional medicine and used it more often. This was more apparent in Ushongo as many people answered that they often go to Bibis for further knowledge of traditional medicine. Additionally, it was mentioned by people in both areas that the older generations have more knowledge of traditional medicine. This could be due to a few factors. It could be that the older generations have had more time to acquire knowledge throughout their lives. Additionally, hospital medicine could have been something that was not available or as heavily used in their earlier lives as it is now. So while there are some exceptions, overall, it is the older generations that have the largest amount of knowledge surrounding traditional medicine. Going off of this, people generally learn traditional medicine from their elders such as their grandparents and parents, so the knowledge is passed down through generations and is expanded upon and used throughout their whole lives.

In terms of gendered usage of traditional medicine it is fairly similar in many regards between the two locations. Both the areas show the greater gender dynamics that are present in Tanzania. However, in Ushongo the differences are not as stark as the ones in Kizanda. One big difference that was found was in who uses or is thought of as having the most knowledge of traditional medicine. While in Kizanda it was mainly men who seemed to be seen as traditional medicine experts, in Ushongo Mtoni it was women, specifically Bibi's who were spoken of as the most knowledgeable.

Perceptions:

Another area that is important to explore and compare between Ushongo Mtoni and Kizanda villages is people's perceptions of traditional medicine. One essential question this study focused on was if people preferred traditional medicine or hospital medicine. In Kizanda village the majority of people (70%) preferred traditional medicine. The next largest percentage use both traditional and hospital medicine. People said that they like traditional medicine because it is less harmful than hospital, it is easier to get, it is cheaper, and it is more ingrained in their

culture. For these reasons this study has found that people in Kizanda have a deep connection and very positive perception towards traditional medicine. In Ushongo Mtoni, people also really appreciate traditional medicine, however, they seem to use both traditional medicine and hospital medicine. Traditional medicine alone and a combination of traditional and hospital medicine were found to be equally as preferred in the area. This was consistent with a study that was also based in the West Usambara mountains which found that people use a combination of traditional and hospital medicine (Fierman, 1998). While people still appreciate and have a great respect for traditional medicine in the area, one woman even said that the doctors in the hospital told her to use traditional medicine instead of hospital. The people of Ushongo Mtoni have a more positive outlook on hospital medicine and aren't as opposed to it as the people of Kizanda are. One thing was found to be very consistent in both regions, there was the common conception that traditional medicine is more effective than hospital medicine in curing some illnesses, such as malaria. People in both areas have a positive perspective towards traditional medicine while people in Kizanda rely on it more heavily.

Traditional medicine is highly important to people in both Kizanda and Ushongo villages, that is very clear. Because it is such an essential part of healthcare for so many, this study decided that it would be important to assess people's thoughts on whether or not the plants could disappear or if they were threatened. In Kizanda a few people thought that the plants had the potential to disappear due to climate or other factors. However, the majority of people said that there was not a very high chance that the plants would disappear and that they hadn't seen them becoming less abundant. There were a few reasons that they gave for this, they said that there were so many of the plants around that there was enough for everyone to use them and that they were not being depleted. Additionally, many people said that they loved the plants and utilized them so heavily that people made efforts to conserve them and to keep them in home gardens for easy access. This was consistent with an ISP conducted by Daddis in 2018 which found a deep and important connection between the people of Kizanda and traditional medicine (Daddis, 2018). Alternatively, in Ushongo Mtoni, almost every person that was interviewed said that the plants are disappearing. They said that many people in the community do not have any knowledge of medicinal plants so that when they go into the forest to gather firewood or to clear space for new farms or homes they will cut down trees and plants that are used for medicine.

These answers show that the depth of knowledge is not as deep in Ushongo Mtoni and, because of this, the plants are threatened.

Conclusion

Both Kizanda Village and Ushongo Mtoni Village rely on traditional medicine to some extent. Traditional medicine is used for very practical and necessary reasons in both areas. While overall there are similarities in usage and perceptions between Ushongo Mtoni and Kizanda, there are also many stark differences. The types and number of usages of the plants were fairly consistent in both areas. In terms of inconsistencies, there are a few reasons which could contribute to the differences that are found between traditional medicine usage in Kizanda and Ushongo Mtoni. One major factor could be the climate of the two regions. The climate of Kizanda Village has allowed for an immense amount of biodiversity, which, in turn, contributes to a higher number of medicinal plants in the area.

Another factor that could impact the differences between Kizanda and Ushongo Mtoni is tourism, which leads to westernization. Apostolopoulos et al. state that tourists are often agents of westernization (2005). Kizanda experiences very little contact with tourism and they have a very deep connection with the medicinal plants. While Ushongo does have a connection and a positive perception towards traditional medicine it is not to the same extent as Kizanda village. Tourism could have impacted the knowledge of the people and have caused a loss of connection between the people of the area and traditional medicine. Also the westernization of the area and the globalization could have lessened people in Ushongo want to learn about traditional medicine. The traditional healer that was met with in Ushongo expressed concern that there were no young people coming to learn about traditional medicine. Additionally, a handful of people said that they bought traditional medicine from stores in town which seems to be another sign of a lessening connection between people and traditional medicine. There seems to be a real threat that the knowledge of traditional medicine could die out with the older generations who use them. The death of the knowledge could also lead to the death of plants. Because of the depth of the connection between the people of Kizanda and the plants there does not seem to be an imminent threat of the plants disappearing in that area. This is because of their abundance and the people's efforts to conserve them. However, in Ushongo Mtoni, many people expressed a

concern that the plants could disappear due to a lack of knowledge or care that people have when cutting plants in the forest.

Despite the differences in the abundance of the plants in Ushongo and Kizanda one thing remains crystal clear in both of these areas, traditional medicine is important. It is an essential piece of healthcare and even of culture. The stronger the cultural connection between people and plants, the more importance people will place on conserving them. This study hopes to emphasize the importance of conservation of the plants that are used in traditional medicine as well as the culture of traditional medicine itself. Yes, the plants should most certainly be conserved for the sake of biodiversity, however, they should also be conserved as a part of healthcare, culture, family legacy, and more. The connection between people and traditional medicine in both areas is deep, storied, and ancient and is important that it be conserved.

Suggestions for Future Studies:

There have been previous studies that have focused on traditional medicine in Kizanda village. However, there have been few to none that have focused on traditional medicine in Ushongo Mtoni. Although the depth of the knowledge in Kizanda is greater, there is also a wealth of knowledge to be found surrounding traditional medicine in Ushongo area. One study that could be done in Ushongo area would be to shadow a witchdoctor and to gather their knowledge and perceptions. Additionally, there was a general perception that plants are disappearing in Ushongo due to lack of knowledge of traditional medicine. It would be a very interesting study to look into the disappearance of these plants and how education of people on traditional medicine helps contribute to the conservation of medicinal plants. Finally, it would be interesting to study aquatic traditional medicine, potentially how climate change is affecting these medicines.

