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Assessment of Traditional Practices of Healers to Treat Human Illness in Shashamene Town in Ethiopia

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Abstract

The study was conducted to investigate traditional practices for the usage of medicinal plants to protect commonly occurred human disease. 41 respondents were randomly selected for questionnaires and healers were used for secondary data source as they had indigenous knowledge. Around the study area there were about 75 medicinal plant species were found. A number of botanicals have been used by people where the study was occurred and mostly the respondents have said medicinal plants crashed and taken in oral to minimizing the headache, stomach pain, gastric and Diarrhea, moreover these botanical were traditionally accepted to take as an alternative way to be treated from different infectious disease. More of leave of medicinal plants were used for traditional treatment as it is simple to be used either in the form of crushed or directly chewing. In the preset study Herbs were mostly usable for traditional treatments as compared with small and large trees. Healers were people who had Indigenous Knowledge or they were experienced to select traditional medicinal plants from their natural habit; additionally, they are recognized by local people as traditional doctor who can give the appropriate treatment for commonly occurred infectious among people.

Keywords: Healers; Human illness; Medicinal plant; Traditional practices; Indigenous Knowledge

Introduction

Traditional medicinal plants have been defined by world health organization as the sum total of knowledge and practices, whether explicable or not used in the diagnosis, prevention and elimination of physical experiences and observation handed down from generation to generation whether verbally or in writing. Traditional medicinal plants are used in treatment and prevention of various health problems from simple to complex situation globally, thereby improving the quality of life [1]. Knowledge can arise from scientific or traditional sources. Traditional knowledge has been described as a cumulative body of knowledge, practice and belief, evolving through adaptive processes and handed over through generations by cultural transmission. Traditional medicine is used throughout the world as it is heavily dependent on locally available plant species and plant-based products and capitalizes on traditional wisdom-repository of knowledge. The wide spread use of traditional medicine could be attributed to cultural acceptability, economic affordability and efficacy against certain type of diseases as compared to modern medicines. Thus, different local communities in countries across the world have indigenous experience in various medicinal plants where they use their perceptions and experience to categorize plants and plant parts to be used when dealing with different ailments [2]. Plants have played a central part in combating many ailments in human and livestock in many indigenous communities, including Africa. Traditional healers, and particularly medicinal plant herbalists, in Africa have a detailed knowledge-base of traditional medicine, which is transferred orally from one generation to the next through professional healers, knowledgeable elders and/or ordinary people. In Ethiopia, traditional medicine has played a significant role in treating health problems in both livestock and humans. Knowledge of medicinal plants of Ethiopia and of their uses provides vital contribution to human and livestock health care needs throughout the country [3]. The plant-based human and livestock health care persists and remains as the main alternative treatment for different ailments in Ethiopia, largely due to shortage of pharmaceutical products, prohibitive distance of the health service stations and Re-emergence of certain diseases and appearance of drug resistant microbes and/or helminthes. Traditional medicinal plants are used in treatment and prevention of various health problems from simple to complex situation globally, thereby improving the quality of life [4]. The inaccessibility and affordability of modern drug among the rural population of tropical Africa have made a large proportion of rural people to depend on traditional herbal drug. In sub-Saharan Africa, modern health care delivery is beyond the reach of people living in the rural arcas, hence they greatly rely on ready available traditional medicinal plants in their neighbor hoods [5].

The high cost of drug and inability of many developing countries to purchase modern drug have forced local communities to look for products in the form of traditional medicinal plants that are proved to be effective, safe, inexpensive and culturally acceptable [6]. However in most developing countries, the knowledge on the use of plant sources for medicine is disappearing due to lack of scanty documentation of traditional medicinal plants from their habitat and the consequent loss of globally plant species is in complete as a result of limited inventory of traditional medicinal plants used by local people. The widespread use of traditional medicinal plants could be attributed to cultural acceptability, perceived efficacy against certain diseases, physical accessibility and affordability as compared to modern medicine [7].

