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Medicinal Plants: General Overview of Medicinal Plants in Ethiopia

Girum Faris, Mesay Paulos

Abstract*: *In Ethiopia, Medicinal Plants have played a crucial role and should be used as a source of food for humans, preserving food and animal products, clothing, shelter, Flavours, and fragrances, as well as other essential items for earning economic benefits. This review aimed to utilise medicinal plant treatments to address human and animal problems. The use of medicinal plants for human and animal treatments has been practised from time immemorial. Generally, medicinal plants play a crucial role in traditional medicine and are significant in livestock and the health care of the majority of people in Ethiopia. The major threats to medicinal plants include habitat destruction, urbanisation, agricultural expansion, deforestation, invasive alien species, population Growth, road construction, and investment. As a result, Medicinal plants are declining and being lost due to their reduced abundance and distribution. Therefore, restoring these medicinal plants requires developing various methods through collaboration with stakeholders and employing farmer participatory research-based conservation mechanisms, which will help solve some of the problems. Pertinent to the loss of medicinal plants and their habitats, for documenting medicinal plants. The article emphasises a general overview of plant treatment for either animals or humans.

Keywords*: *Ethiopia, Medicinal Plant, Threatening Factors, Traditional Medicines.

Nomenclature:
WHO: World Health Organisation
SNNNPR: Southern Nation and Nationalities of People's Region
TMPs: Traditional Medicinal Plants
NGOs: Non-governmental Organisations

I. INTRODUCTION

Medicinal plants are plants containing critical active ingredients, mainly used for treating diseases or relieving pain. The traditional health care practice is primarily dependent on medicinal plants collected from the natural habitats and home gardens. The importance of medicinal plants to healthcare, local economies, social value, cultural integrity, and ultimately the well-being of people—particularly the rural poor—has been increasingly acknowledged over the last decade. It plays a vital role in the health care system of most developing countries. Plants represent a vast storehouse of drugs: they produce more than 10,000 different compounds to protect themselves from predators.

Traditional medicinal plants are also used for various purposes, including forage, firewood, spices, construction, food, cosmetics, clothing, and as habitats for humans, wild animals, and insects. Furthermore, medicinal plants play a significant role in maintaining ecosystem stability, providing export accommodation, and serving as a fumigant. Traditional herbal remedies can also be used as scientific resources to develop new, safe drugs. It is also effectively the cheapest and most environmentally friendly option. Many of today's wonderful drugs were initially discovered through the study of traditional medicine.

Ethiopia has a long history of using medicinal plants to treat various diseases. It is endowed with diverse agro-ecological zones, which support the existence of numerous plant species, both cultivated and wild, as well as cultural diversity and its associated indigenous knowledge [35]. Medicinal plants can be defined as plants that have therapeutic properties or exert a beneficial pharmacological effect on the human or animal body [29]. Medicine includes various types of health practices evolved to maintain and restore health. It is obtained from natural sources or synthetic chemicals [17]. Medicinal plants are valuable sources for discovering new therapeutics against various diseases. They may also have a wider therapeutic window than synthetic drugs, thus preventing the development of drug resistance. Modern medicinal plants contain different groups of phytochemical constituents such as flavonoids, triterpenoids, glycosides, saponins, carotenoids, volatile oils, amino acids, steroids, quinines, alkaloids and coumarins, responsible for multifaceted biological effects [28]

Medicines can be classified as traditional and modern. Conventional medicines are purely based on a natural way of treating all illnesses. These medicines are derived from plants and animals; besides that, they are not usually processed. Modern medicines are based on biomedical science, genetics, and medical technology, which are used to diagnose, treat, and prevent injury and illness. Many new biological treatments are being developed using medicine, opening new career opportunities for both women and men as nurses/compounds and physicians. While traditional medicine is defined as using local drugs to treat illness by avoiding, diagnosing, and treating physical and psychological diseases, it differs in its theories, beliefs, and knowledge from modern medicine.