Limitations and Biases:

The major limitation in this study was consistency between Kizanda and Ushongo. Even though this study tried to keep the methods as similar as possible, this was difficult to do because of different translators who interpreted answers and questions in different ways. Additionally, the difference in the village layout, climate, population numbers could have been impactful. Ushongo Mtoni is a little under half the size of Kizanda and this could have had some effects

such as range of knowledge that was able to be gathered. Another limitation to this study is that when people were being interviewed it was very hard to keep other people from coming into the interviews or listening or giving their own answers. Another limitation was the language barrier. Despite the fact that there was a translator present throughout the interviews, there was certainly some loss of information due to misunderstanding between the researcher and the translator as well as the possibility that the translators could have altered people's answers slightly. For example, in Ushongo the translator did not know the name for many ailments and illnesses so he would try to describe them based off of motions and sounds and the researcher would do their best to guess whoever the exact ailment the plant treated could have been slightly misconstrued. There could also have been some bias in the selection of the people, the selection of interviewees was solely left up to the translators and it was difficult to control for random selection. In Ushongo people were often randomly talked to on the street while in Kizanda village it seemed like the interviews were set up ahead of time by the translator. Additionally one major bias that could have affected the data gendered usage of plants was that there were solely male translators. Some of the women certainly felt uncomfortable answering questions pertaining to private issues because there was a male translator present. Perhaps if there was a female translator there would have been the possibility to gather a greater and more in depth amount of information surrounding private issues for women. Specific factors were slightly difficult to determine due to the questions, the study determined more of the general usages and perceptions as well as unexpected yet interesting findings surrounding knowledge of traditional medicine and conservation of plants. Finally, this data was analyzed only using narrative analysis, did not determine if any of the data had statistical significance.

Appendix

List of Interview Questions:

- I. Name ?
- II. Age ?
- III. Occupation ?
- IV. Do you use traditional medicine?
- V. Do you prefer traditional medicine or hospital medicine?
- VI. Do you treat yourself or do you go to a traditional healer or witch doctor for treatment?
- VII. Where did you learn to use traditional medicine
- VIII. How long have you been using traditional medicine
- IX. Where do you get your plants from that you use for treatment?
- X. Are these plants easy to find?

XI. Which problems do you treat with traditional medicine? What treatments/plants do you use and how do you use them?

XII. Are these plants disappearing or are they still abundant

Ushongo Traditional Healer Interview Answers

1. Yes she uses traditional medicine
2. She prefers traditional to hospital medicine
3. She treats herself
4. Satan informs her on her traditional medicine from being in her head
5. When a problem doesn't end that she has she will call upon satan
6. Some of the plans are easy to find and some are difficult
7. Some of the plants can disappear because people will take many roots
8. Diseases:
 1. Hoza: treats chronic stomach pain and stomach wound
 2. Mtura: treat the problem of stomach that comes from wizards, treats menstrual cramps,
 3. muambange, children who have spasms, take and grind it then rub it on the body
 4. Roots of muambange and Mtura combine to treat hernia
 5. Mzange- special to make body attractive mix with coconut oil then rub on body
 6. Mzalianuma- treats pressure stomach and treats dizziness - use evaporation
 7. Mvude- treatments of stomach and pressure
 8. Kivumase- treats oiler if eaten and when your rectum falls out you apply it to the rectum and it will be good
 9. Mvuro - rashes and burn on body drink with water - don't boil- bloody stool grind and drink juice, burns, grind and squeeze juice on skin , can also use for skin problems like dimples in skin - can also use with mvumbase and use for diarrhea and apply to anus
 10. Mkomachuma: treats power of penis to make it good- roots
 11. Kongo- take this and hoza for people who have wizard in stomach - grind and use juice
 12. Mchuguliazimu: heart problems take roots and boil and drink

13. Mhumba: menstrual cramps if you are unable to have children - take roots and drunk 7 days and find a man and get pregnant
 1. Mix with mambaumbe then you take and clean baby using this
 2. If you have a big wound take the juice and put on wound for the night and it will work like stitches
14. msosokole: treats vomit for children
15. Menirika- hernia and when a baby has fits and medicine to kill wizard of satan or people
16. Mnyebeure: treat when children get very tensed up
17. Mkongodeba- mix with another plant and treat problem of children and take roots
18. Nyamata - dry in fire and use for a bleeding ulcer and rub plant and apply to arm
19. Moony- looks like samba plant with red stem - use fruit to make oil then put in medicine vessel - body pain from overwork -boil a lot then put on the body and press
20. Chambikaheza- diseases from people, mix with hoza and stomach of sheep (where there are mixings of many plants) and mix with hoza and grind until it is mixed and squeeze - there are some diseases from god that nobody can judge and some that come from people who are jealous
21. Mvuyo - leaves can increase vitamins and roots can help with knees and joints to be strong and can treat stomach and body pain and HIV AIDS
22. Bloody nose and headache use mkabaku
23. Kimere - take the inside milk from this plant and put it in your eye when you have eye pain

Table 1: Kizanda Village Traditional Medicine

Scientific name	Kisambaa Name	Treats for	How Used	Number of times mentioned

Datula species sodom apple		Stomach issues	Use roots and leaves and boil and drink 2x per day for 7 days Leaves and roots drink 3x per day	25
		Breast pain/problems	Boil roots and drink or take single root and apply to body	
		Tooth pain	Break down with mortar and pestle and break down with teeth and keep in mouth and spit out after 10-20 mins, use daily	
		Frequent headache pain	Can use leaves of datula, mshegheshe or myrica salicifoila, and leaves of plants called fuiza (sambaa), muati (sambaa), ulenge(sambaa) and boil and keep in pot and put cloth over head and try to inhale to remove poison	
		Menstration pains	Use with roots of my rica salicifoila and roots of datula and roots of moosy plant and bark of banana flowering mix and boil and drink 2x per day also can add adhatadata angleriana	
		Headache	Take leaves of datula species and leaves of my rica salicifoila (mshegeshe) and leaves of avocado leaves of lemon, leaves of plants called fuiza (sambaa) - boil them and then take kanga and cover and get evaporation	
		Hydrocell	mix with other plants and inhale evaporation	

	Mzugwa	<p>Malaria</p> <p>Boil and drink leaves morning and evening</p> <p>Use with leaves of afyofyo and alovera separately and boil and drink</p> <p>Use with roots of myrica salicifolia and mhasha and boil and drink 2x per day</p> <p>Boil leaves with bark of quinine and drink 3x per day</p> <p>Menstrual cramps</p> <p>Mix with tughutu and roots of boho</p> <p>Headache</p> <p>leaves of mzugwa, fuiza mshegeshe, viagiashighi boil the then places them outside and put a kanga over head and try to inhale the evaporation</p> <p>Chest flu</p> <p>Mix with mzumbasha boil and drink 1/2 cup in the morning and evening</p> <p>Hydrocell</p> <p>Mix with datukla species and mzumba make juice and give a teaspoon to children 2x per day before sunrises and after it sets</p> <p>Colic for children</p>	20
	Mzumbasha	<p>Headache</p> <p>Boil and drink</p> <p>Malaria</p> <p>Boil and drink</p> <p>Stomach Pain</p> <p>Leaves only swallow and try to grind with teeth</p> <p>Menstrual cramps</p> <p>Mix with mzugwa boil and drink half cup of the juice in the morning and evening</p> <p>Hydrocell</p> <p>Mix roots with roots of mshashu or muck or mbawa and boil and drink 1 spoon 2x per day</p> <p>Colic for children</p> <p>Chest pain</p>	15