Indigenous knowledge on traditional medicinal plants is being lost at a faster rate with the increasing of modern medicine, which has

made the younger generation to underestimate its traditional value. Many people are no more understand about traditional medicinal plant and again some traditional healers are confuse to identify traditional medicinal plant and there is some problem in case of using it properly [8] so patients are no more beneficial because of most of the traditional healers were found to have poor knowledge on dosage and antidote while prescribing remedies to their patients and most of the remedies were reported to have no serious adverse effects except vomiting and temporary inflammations. This could be attributed to the low toxicity of the remedy preparations of the medicinal plant species used by the traditional healers in the study area [9]. The source of knowledge is not adequately documented, which impedes their widespread use, evaluation and validation. Here, I recorded indigenous knowledge and standard practices for human disease control, in western arsi zone, sheshamene town.

The preparation and use of traditional plants for human treatment is not appropriate in urban area of the developing countries and in this case an appropriate preparation and use of traditional medicines is a critical importance [10]. So the aim of study was to bring a good awareness on traditional medicinal plant and to show as the use of medicinal plants, is playing a significant role in meeting the primary healthcare needs of shashamene town. This study also contributes to the enormous indigenous knowledge on medicinal plants and plant-based remedies practiced among ethnic groups, and it assists knowledge and practice preservation, which remain mostly with elderly traditional practitioners. Furthermore, the information generated will also inform future validation studies, so as to increase the acceptability of plant-based remedies in human and animal health care systems both nationally and internationally. This research was supplied to bring about significance to the existing knowledge concerning identification, preparation, and uses of traditional medicinal plants for better treatment. It was also help in designing and modifying the preparation and using method in the study area. This study can also useful materials for references for other researchers who wants to carry out research on identification, preparation and uses of traditional medicinal plants.

Objective of the Study

General objective

- To investigate and document preparation, and uses of traditional medicinal plants in shashamene town.

Specific objectives

- To understand general overview of traditional medicinal plants.
- To investigate the way of using of traditional medicinal plants.
- To identify the effective traditional medicinal plant species, from other plants.
- To know preparation step and uses of medicinal plant in tradition.

Materials and Methods

Description of the study area

Shashamane is a town and a separate woreda in West Arsi Zone, Oromia Region, Ethiopia. The town lies on the Trans-African Highway 4 Cairo-Cape Town, about 150 miles (240 km) from the capital of Addis Ababa. It has latitude of 7° 12' north and a longitude of 38° 36' east.

The 2007 national census reported a total population for this town of 100,454, of whom 50,654 were men and 49,800 were women. A plurality of the inhabitants practiced Ethiopian Orthodox Christianity, with 43.44% of the population reporting they observed this belief, while 31.15% of the population said they were Muslim, 23.53% of the population were Protestant, and 1.3% were Catholic (2007 Population and Housing Census of Ethiopia).

Study design

This study was a cross-sectional study and carried out to identify the preparation and method of using traditional medicinal plants used to treat human ailments in shashamene town arsi zone. It was designed in such a way that data from the sample population using data collecting tools. The study was used the people who have information, knowledge and experiences on traditional medicinal plants, their preparation and how people use it and was identified in the area.

Study subject

The subject of the study was traditional medicinal plants used for treating human ailments collected from shashamene town. Information about plants was obtained from local people and traditional healers who have enough knowledge on the traditional medicinal plants. And some secondary data were needed for 2015.

Sampling technique

Sampling techniques was based on simple random sampling method. Traditional medical practitioners and local elder people were purposefully included in the sample. Traditional healers were source of secondary data for 2015. Local people were asked according to prepared questionnaires.

Sample size

The sample size of the study was determined by using the formula given below which were contain 41 informants of shashamene town. Informants including traditional healers were interviewed based on the prepared questionnaires.

The formula was

N=(N.Z^2 pq)/ (D^2 (N-1)+Z^2 pq) Where n=sample size N=total number of households Z=is the standard normal value at (1-&) of 95% confidence interval at 1.96 D=is a total error=0.3 P=estimated prevalence of traditional medicinal plants.

Data collection methods

Three separate questionnaires were prepared; one for traditional healers and other for patients and local people, who use traditional medicinal plants for the care. Interviews were conducted and the information on the local name of the plants parts used to disease treated, method of preparation and route of administration were recorded during the field study based on the prepared questionnaires.