In Ethiopia, traditional medicinal plants have been utilized for generations to address a variety of human health issues. This practice is rooted in cultural acceptance, affordability, cost-effectiveness, and accessibility. In many regions where modern

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*Correspondence Author(s)
Girum Faris, Ethiopia Biodiversity Institute, Centers and Botanical Gardens Coordinator, Addis Ababa, Email:girumf@gmail.com
Mesay Paulos*, Crop and Horticulture Cease team, Ethiopian Biodiversity, Assosa Branch, Assosa, Ethiopia. Email ID: mesi.and.paul66@gmail.com, ORCID ID: 0009-0008-9710-6616

healthcare services are scarce, rural communities heavily depend on traditional medicine as their primary form of healthcare [31]. The transmission of conventional knowledge typically occurs orally, with practitioners playing a vital role in passing down this valuable medicinal wisdom [18]. The main factors contributing to the reduction in the abundance of medicinal plants include ecological shifts, deforestation, loss of forests and woodlands, urbanisation, agricultural expansion, and a lack of awareness among the community [14]. Medicinal plants are becoming extinct, and the associated knowledge held by elders has received little attention; as a result, they are on the verge of disappearing. Anthropogenic activities, a profound gap between the generations, and a lackadaisical mindset of the younger generation have caused a decline in indigenous knowledge on plant utilisation [19]. Several researchers documented that nearly 80% of the Ethiopian population relies on home remedies, with a significant majority, about 95%, derived from botanical sources [26]. [9] It was also stated that the problem is further compounded by the fact that traditional medicine knowledge is being lost at an alarming rate. Some findings also highlight potentially essential information gaps and the need for standardisation of ethnomedicinal studies on indigenous medicinal plants in Ethiopia. Several research studies reveal that existing medicinal plants are at conservation risk [29].

Despite the critical role of traditional medicine and medicinal plants in primary health care, little work has been done in the country to properly document and promote the associated knowledge. Only a few of the country's diverse cultures and languages have been considered [10]. Many Ethiopian medicinal plants have undergone scientific investigation. Ethiopia has a high diversity of plants and animals due to its variety of climates and topographies. The use of medicinal plants for primary healthcare has been practised by local populations worldwide for centuries and remains part of their lifestyle today. The Elders, who know more about medicinal plants, may die without delivering their traditional experiences to the next generation. However, the knowledge and use of plants in many rural ethnic cultures have not been studied [39]. In developing countries like Ethiopia, indigenous knowledge about traditional medicinal plants is transferred orally from generation to generation. Moreover, there is a gap in the documentation and recording of medicinal plants in the country. In most parts of the country, medicinal plants, wild plants, and forests are nearly degraded due to human impacts such as deforestation, agricultural expansion, overexploitation, and population growth, resulting in an apparent loss of biodiversity. Therefore, a detailed overview of valuable Medicinal plant resources and related indigenous knowledge is essential to transmit this knowledge to the next generation.

A. Objectives

The overall objective of this review paper is to record detailed information about traditional medicinal plants and relevant indigenous knowledge as the basis for scientific work.

i. To review the importance of Medicinal plants to treat human ailments and to treat livestock ailments
ii. To review an overview of Medicinal plants

II. MATERIALS AND METHODS

This review was conducted using a systematic and comprehensive approach to gain a general understanding of medicinal plants grown in Ethiopia. The source material for the review was gathered from various valuable articles, books, the DOIAJ website, published articles, Reports, unpublished media articles, Assessments of studies on medicinal plants in Ethiopia at different locations, and local NGOs' work on medicinal plants. This review paper emphasises the importance of dedicating valuable time to enhance the significance of the present review and address important information to the readers, as there are approximately 20 documents and 30 articles which cover an overview of medicinal plants in Ethiopia.

A. Meaning and Origin of Traditional Medicine

Medicinal plants are herbs traditionally used in foods and drinks, believed to be good for health and to maintain the ecological balance of the environment. Medicinal plants include foods, beverages, herbs, and spices. Medicinal plants have a promising future because there are about half a million plants worldwide, and the medical values of most have not yet been investigated. From this perspective, several investigations would have been conducted in ethnobotany to understand medicinal plants. It is considered a cultural group due to its participation in the field of ethnobiology. Ethno botany is the study of the relationship between plants and people: From the "ethno "study of people and "botany"-analysis of plants. Ethnobotany is considered a branch of ethnobiology. Ethno botany studies the complex relationships between the use of plants and cultures. The focus of ethnobotany is on how plants have been or are used, managed, and perceived in human societies. It includes plants used for food, medicine, divination, cosmetics, clothing, and social life [6].