Myrica Salicifolia	Mshegeshe	Back pain	Use roots	14
		Headache	Barks boil and drink	
		Frequent headache	Can use leaves of datula, mshegeshe or myrica salicifolia, and leaves of plants called fuiza (sambaa), muati (sambaa), ulenge(sambaa) and boil and keep in pot and put cloth over head and try to inhale to remove poison	
		Chest/ flu	Mix with leaves of muzugwa fuiza, mshegeshe, viagiashighi boil then place outside and put kanga over head and try to inhale and let them soak into pores	
		Tooth pain	Boil and swish in mouth for 30 minutes then spit out	
		Hydrocell	Mix leaves with other plants and boil them and inhale evaporation	
		Reduction of pain and tiredness during work	Take a whole coconut and burn it to get a flour and then take the poles broken by an elephant, take roots of plants called mvuvundi (sambaa), roots, barks, leaves of mvula (sambaa) tree found in desert areas, roots of mvula (smaba and roots leaves of plant mshegheshse (sambaa) and barks of plant called mmandai (sambaa) burn them in a pot to get a flour and eat the flour before and after working can also tattoo it into your skin to keep the strength	

Bees wax		<p>Incase sexual desire</p> <p>Ulcers</p> <p>Blood pressure</p> <p>Stomach pain</p> <p>Chest pain</p>	<p>Msakaunguko tree, roots of pilipili, bees wax, roots of male papaya plant —> can mix these ingredients according to accessibility</p> <p>Mix with other ground plants and oils and drink for seven days</p> <p>Mix with leaves and barks or mlonge and drink</p> <p>Combine with ng'wakwa</p> <p>juice of ginger, bees wax, egg juice, juice of algae plants, drink the juice without boiling</p>	11
Egg		<p>Delivery of babies</p> <p>Chest pain</p> <p>Colic for adults</p> <p>Colic for children</p> <p>Ulcers</p>	<p>Outer layer of egg then water remaining from sauce pan and give to pregnant woman</p> <p>juice of ginger, bees wax, egg juice, juice of algae plants, drink the juice without boiling</p> <p>Use with Eza, milk or barks of plant called muungu</p> <p>Mix with ginger</p> <p>Avocado, jack fruit, egg, bees wax and dates</p>	11

Avocado		To get smooth skin	Fruits of guava mixed with banana and avocado and apply to face Mix with pumpkin seeds bees wax and peanuts and coconut four and add water boil and drink and apply to penis daily Leaves of avocado tree take the out and boil it 3x per day until results are seen Or dry in sun and grind to make flour	11
		Sexual desire	use the leaves of guava plants, avocado, mchaichai (tanga) and make a juice and drink frequently	
		Stomach pain	Take leaves of datula species and leaves of myrica salicifolia (mshegeshe) and leaves of avocado leaves of lemon, leaves of plants called fuiza (sambaa) - boil them and then take kanga and cover and get evaporation	
		UTI	Leaves of avocado and leaves of guava boil and drink 2x per day morning and night	
		Head pain	Leaves of guava and avocado and boil and drink 1/2 cup 3x per day	
		Malaria		
		Chest pain		
Vernonia myriantha	Mhasha	Malaria	Mix with mzugwaf leaves and boil and drink 1/2 cup morning and evening	10
		Breast pain or problems	Use roots and mix with mtei drink and apply to breast like a massage	
		Asthma	Take leaves and try to swallow after grinding with teeth	
		Leg problems and muscle cramps	Boil leaves and make massage	
		UTI	leaves of alovera, roots, mzugwe (corealis) and roots of weed called mhash (sambaa) boil them and drink 1/2 cup 3x per day and keep a clean toilet	
		Menstrual problems		

	Fuiza	<p>Malaria</p> <p>Frequent headaches</p> <p>Chest and flu</p> <p>Head pain</p> <p>Safe delivery and reduction of pain during delivery</p> <p>Asthma</p>	<p>Leaves boil and drink with other plants two times a day for seven days</p> <p>Can use leaves of datula, mshegheshe or myrica salicifoila, and leaves of plants called fuiza (sambaa), muati (sambaa), ulenge(sambaa) and boil and keep in pot and put cloth over head and try to inhale to remove poison</p> <p>Take leaves of mzugwa fuiza, mshegeshe viagiashighi boil then and then put a kanga over head and try to evaporate them into pores</p> <p>Take leaves of datula species and leaves of myrica salicifoila (mshegeshe) and leaves of avocado leaves of lemon, leaves of plants called fuiza (sambaa) - boil them and then take kanga and cover and get evaporation</p> <p>Take leaves and scratch them to get juice and massage on stomach and back</p>	9
Crassiceohalum Bojer	Eza	<p>Pregnancy problems</p> <p>Colic</p> <p>Tooth pain</p>	<p>Roots boil and drink for 7 days</p> <p>Leaves of eza and leaves of tongo tongo and boil and drin 3x per day</p>	8
Soil creep		<p>Menstruation cycle (reduction of pain and excessive bleeding)</p> <p>Pain with urination for women</p>	<p>Boil banana flower whole with soil creep from erosion and add roots of mossy plant</p> <p>Missy plant root and roots from soil creep then boil and drink for 7 days</p> <p>Mix with mossy plant and tugutu</p>	8

Mossy plant		Menstruation cycle (reduction of pain and excessive bleeding)	Boil banana flower whole with soil creep from erosion and add roots of mossy plant	8
		Pregnancy problems	Use with roots of myrica salicifolia and datula plant and banana flower 2x per day	
			Missy plant root and roots from soil creep then boil and drink for 7 days Leaves roots	
diatrophaspecies	Castor	Family planning	Men swallow to prevent fertilization, can also take seeds and break down with pistol and mortar and grind before intercourse and apply to vagina or penis	8
		Ghonnera	Boil and drink 3x per day for 7 days	
		Ear Pain		
		Muscle cramps and leg problems	Mix roots of many plants add water and grind and massage into muscle	
		Abscess	Take 1 seed of diatrophaspecies and swallow	
Myrica Salicifolia	Mmandai	Frequent headache pain	Can use leaves of datula, mshegheshe or myrica salicifolia, and leaves of plants called fuiza (sambaa), muati (sambaa), ulenge (sambaa) and boil and keep in pot and put cloth over head and try to inhale to remove poison	7
		Menstruation	Use with datula and roots of mossy plant and bark of bananas flower and mix them and boil and drink 3x per day	
		Reduction of pain from over working	Add to roots of goto and mule and mizinda and nguue and mix them and boil then drink or bgrind roots and make a juice/flour	
		Headache	Take leaves of datula species and leaves of myrica salicifolia (mshegheshe) and leaves of avocado leaves of lemon, leaves of plants called fuiza (sambaa) - boil them and then take kanga and cover and get evaporation	