Data analysis

Data was collected and analyzed by quantifying and sorting data and determine proportions/percentile, and tables that was summarize the ethno botanical data of traditional medicinal plants. Based on information that was gathered and traditional used medicinal plants

that were identified, list of plants along with information on their use for treatment of disease were prepared in the form of table.

Ethical consideration

An official letters was written from Hawassa University, biology department to the responsible authorities (town leaders) and healers to obtain permission from the leaders to gather the needed information. The objectives of the study were explained to those authorities and the healers to make the response easily.

Results and Discussions

Socio-demographic information of the informants

S.No	Demographic information	Frequency (n=41)	Percentage
	Gender		
	Male	27	66%
1	Female	14	34%
	Age category		
	Below 20	0	0%
	21-30	16	39%
	31-40	9	22%
	41-50	11	27%
	51-60	4	10%
2	Above 60	1	2%
	Ethnicity		
	Oromo	34	83%
3	Amhara	7	17%
	Religion		
	Muslim	20	49%
	Orthodox	13	31%
4	protestant	8	20%
	Occupation		
	Farmers	5	12%
	Teacher	12	29%
	Merchants	6	15%
	Immature	3	7%
	Students	3	7%
	farmer trainer	5	12%
	Financing	1	2%
	Pharmacy	2	5%
	Nurses	2	5%
	Tailors	1	2%
5	Banking	1	2%
	Educational status		
6	Degree	7	17%

	Diploma	19	46%
	Illiterate	7	17%
	8th	1	2%
	10th	6	14%
	12th	1	2%

Table 1: Demographic information of informants of the study area, in 2015.

The majority of the study area population was oromo (83%), as it is in oromia regional state, Ethiopia followed by Amhara (17.1%). Thus most of the traditional medicinal plants were documented by the local language (Afan oromo).The majority of the respondent were muslim 48%) Followed by orthodox (31%) and the rests were Protestants (20%) (Table 1).Plant growth habit was herbs (45%), shrubs (35%), tree (5%) and climbers (5%) (Figure1). Frequency of plant parts used were leaf (65%), Roots (20%) and fruit (25%) (Figure2).Mode of administration were oral (75%), dermal (20%) and nasal and ocular (5%) (Figure3). A total of 20 traditional medicine plants were collected, identified and documented for treatment of different kinds of human ailments (Table 2). From the collected plant species one plant was a very appreciable plant in that human ailment. Most of the plants were need additives either for its taste or as a source of medicines.

Traditional medicinal plants of the study area

There are many Traditional medicinal plants were used for diseases treatment. In the study area from those 20 traditional medicinal plants are identified in study area. The study area populations were using these plant parts for treatment of different diseases. Leaves constituted a major percentage followed by root and stem. Route of administration was oral, dermal and ocular.

As obtained from the study, herbs were constituted the highest proportion followed by shrubs, tree and climbers. The method of preparation that was dominated in the community was decoction while other methods such as infusion, crushing, squeezing and concoction where also practiced in some cases. As the study shows (Table 2) different types of plants were used to treat different types of human ailments.

Scientific name	Part used	Preparation	Disease	routes
Allium sativum	Leaf/stem	Crushed/chewed	STD, cough ,malaria	oral
Nigella sativa	Seed/fruit	Crushing	Gastric,headache,	oral
Ocimum latifolium	Leaf	Pounded ,Squeezed	Febril illness	oral
Moringa oliefera	Leaf Stem	Decoction	Stomachache/headache	Oral
Saturega paradoxa	Leaf/root	Crushed	Bat urine,eye,evil	dermal
Croton macrosth	Leaf	Concortion pounded	Abiato headache	Dermal
Foeniculum uvigare	Leaf	Decoction	Boil in coffee	Oral
Ficus carica	Leaf	Decoction	Malaria	Oral
Vernonia Amygdalina	Leaf	Decoction	Typhoid	Oral
Citrus lemon	Juice	Crushed	Common cold	Oral
Psidium guava	Decoction	Decoction	Stomachache diarrhea	Oral
Malus dome	Juice	Crushed	Gastric disease	Oral
Ocimum baslium	Leaf /root	Crushed	Stomach ache	Oral
Annona cherimola	Leaf/ seed	Crushed	Digestion problem	oral
Zehniria scarba	Root /leaf	Decoction	Diarrhea headache	oral
Clausena anisata	Leaf	Decoction	Snake bite toothache	Oral
Ruta chalepensis	Leaf	Decoction	Stomach ache	oral
Hypoestes triflora	Leaf	Decoction	Animia	oral