B. Evolution of Medicinal Plants

The knowledge of medicinal plants is transferred orally; however, this cultural indigenous knowledge in Ethiopia is unevenly distributed among communities. People in various locations with different religions and cultural backgrounds possess specific knowledge about the use of plants, which has generally entered wide circulation in the country. Knowledge about the use of plants is mainly oral; however, Ethiopian church practices have documented some knowledge in medico-religious Geez manuscripts from the 16th century. Medicinal plants and substances derived from natural sources have been used as prehistoric medicine. Nomadic tribes have had access to a broader range of materials. Some of the prehistoric medicinal methods are as follows.

i. Yarrow is the scientific name of Achillea Millefolium, and it can also be called an astringent. This medicine is used to treat tissue contractions and helps reduce bleeding. It also promotes sweating and a mild aroma. It may be used for wounds, abrasions, and cuts. Mallow is one of the prehistoric medicines, which is prepared as an herbal infusion for its colon cleansing properties.
ii. Rosemary is a fragrant evergreen

plant native to the Mediterranean. It has been used in ancient times for its medicinal properties. It contains a good source of iron, calcium and vitamin B6. The ancient people prepared it as a dried powdered extract. Traditionally, this medicine has been used to alleviate muscle pain, promote hair growth, improve digestion, and fight against radical damage in the brain, etc. But now this medicine is exclusively used for cancer disease in Ayurveda treatment.

iii. The Birch Polypore is an ancient medicine, and it is commonly seen in European countries. This plant can induce diarrhoea when ingested. This plant is used in laxative medicine. Women in the prehistoric period collected and administered herbal remedies, and they were responsible for treating illnesses and keeping their families healthy. The ancient people were not educated, but they had a good understanding of the benefits and harms of various medicines and used these plants for different diseases. All the ancient medicines are still being used and studied for various illnesses related to the human body. Today, most doctors follow his treatment approach as outlined in the available documents.

C. General Overview of Medicinal Plants

Medicinal plants are available throughout developed and developing countries as home remedies, over-the-counter drug products, and raw materials for the pharmaceutical industry. Many Ethiopian medicinal plants have undergone scientific investigation. Ethiopia is the centre of plant and animal diversity due to its varied climate and topography. The use of medicinal plants for primary healthcare has been practised by local populations worldwide for centuries and remains part of their lifestyle today. Thus, the traditional herbal medicines and their preparations have been widely used for thousands of years in many countries. Therefore, it is essential to study medicinal plants to treat human and animal ailments. The traditional cultural knowledge of medicinal plants in Ethiopia is unevenly distributed among communities. People in various regions with different religions and cultural backgrounds possess specific knowledge about the use of plants, which has generally entered wide circulation in the country. The knowledge about the use of plants is mainly oral; however, the practices of the Ethiopian church must maintain the desired form. Medicinal plantations can be established in degraded and degrading areas. Many medicinal plants of Ethiopia have good properties for land rehabilitation and erosion control, which could be planted in different agro-ecological settings [13]. In-situ and ex-situ conservation strategies work well when they complement one another, as each method's limitations are supported by the other. In addition to this scheme that would enable sustainable use of medicinal plants and the associated indigenous knowledge should be developed with the best practice of benefit -sharing practice such as cultivation, prevalence of pest and disease occurrence, Additionally identification process of the plant species with their parts and place could be free from invasive plant, polluted environment and medicine preparation including its components, medication processes, storage standards, and dosage; all should be taken into account. Agro Climatic factors including temperature, rainfall, humidity, altitude of the growing region, light, physiochemical properties factors such as nutrients, pH, cation exchange capacity, harvesting factors such as age, season, collection time, plant organ), and post-harvesting factors such as storage hygiene, drying process are the significant factors affecting the contents and composition of medicinal plant raw materials and their products.

D. Medicinal Plants and Agro Ecology

Ethiopia boasts a remarkable variety of climates and ecological conditions, resulting in an incredibly diverse array of flora and fauna [36]. The country's geographical diversity has fostered the development of numerous vegetation and habitat zones. Additionally, Ethiopia is home to diverse languages, cultures, and beliefs. There are various medicinal plants adapted to different ecological conditions in the country, varying with altitude, soil type, and agro-climatic conditions in both highland and lowland areas.