Banana	Tindi Jasuu	Menstruation cycle (reduction of pain and excessive bleeding) Smooth skin Colic	Boil whole with soil creep from erosion and add roots of mossy plant Fruits of guava mixed with banana and avocado and apply to face Take banana and peel and dry in the sunlight then grind with mortar and pestle to make flour then flour to make porridge	7
Guava		To get smooth skin UTI Diarrhea Malaria Chest pain	Fruits of guava mixed with banana and avocado and apply to face use the leaves of guava plants, avocado, mchaichai (tanga) and make a juice and drink frequently Grind leaves with mortar and pestle and keep in a bottle or any instrument for 1-2 hours then filter juice and drink Leaves of avocado and guava boil and drink 2x per day morning and night Leaves of guava and avocado and build and drink 1/2 cup 3x per day	7
Ginger		Chest pain Hydrocell Colic for children	Hi juice of ginger, bees wax, egg juice, juice of algae plants, drink the juice without boiling Ginger mixed with soda carbonate boil and drink Mix with egg	7

Adhatadata angleriana	Tughutu	<p>pregnancy problems</p> <p>Menstral cramps</p> <p>Excessive bleeding</p> <p>Injury</p> <p>Hydrocell</p> <p>tooth pain</p>	<p>Roots boil and drink</p> <p>Mix with roots of fallen down trees at soil creep and with mossy plant</p> <p>Make solution and apply to the injured place</p> <p>Use roots of mshewa and unkurwe and tughutu and boil and drink morning and night half a cup</p>	6
	Quinine	Medicine for malaria	<p>Boil and drink 3xper day for seven days</p> <p>Mix with mzugwa leaves and leaves of mhasha boil and drink 2x per day</p>	6
Coconut		<p>Sexual desire</p> <p>Ear pain</p> <p>Pain Reduction and tiredness during work</p> <p>Asthma</p>	<p>Mix with coconut onion, pumpkin seed and make into flour with mortar and pestle and add water and boil and drink frequently before sexual intercourse</p> <p>Mix with pumpkin seeds bees wax and peanuts and coconut four and add water boil and drink and apply to penis daily</p> <p>Use oil and put in ear to reduce pain</p> <p>Take whole coconut and burn it and get flour then use roots of mvuvundi and all of Mvula and mshegeshe and mmandai and burn them to get a flour and eat before and after working and can tattoo into skin to get strength</p>	6
Alcelina abisiciaca	Muungu	<p>Tooth pain</p> <p>Colic for adults</p>	<p>Keep in mouth and swish around for 10 mis then spit</p> <p>take barks and mix with milk and egg and drink</p>	6

		Blood pressure	Roots of muungu (sambaa), mfufu, muula, boil and drink 1/2 cup 3x per day	
Alovera		Bone pain Tooth pain Chest and flu Stomach pain UTI Typhoid	Alovera leaves soak in water for four days to make a juice then drink 2x per day until the problem disappeared Mix with clove and brush Mix with mzugwa, afyofyo and separately boil and drink Make deep cuts with knife and keep in water for a few hours and try to drink leaves of alovera, roots, mzugwe (corealis) and roots of weed called mhash (sambaa) boil them and drink 1/2 cup 3x per day and keep a clean toilet Take leaves of wild tomato plant and grind with water to get juice then drink 1tsp and up to two for adults 3x per day for 12 days	6
Lemon leaves		Head pain Malaria Tooth pain	Take leaves of datula species and leaves of myrica salicifolia (mshegeshe) and leaves of avocado leaves of lemon, leaves of plants called fuiza (sambaa) - boil them and then take kanga and cover and get evaporation Boil with mzugwa and drink	6
	zaake	Menstrual cramps Colic for children Muscle cramps and leg problems	Roots of datula mzubasha, mossy plant zaake and barks of banana flour and boil and drink 3x per day. leaves, rub between hands and try to swallow juice frequently morning and evening 1 spoonful	6

Papaya	Mbawa	Family planning Inury and wound Roots of male payaya increase sexual desire Regular menstrual cycle	Try to swallow seeds before sexual intercourse Use leaves and milk from papaya and apply to wound Mix with other plants root and living crab boil and wait until cool then burn them and use ash to make a juice	5
Climbing liana and fruit (oyster nut)	Kweme	Hernia Stomach pain Post delivery stomach stretch reduction Colic for children and adults	Boil with water (3 cups) then drink juice 2x per day for a week or frequently Use with mossy plant and mghurwe and boil and drink 2x per day Peel oyster nuts then grind with mortar and pestle and boil and try to give to a woman or spread oil on woman and tie a manga around waist for 1-2 months	5
Parinari excelsa	Muula	Fertility for men Pain Killers Blood pressure and heart problems	Boil roots then drink Boil bark and drink 3x per day (morning afternoon and evening) can add mshegeshe Roots of muungu (sambaa), mfufu, muula, boil and drink 1/2 cup 3x per day	4
Cajanus cajan	Mea wa mbaazi (kiswahili)	Chest pain	juice of ginger, bees wax, egg juice, juice of algae plants, drink the juice without boiling	4

	Boho	Menstral cramps Asthma Colic for children	Mix with mzugwaf and roots of tugutu and boil and drink 3x per day Mix msasa with roots of boho msase and oyster nit and grind with mortar and pestle to make a flour then add small amount to water then filter juice and give one spoonful to a sick person and one spoon to a living chicken two times a day Roots o mhuka and roots of weed called boho boil and drink 2 spoons 2x per day	4
Wild tomato or solanum inccanum	Mturubuasam	Stomach pain Typhoid	Swallow and grind with teeth to make a juice Take leaves of wild tomato plant and grind with water to get juice then drink 1tsp and up to two for adults 3x per day for 12 days	4
Piece of old clothes		Bloody nose	Burn and evaporate and inhale smoke	4
Black Jack or Vani Vani	Mashona nguo	Ulcers Injuries Stomach pain	Boil leaves and drink Make solution and apply to injured parts of the body Take leaves and roots of datula species and boil and drink them 1/2 cup 3x per day leaves of mature black jack (vanivani - scientific) boil them and try to drink the juice - 1 duo	3
Tea roots		Tooth pain	Boil and drink	3
Chili	Mpilipili mwechega	Sexual desire and strength during sex Menstrual problems	Boil and drink Mix with other plants for sexual desire	3
	Unkurwe roots	Increase sexual desire Hydrocell	Boil and drink for 7 days and mix with other plants Also can add bees wax Use roots of mshewa and unkurwe and tugutu and boil and drink morning and night half a cup	3
	Mkundekunde	Sexual desire	Mix with other plants boil with water and drink solution	3