Vernia Auriculifera heirn	Fresh leaves	Decoction	T.corporis	Dermal

Table 2: List of traditional medicinal plants used for treating human ailment in shashamene town.

STD- sexual transmission diseases

P	Disease	Plants	Time	Result
x	Gastric	Nigella sativa + milk	M & N before food for 7 days	Stomach bum absent
y	Liver disease	Allium sativum + honey	M. before food For 15 day	Abdoman pain Enough sleep to patients
z	Febril illness	Damakasee	One time per a day	No fever and headache
P=Patients M=Morning N=Night				

Table 3: Patients who used traditional medicine from healers at study time.

Result of patients

Garlic and Nigella sativa is the most common traditional medicine in the study area. These two medicinal plants were also used by mixing with other traditional medicine (85% of traditional medicine contain both Garlic and black seed) and both were the most advanced traditional medicinal plant.

Plant parts used to treat human ailments

Traditional medicinal plants were harvested for their different parts of traditional drug (eg. leaves, root, seeds, barks and fruit). In the study area, the information reported that more species (65%) of the traditional plants were harvested for their leaves and were followed by fruit (15%) and flower, tuber and root (20%).

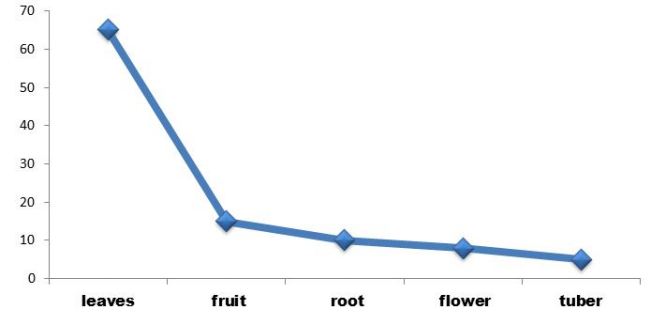

Figure1: Plant parts used to treat human ailment in the shashemene town in 2015.

Growth form of traditional medicinal plants in the study area

The result of growth form analysis of traditional medicinal plants showed that herbs constituted the highest proportion being represented by 45% species, while there were (25%) shrub species, (25) tree and (5%) climbers (Figure 1).

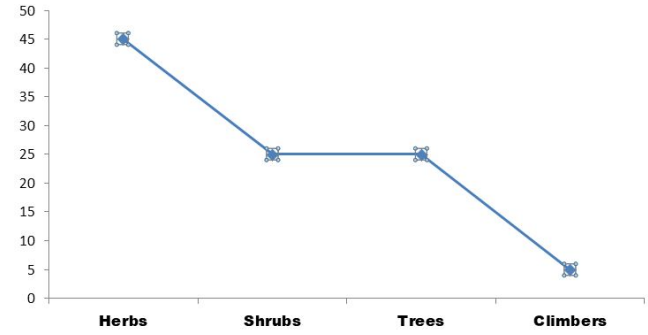

Figure 2: Habit of the plant species collected from shashamene town in 2015.

Parts of Physic nut tree (*Jatropha carcus*) used to treat human ailments.

In the study area Physic nut tree was the most appreciable tree in that all parts of its body were used to treat different types of human ailments. It was found only in the garden of one owner and all the communities of the woreda were going to his house to treat from different ailments (Table 4).