		Delayed delivery	Mix with other plants and animal feces and inhale evaporation	
	Mshashu	Colic for children Bleeding during pregnancy Muscle cramps and leg pains	Mix with mzungubasha roots and boil and drink Roots of mkuunguma and mshashu boil and drink 2x per day Roots of modongonyezi, mshashu zaake mhasha boil and drink	3
	Mntango	malaria Headache	Barks of quinine and mntango boil and drink 2x per day	3
	Mzumba	Colic for children	Mix mzungwa with datukla species and mzumba make juice and give a teaspoon to children 2x per day before sunrises and after it sets	3
Ficus family	Mkuyu	Tooth pain Menstrual problems	Take gum of plant and put it omg the tooth with the problem Mix with other plants	3
Corealis	Mzugwe	Headache UTI Malaria	Boil and drink leaves and sometimes can massage into head leaves of alovera, roots, mzungwe (corealis) and roots of weed called mhash (sambaa) boil them and drink 1/2 cup 3x per day and keep a clean toilet Mix leaves with mash and boil and drink	3
Telfairia pedata	Mmea wa kweme (Climbing liana)	reduction of pain during delivery Asthma	Mix msasa with roots of boho msase and oyster nit and grind with mortar and pestle to make a flour then add small amount to water then filter juice and give one spoonful to a sick person and one spoon to a living chicken two times a day	2
	Mkongoo	Back pain Body pain	Use roots	2

	Bai roots	pregnancy problems Excessive bleeding and pain	Roots Roots of bai and roots of plants found at land slide area and roots of kafufyo and take roots of plant that has been found at footpaths and roots of plant called mvambaziwa and roots of mziaghembe and boil and drink 2x per day	2
	Katyofyo	Malaria Excessive bleeding and pain during menstruation	leaves boil and drink with other plants two times a day for seven days	2
	Tongo tongo	Breast pain Colic	Scratch and break with mortar and pestle and apply to breasts Leaves of eza and tongo tongo and boil and drink 3x per day	2
Peanut	Karanga	Sexual desire	Mix with coconut onion, pumpkin seed and make into flour with mortar and pestle and add water and boil and drink frequently before sexual intercourse Mix with pumpkin seeds bees wax and peanuts and coconut four and add water boil and drink and apply to penis daily	2
Pumpkin seeds		Sexual desire	Mix with coconut onion, pumpkin seed and make into flour with mortar and pestle and add water and boil and drink frequently before sexual intercourse Avocado Mix with pumpkin seeds bees wax and peanuts and coconut four and add water boil and drink and apply to penis daily	2

	Muati	Headache pain	Can use leaves of datula, mshegheshe or myrica salicifoila, and leaves of plants called fuiza (sambaa), muati (sambaa), ulenge(sambaa) and boil and keep in pot and put cloth over head and try to inhale to remove poison	2
		Tooth pain	Bark of eucalyptus, roots of tea, roots of muati	
	Afyofyo	Chest and flu	Use with leaves of afyofyo and alovera separately and boil and drink	2
		Safe delivery	Mix Roots of mwiinu and fyofyo and any canopy species roots and meat of cows leg-soup boil them separately and take a small amount of each solution and mix and drink 1/2 cup 3x per day for 6 days	
Porinori excelisia	Mule	Reduction of pain from overworking	Roots of myrica salicifoila and roots of plant called goto and mule and mizinda and nguue and mix then boil and drink or grind roots and make a flour to add to a juice	2
Garlic		Trouble conceiving	grind with onion and mix with flour of mtama and mlenda and water and leave for 3 days then drink 1 spoon 3x per day	2
		Chest Pain	Mix with egg, bees wax, algae, and grind all and combine and boil and drink	
	Llunkurweh	ulcers	use tooth and grind and swallow juice	2
	Muuka	Colic for children	mix with mzumbasha roots boil and drink	2
		Breast pain	Use roots and mix with roots of plant called mywimka and boil then massage into breast	
	Marijuana	Ear Pain	use the leaves and scratch them to make roots	2
	Muule	tooth pain and problems	Boil and keep within mouth then spit out	2

	Msasa	Asthma Tooth pain	Mix msasa with roots of boho msase and oyster nit and grind with mortar and pestle to make a flour then add small amount to water then filter juice and give one spoonful to a sick person and one spoon to a living chicken two times a day Take leaves of a plant called msasa (sambaa) and dry them and grind using mortar and pestle to get flour and mix flour with bees wax and try to keep within tooth or use tooth brush and brush with mixture	2
	Muombeombe	Asthma	mix with small salty fish and boil and drink 1/2 cup 3x per day and eat the fish	2
	Mdongonyeze	Headache associated with malaria Muscle cramps	Leaves of mbuumbu and mdongonyeze mshegeshe and uguishighi boil and evaporate until the sick person is sweating	2
	Nguro	Safe quick delivery	A dangerous snake is beaten and killed and then the head is cut off and you take the seeds of diatropha and keep them in the mouth of the snake then plant the seed and let it grow then cut the pores of the plant and scratch them and get a flour from it and keep the flour within water and give the pregnant woman —> this cure can also be used for snake bites	2
	Jack fruit	Ulcers	Avocado bees wax dates and egg	2
	Ng'waka	ulcers Blood pressure	Scratch and grind to get clout then mix with bees was and swallow 2 spoons a day	2
Black sugar cane	Muwa miens	Hernia	Boil and drink 3x per day frequently	1
Ipomoea batatus	Mtembele (sweet potato)	Abcess	Leaves rub between hands to get a juice	1
Liver wort	Long'e (sambaa) kiharara (swahili)	Used to treat colic caused by sever stomach pains Back pain	Trunk and cut into fine pieces and keep in bottle with water and drink 3x per day	1
	Sodop hepo	Stomach Issues	Use roots and leaves and boil and drink 2x per day for 7 days	1

Coleaus kamandischalis		Malaria	Boil and drink leaves morning and evening	1
	Msakaungoko tree	Increase sexual desire	Msakaunguko tree, roots of pilipili, bees wax, roots of male papaya plant —> can mix these ingredients according to accessibility	1
	Bwaohe	Pregnancy problems		1
	Mtei roots	pregnancy problems	Roots	1
	Umbombo roots	Sexual desire	mix with other plants boil and drink with water	1
	Ufambo roots	Sexual desire	Mix with other plants and boil and drink with water	1
	Mnkwanga	Headache	Boil and drink	1
	Maurobani	Malaria	Leaves and barks boil and drink with other plants two times a day for seven days	1
	Mlonge	Blood pressure	Leaves and bark boil them with bees wax and drink	1
	Ng'wakwa	Stomach pain	Scrape bark to get four then mix with bees wax and drink	1
Azadirpchia indica		Malaria	Bark and boil and drink 3x per day for 7 days	1
Onion		Sexual desire	Mix with coconut onion, pumpkin seed and make into flour with mortar and pestle and add water and boil and drink frequently before sexual intercourse	1
Moringa olleifera		Sexual desire	Seeds are eaten by men	1
Ashes from fire wood		Stomach pain or pollution	Boil and drink 3x per day for a week	1
Cow urine		tooth pain	Especially black cow keep in mouth and swish around for 10 mins and spit out	1
Hoza ndogho		Stomach pain	Collect leaves and roots from farms, dry them in sunlight then burn them and put in a cooking post with fire and make ashes and store the ashes and can drink them later if you are suffering from stomach pain, and drink 3x per day in a week	1
suburb mwitu (check this name —		Hernia	Grind with teeth then swallow	1

> Interview 7)				
	Mhaata nyani	Helping with delivery	bark taken from left and right side of the tree and dry oil the sin and grind and filter to get a flour and mix with a solid sample from a termite hill and try to cut and grind it and mix with water then swallow	1
Clove		Tooth pain	Take clove seeds and grind them then use the solution with a tooth brush 3x per day (morning afternoon and evening) until the problems are gone, can also mix with alovera juice	1
	Mng'angwa	Frequent headache pain	Keep within boiled water then drink it frequently as a tea	1
	Ulenge	Headache pain	Can use leaves of datula, mshegheshe or myrica salicifoila, and leaves of plants called fuiza (sambaa), muati (sambaa), ulenge(sambaa) and boil and keep in pot and put cloth over head and try to inhale to remove poison	1
	Mghurwe	stomach pain (menstral cramps)	mix with climbing liana, mossy plant, and all roots found at soil creep 3x per day (morning afternoon and evening)	1
	Viagiashighi	Chest and flu	Mix with leaves of muzugwa fuiza, mshegeshe, viagiashighi boil then place outside and put kanga over head and try to inhale and let them soak into pores	1
	kiui	Ear pain	Scratch between hands with water to produce juice then put in ear	1
	Mbwakabwaka	Hydrocell	use roots and boil then drink them 2x per day morning afternoon and evening	1
	Ugoto	Reduction of pain from overworking	Roots of myrica salicifoila and roots of plant called ugutu and mule and mizinda and nguue and mix then boil and drink or grind roots and make a flour to add to a juice	1
	Mizinda	Reduction of pain from overworking	Roots of myrica salicifoila and roots of plant called goto and mule and mizinda and nguue and mix then boil and drink or grind roots and make a flour to add to a juice	1
	Nguue	Reduction of pain from overworking	Roots of myrica salicifoila and roots of plant called goto and mule and mizinda and	1

			nguue and mix then boil and drink or grind roots and make a flour to add to a juice	
adhatadata angleriana		Menstrual cramps	Roots of datula species and barks of banana flower and roots of mossy plant boil and drink 2x per day	1
Eucalyptus		Tooth pain	Bark of eucalyptus, roots of tea, roots of muati	1
	Mtama	Trouble conceiving	grind garlic with onion and mix with flour of mtama and mlenda and water and leave for 3 days then drink 1 spoon 3x per day	1
charchorus olitorus	Mlenda	Trouble conceiving	grind garlic with onion and mix with flour of mtama and mlenda and water and leave for 3 days then drink 1 spoon 3x per day	1
	mkumba	For young girls	Mix with roots of mashinga and a living crab and keep them in bottle with water and boil and drink 1/2 cup morning and night	1
	Mashinga	for young girls	Mix with roots of mkumba and a living crab and keep them in bottle with water and boil and drink 1/2 cup morning and night	1
	Papata	bleeding during pregnancy	take roots of the plant and the colon or intestine of fish and boil them and drink for 7 days	1
	Mbawa	Colic for children	Mix with mzumbasha roots and boil and drink	1
	Msoo	Hydrocell	roots	1
	Mshewa	Hydrocell	Use roots of mshewa and unkurwe and tughutu and boil and drink morning and night half a cup	1
	Boho	Stomach pain Ulcers	keep bark within water for 3 hours then boil and drink every 6 hours	1
	Ngedeo	Ear pain	Rub the plant and scratch in hands to make a juice and put the juice in ear frequently	1
	Molongonyezi	reduction of body pain	use with roots of plant called mkongoo boil and drink	1
	Mwimka	breast pain	Mix with roots of muck boil then drink and massage into breast	1
	Mkuunguma	bleeding during pregnancy	mix with roots of mshashu and chili roots and boil and drink 2x per day	1
Termite mound	Nguleiaya shaga	reduction of pain during delivery	take soil and mix with water and oyster nuts and drink during labor	1

	Msase	Asthma	Mix msasa with roots of boho msase and oyster nit and grind with mortar and pestle to make a flour then add small amount to water then filter juice and give one spoonful to a sick person and one spoon to a living chicken two times a day	1
	Muuke	Colic for adulta	take roots of a plant called muuka (sambaa) and msihasno (sambaa) and datula species, mbunushekizeu (sambaa) nkamachuma and mshwée boil them and drink juice 2x per day 8am and 8pm 1/2 cup for adult and one half tea spoon, stop when it looses its taste	1
	Msihasno	Colic for adults	take roots of a plant called muuka (sambaa) and msihasno (sambaa) and datula species, mbunushekizeu (sambaa) nkamachuma and mshwée boil them and drink juice 2x per day 8am and 8pm 1/2 cup for adult and one half tea spoon, stop when it looses its taste	1
	Mbunushekizeu	Colic for adults	take roots of a plant called muuka (sambaa) and msihasno (sambaa) and datula species, mbunushekizeu (sambaa) nkamachuma and mshwée boil them and drink juice 2x per day 8am and 8pm 1/2 cup for adult and one half tea spoon, stop when it looses its taste	1
	Nkamachuma	Colic for adults	take roots of a plant called muuka (sambaa) and msihasno (sambaa) and datula species, mbunushekizeu (sambaa) nkamachuma and mshwée boil them and drink juice 2x per day 8am and 8pm 1/2 cup for adult and one half tea spoon, stop when it looses its taste	1
	Mshwée	Colic for adults	take roots of a plant called muuka (sambaa) and msihasno (sambaa) and datula species, mbunushekizeu (sambaa) nkamachuma and mshwée boil them and drink juice 2x per day 8am and 8pm 1/2 cup for adult and one half tea spoon, stop when it looses its taste	1
	Mvundivundi	Reduction of pain and tiredness during work	Take a whole coconut and burn it to get a flour and then take the poles broken by an elephant, take roots of plants called mvuvundi (sambaa), roots, barks, leaves of mvula (sambaa) tree found in desert areas, roots of mvula (smaba and roots leaves of plant mshegheshse (sambaa) and barks of plant called mmandai (sambaa) burn them in	1