S.No	Parts	Way of preparation and application	Types of diseases Treated	
1	Leaves	Dry powdered and mixed with water	Snake bite	Common Treatment of Respiratory Infection
2	Stem	Decocted and applied	Eye disease	
3	Bark	Juice boiled with tea or coffee	Colds & dry cough	
4	Flower	Infusion--Decocted and applied to ear	Head ache Eye wash Ear infection	

5	Seed	Powdered and mixed with tea	Fever Relieve pain Swelling	
6	Seed oil	Juice is applied to infected skin	Treat skin disease Eye disease	
7	Root	Dry powdered chewed or snuff up the juice	Common Cold & cough Ear ache	

Table 4: Parts of the Physic nut tree (*Jatropha carcus*), preparation and types of disease treated.

Route of Administration

Peoples of the study area were mostly administering traditional medicinal plants orally and ocular rarely occurred.

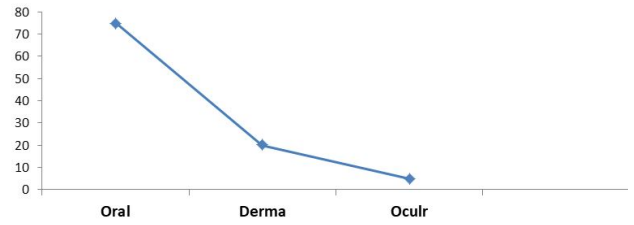

Figure 3: Route of administration of traditional medicinal plants.

Method of the preparation of the remedy in the study area

The method of preparation that was dominated in the study area community was decoction, while other methods such as crushing, squeezing, juices, concoction, chewing and powdering were also practiced in some case (Figure4).

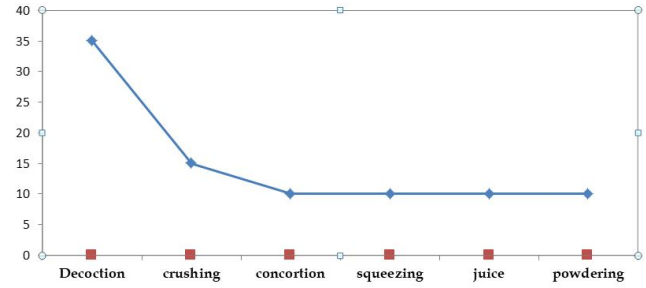

Figure 4: Method of preparation of remedy.

In the study area there were around 20 medicinal plant species were found which can give a big advantage for local people, as respondents gave information especially local communities had adopted medicinal plants as an alternative methods to treat common diseases. For instance Table 2 showed that plant parts taken and crushed with locally prepared materials followed by drinking or chewing against for a particular infection such as common cold, headache, and Gastric and any abdominal pains were treated by those local botanicals. Mostly leaf of the plants were preferable to be taken as treatment by healers because of they are easy for management or sample taking, the present study revealed that the plants preferred by the local communities or healers were herbs their roots, leaves, fruits and stems were parts which are involved in the treatments.

On the hand, the prepared plant parts mainly taken by infected person in the form of liquid orally because plant parts have different tastes, this is therefore, they were managed according to their taste characteristics. For example, if the treatment is sweet, it would be chewing and swallowed. In contrast, if it has bitter taste they would be taken in the form of liquid which allowed controlling its bitterness. According to the informants, the most popular method of preparation of remedy in this study area was decoction. However, [2] in their similar study on the people of wonago woreda reported that crushing was the most dominant method of preparation of remedy.

Generally, as it was mentioned in Figure 3 herbs and shrubs were the common used medicinal plants in the study area on the hand climbers and trees were rarely used by the healers and local communities. Mostly Dermal and ocular treatments were unusual in current investigation.

It was showed in Figure 4 the most practiced methods of preparations were crushing and decoction of fresh plants part and powders and rarely practiced for usable manners. This was the usual way.

The present study agreed with the previous studies reported by [11] and who investigated that Among the total traditional medicinal plants, 71 species (85.5%) were used against human aliements, 3 species (3.6%) were used to treat health problems of livestock and 9 (10.84%) species were used to treat both human and livestock ailments. Fabaceae was the most dominant medicinal plant family reported. Leaves were the dominant plant part used to prepare remedies (31.9%), followed by seeds (19%). Traditional remedies were processed mainly through crushing (28.2%), chewing (12.27%), squeezed (12.27%) and powdered (9.2%).plants were carried out. A total of 83 medicinal plants and 11 medicinal animals were collected to treat 53 human and livestock ailments.