			a pot to get a flour and eat the flour before and after working can also tattoo it into your skin to keep the strength	
	Mvula	Reduction of pain and tiredness during work	Take a whole coconut and burn it to get a flour and then take the poles broken by an elephant, take roots of plants called mvuvundi (sambaa), roots, barks, leaves of mvula (sambaa) tree found in desert areas, roots of mvula (smaba and roots leaves of plant mshegheshse (sambaa) and barks of plant called mmandai (sambaa) burn them in a pot to get a flour and eat the flour before and after working can also tattoo it into your skin to keep the strength	1
	Knifingamsi	Stomach pain	Take roots and leaves of weed called knifingamsi (sambaa), roots leaves of weed called kikose (sambaa) burn with pot to get flour and try to eat a small amount swallow and can put in tea	1
	Kikose	Stomach pain	Take roots and leaves of weed called knifingamsi (sambaa), roots leaves of weed called kikose (sambaa) burn with pot to get flour and try to eat a small amount swallow and can put in tea	1
Mango Tree		Tooth pain	take bar and boil and then swish in mouth and spit out morning and night	1
	Msakasua	Tooth pain	Gum of palm and put it on the tooth with the pain	1
	Mbuumbu	Headache associated with malaria	Leaves of mbuumbu and mdongonyeze mshegeshe and uguiashighi boil and evaporate until the sick person is sweating	1
	Uguiashighi	Headache associated with malaria	Leaves of mbuumbu and mdongonyeze mshegeshe and uguiashighi boil and evaporate until the sick person is sweating	1
	Mvambaziwa	Excessive bleeding and pain during menstruation	Roots of bai and roots of plants found at land slide area and roots of kafufyo and take roots of plant that has been found at footpaths and roots of plant called	1

			mvambaziwa and roots of mziaghembe and boil and drink 2x per day	
	Mziaghembe	Excessive bleeding and pain during menstruation	Roots of bai and roots of plants found at land slide area and roots of kafufyo and take roots of plant that has been found at footpaths and roots of plant called mvambaziwa and roots of mziaghembe and boil and drink 2x per day	1
	Mngwiza	Asthma	bark of mngwiza boil and drink 1/2 cup until the condition has lessened	1
	Modongonyezi	Muscle cramp and leg problems	mix with mshashu zaake and mash and boil and drink and can make massage	1
	Mtongotongo	Bleeding during pregnancy	Take mtongotongo and fern plant and grind using mortar and pestle with a small amount of water and filter the juice and give 1/2 cup 1 time a day	1
	Mhuka	Clic for children	Mix roots with roots of boho and boil and drink 2 spoons 2x per day	1
Solanum incanum	Mtumbua	Stomach pain	Boil leaves and drink 3x per day	1
	Mpumu	Tooth pain	Boil and swish in mouth and spit out 3x per day	1
	Mkende	Headache or pain	Mkende, mshegeshe, shungamzinga, uguashighi boil and evaporate with kanga over head until the sick person sweats	1
	Shugamzinga	Headache	Mkende, mshegeshe, shungamzinga, uguashighi boil and evaporate with kanga over head until the sick person sweats	1
	Uguiashighi	Headache	Mkende, mshegeshe, shungamzinga, uguashighi boil and evaporate with kanga over head until the sick person sweats	1
	Tindi jamboko	Menstruation problems	Take roots of banana and plant called tindi jamboko (sambaa), roots of any plant which are crosses at foot paths and roads, root of mshegeshe and boil them and drink 1/2 cup 3x per day.	1
	Nyezi	Chest pain	mix leavers of nyezi, mzumb, asha, ginger and grind with teeth and swallow juice frequently	1
Cord africana	Mfufu	Heart problems and blood pressure	Take roots of muungu (sambaa), mfufu, muula, boil and drink 1/2 cup 3x per day	1

	Mbono	Muscle cramp and leg problems	Roots of diatropha and mbono and boil and massage using piece of clothes two time per day	1
	Mwiinu	Safe delivery	Roots of mwiinu and fyofyo and any canopy species roots and meat of cows leg- soup boil them separately and take a small amount of each solution and mix and drink 1/2 cup 3x per day for 6 days	1
	Tobacco	Pain in temple	Leaves of tobacco and data species and mix and burn to make flour and put on temple	1
	Msambia	Asthma	Bark	1
Date	Tende	Ulcers	Avocado bees wax dates and egg	1
Kylinga erecta	Ndogo (swahili)	Unbalanced menstrual cycle	Take the roots of the grass species found at the rivers (ndogo in Swahili) called water grass and kylinga erecta, roots of zaake tghutu, mossy plant, roots of the plants/weed found at soil creep, boil and try to drink 1/2 cup 3x in a day	1
	Mtua	Delayed delivery	Mix with a multitude of plants and evaporate	1
	Nyangaranga	breast problems	leaves and boil and drink 1/2 cup 3 per day	1
	Mtindi	Back pain	Mix with liverwort and put in water and drink	1

Table 2: Traditional Medicine in Ushongo Mtoni

Scientific/ Common English Name	Kiswahili Name	Treats For	How Used	Number of Times Mentioned
	Mtura	Stomach Menstrual cramps Hernia	Boil one cup and drink 1 cup 3x per day	13
	Muarubaini	Malaria Fever Stomach Headache Hernia	Use leaves The pieces and boil in. Big bowl and inhale evaporation for 3-7 days	11
Alovera	mshubiri	For stomach For skin When blood is dirty Malaria	Cut and put in water 1/4-1/2 cup	6

		"can treat many diseases"		
	Mchunglikuzimu	For fever Malaria		2
	Dawa Manga	Stroke	Go to local shop to buy	2
	Mkamachuma	Hernia Ulcer	Take leaves and grind and apply	2
Lime	Limao	UTI Excessive bleeding	Leaves Mix with juice of mchugwa and drink	2
	Mronge	UTI Pressure		2
	Popo tree	Malaria	Cut and boil and drink leaves	1
	Mdaa	Pain while peeing	Boil roots and take 1 cup	1
	Mchunga	Skin becomes weak	Boil then drink	1
	Mwubasidume	Fever and aches	Boil and cut and use evaporation	1
	Coconut oil	Soft skin	Use oil and rub on skin	1
	Mbronge	Bone pain		1
	Vumanuke	Throat pain in tonsils	Put it inside a dish then it becomes dry then put in and grind with mortar and pestle until you get a flour then mix with coconut oil and lick it	1
	Mdoza	Stomach		1
	Mkuyati	Men who have trouble becoming sexually aroused	Eat the nuts every time before sexual intercourse	1
	Kunga	Women can have sex man y times close together very easily	Women take roots to make a porridge and then drink porridge	1
	Mkongole	Chest		1
	Msoro	Eyes	Burn and get flour and put in water and put in inner corner of eye	1

Soil from termite mound		leg pain	Take soil from termite hill and grind it and put it in water	1
	Mvundu	When testicles have become swollen	Boil and drink water	1
	Mnuka	When testicles have become swollen and painful	Boil and drink water	1
	Mvukamvumbu	Stomach		1
	Mkonowatembo	Skin		1
Euclea Divinorum	Mda	Tooth pain	Cut root and boil and swish in mouth and spit out 2-3 times	1
	Mkamvundu	Zongo (When bad people curse children and their stomachs become swollen) Shaking in children	Take and crush leaves with mortar and pestle and rub on stomach and drink Take leaves and rub to get juice then rub on body of children	1
	Mchugwa	Excessive bleeding with period	Mix with lime then mix juice and drink	1
	Mhonge	Treats 200 diseases (blood pressure, headache HIV stomach wounds and more)	Take 2-4 seeds 3x per day and can take roots	1
	Muhina	Women who is still not delivering past due date	Boil leaves and give one cup	1
	Mnukavundo	Stomach	Root	1
	Mbigili	Stomach pain that feels like a knife cut (also diarrhea)	Rub between hands and put in water then drink	1
	Mtwintwi	stomach of children		1
	Pepe	Chango	Boil then drink	1
	Mnujovubdo	Throwing up	Take roots and boil and drink	1
	Mpera	Stomach	Leaves	1
	Mono leaves	pain of body	Press on body	1
	Mcoca	Wound	put leaves on wound	1
	Muhengele	Head pain	Boil roots and drink 1. Up then wait 1/2 hour then drink again	1
	Msongwe	Rash	Grind and rub on body	1

	Mokotani	Malaria Sexual desire/ impotence		1
	Mbazi	Chest		1

Table 2 shows the numerous medicinal plants that were mentioned throughout the interviews in Ushongo Mtoni. The first column shows the scientific/ common english name of the plant if they were able to be found. The second column shows the kiswahili name of the plant. Column 3 shows the types of ailment that the treatment is used for. The fourth column includes the ways in which the plants are prepared and the fifth shows the number of times the plants are mentioned.

Do you use traditional medicine

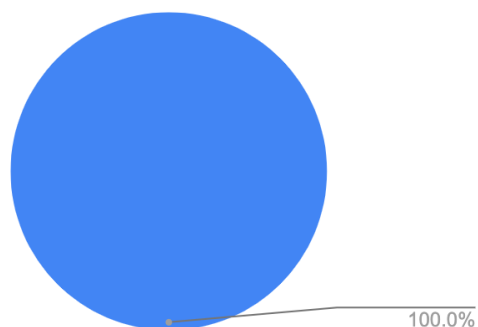


Chart 1: Kizanda Usage of Traditional Medicine

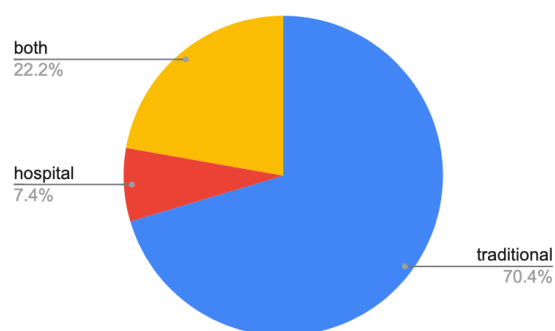


Chart 2: Kizanda Medicine Preferences

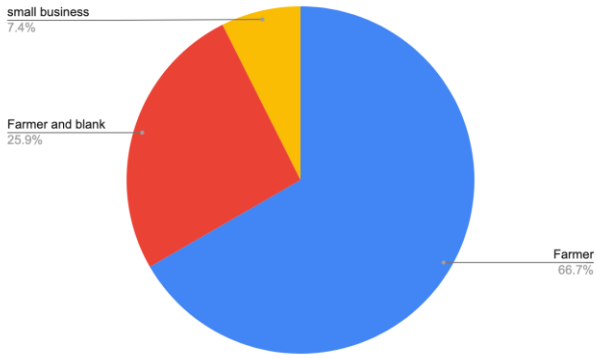


Chart 3: Occupations of Kizanda Interviewees

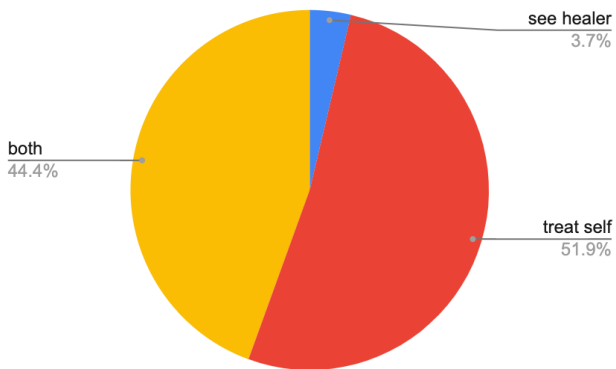


Chart 4: Kizanda Treatment Methods

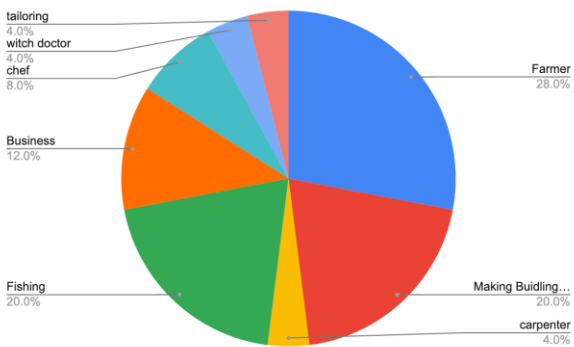


Chart 5: Occupations of Ushongo Mtoni Villagers

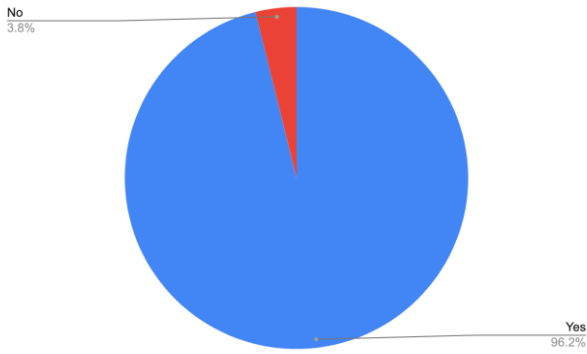


Chart 6: Ushongo Traditional Medicine Usage

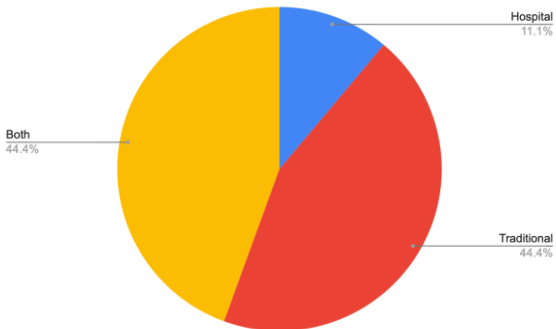


Chart 7: Ushongo Mtoni Medicine Preferences

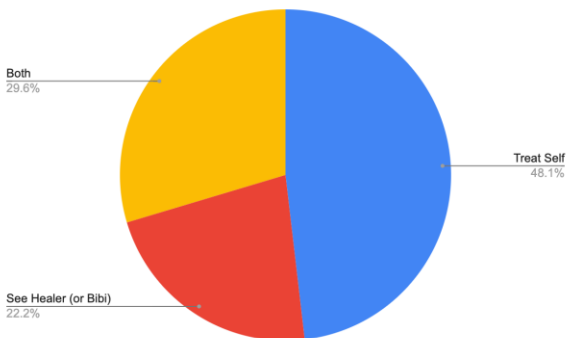


Chart 8: Ushongo Mtoni Treatment Methods

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