Table 3 showed that respondents had given information for the mixing of botanicals which were effective to control a certain infectious diseases. For example the mixture of milk and Nigella sativa used to the treatment of uncomforted stomach bum and honey + Garlic (*Allium sativum*) had showed minimizing stress. Moreover which a solution for normal sleeping i.e. if somebody has not sleep stably these mixtures were a good treatment. As healer respondents mentioned that the above mixture was take either morning or night before food. 20 medicinal plants information were collected from the study area. As showed above among all treatments of the present study *Jatropha carcus* the commonly used plant for protection of variety of infection. All parts of this plant were effective for the protection of desired diseases. More of *Jatropha carcus* was used to treat respiratory infection such as cough, common cold and related headache.

Previously different investigations on medicinal were forwarded which are in agreement with the present day study such as Traditional healers reported to process remedies mainly through crushing, chewing, squeezing, and powdered. The administration of remedial

preparations was mainly through oral, dermal nasal and optical [11] and again revealed that there is a rich indigenous knowledge of medicinal plant use however; the indigenous knowledge of medicinal plants was not well documented. There was no written document of traditional medicinal plants. They transfer from elders to the son only by mouth because of this, knowledge and transmission is endangered. The young generation is not well aware about traditional knowledge and does not accept this knowledge due to the influence of modernization. Medicinal plants were highly affected by urbanization, modernization, overgrazing, and climate change. The present study agreed with that of herbs were the usual medication way for traditional practice.

Herbal remedies have been used for thousands of years. Today an estimated one-third of adult Americans-some 60 million people-use herbal medicines each year, are spending more than $3.2 billion on them. In the rest of the world, approximately 64 percent of the population relies on herbal medicines. Despite their overwhelming popularity and long history, we know relatively little about the safety and effectiveness of herbal remedies. Scientific study should make these remedies far safer and more effective in the future. Global recognition of nature's green pharmacy should inspire individuals and nations to protect this extraordinary resource [12]. Ethiopia has a long history of traditional medicine and has developed ways to compact diseases through it. Most traditional health practitioners believed that the skill of healing is given by God, and knowledge on traditional medicines is passed orally from father to a favorite child, usually a son or acquired by some spiritual procedures [7] reported that the real drawback in traditional medicine system mostly arises from lack of precision in dosage.

Conclusion

The present study indicates that the study area (shashamene town) have high biodiversity of traditional medicinal plants. Despite of gradual socio-cultural transformation, local communities still possess substantial knowledge of traditional medicinal plants and their uses. A total of 20 plants species used to treat human ailments were collected, recorded and documented. Currently, conservation of traditional medicinal plants knowledge is greatly affected by many factors related to modernization and lack of interest by traditional healers in the transferring traditional health knowledge to the next generation. As indicated by traditional healers of the study area some plants have different parts that are used for medicinal purpose. Even though, there are enough health centers to buy and use modern drug to care themselves, the study area population use traditional medicines commonly as a result of its cost effectiveness and its affordability. The result of the study also revealed that there is a high diversity of traditional knowledge about the use, preparation and application which is maintained still among the study area people. People of the study area mostly prepare the remedy from leaves and utilization of more leaves than other parts do not put traditional medicinal plants under pressure compared with using of root or whole plants.

Recommendations

Based on the research result, the following recommendations are forwarded:-

- Encouraging people to grow traditional medicinal plants in their home garden live fences and farm lands.
- Local people`s management and conservation of indigenous resources should be maintained.
- Promoting the organizational structure at zone and woreda agricultural offices to identify and encourage the local healers to enhance the use of traditional medicinal plants and licensing the work of the healers.
- Sustainable utilization and management of plant resources should be encouraged.
- Indigenous peoples who are not involved in traditional healing activities are not aware of the contributing traditional medicinal plants. The method of preparation of remedy and how to use the remedy should be maintained in order to save the life of the users.

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