Along with agroecology, there is an intimacy with indigenous knowledge. The indigenous flora has proven effective in treating a wide range of human ailments. It is due to the communities' in-depth belief in the healing properties of traditional medicine and the relatively low costs associated with these natural remedies. As a result, there is a significant demand for medicinal plants throughout the country. Much of the knowledge surrounding traditional medicine is passed down orally, with practitioners playing a vital role in this transmission process [25].

E. Importance of Medicinal Plants

In developing nations, where poverty and limited access to modern healthcare prevail, approximately 80% of humans and 90% of the livestock population depend on traditional medicinal plants to cure different ailments [1]

Medicinal plants serve as the primary source of healthcare for around 80% of the population in developing countries globally [15].

Besides its importance, Ethiopia's traditional medicine, as elsewhere in Africa, faces problems of continuity and sustainability [38]. Currently, Medicinal plant practitioners have to walk greater distances to collect medicinal plants that once grew near their homes. This way of practice is rooted in cultural acceptance, affordability, cost-effectiveness, and accessibility. In many regions of our country, inadequate access to roads and topography, along with a lack of educated individuals, results in scarce modern healthcare provision. However, rural Societies heavily depend on traditional medicine as their primary form of healthcare. However, the extensive knowledge of medicinal plants is under severe threat due to deforestation, environmental degradation, and population growth.

F. Medicinal Plants for Human Health

Medicinal plants offer significant benefits, providing man with all his basic needs, including shelter, clothing, food, flavours, and fragrances. The parts of plants used for medicinal purposes include the leaf, root, stem, rhizome, fresh root, seeds, fruit, and flower, each with different methods of application [33].

Medicinal plants serve as the primary source of healthcare for around 80% of the population in developing countries globally [8]. Over 800 plant species are utilised in Ethiopia for treating diverse ailments. TMPs are commonly used in both rural and urban areas, with people seeking these remedies alongside modern health care [20].

Medicinal plants used for personal health-care and environmental esthetics are ecologically found, and they come with the territory [3].

Humans have been using medicinal plants as a source of medicine, fodder, and for soil and water conservation for a long time. Truth be told, ancient man was utterly reliant on plants for all of his medical needs, including recovery, prevention, and various medications, and has done so for millennia [5]. Medicinal plants are used in the treatment of some diseases such as urinary problems, diabetes, asthma, stroke, stomachache, hypertension, diarrhoea, and wounds [23]. Leaves were the most frequently cited plant parts used by healers in the preparation of traditional medicines. This finding is in line with the results of other ethnomedicinal studies in Ethiopia [16]. Conversely, among leaves, roots were the most used plant parts that can affect nutrient concentration. This deviation is probably due to differences in plant resource sites. The preference for leaves could be due to their ease of preparation and the chemical constituents they contain for treating diseases. Remedy preparations involving roots, rhizomes, bulbs, barks, stems, or whole plants have effects that pose a greater lasting danger to the continuity of an individual plant compared to those involving leaves. The fear of high threat from medicinal plants, due to the use of plant parts for medicinal purposes, is minimal because leaves were the most harvested plant parts in the area, which has little effect on the survival of the mother plant.

Medicinal plants are regarded as rich resources of traditional medicines, and many modern medicines are derived from these plants. For thousands of years, medicinal plants have been used to treat health disorders, to add flavour and conserve food, and to prevent disease epidemics [40].

The standard benefit of medicinal plants as a normative basis for maintaining good health in most developed countries has been well documented. Medicinal plant-derived drugs are used to cure mental illness, skin diseases, and tuberculosis. Medicinal plants have played an essential role in the development of human culture. Furthermore, several researchers have conducted studies in different parts of the country. For example, medicinal plants frequently used by Bereta people to alleviate human ailments are most commonly found in the leaf, which is often used fresh in the Assosa Zone [24].

The documentation and registration of some unique medicinal plants have increased in the district area, which is significant and advisable for further study and future work. Transferring this knowledge from generation to generation, mainly about their uses and methods of preparation, is crucial for the young generation. Though medicinal plants may play a significant role in agro-biodiversity, they are primarily used for food, fodder, the preparation of industrial medicine, and the conservation of soil around the district site. Even though medicinal plants face many challenges, such as the loss of traditional and cultural factors, the neglect of their utilisation, and insufficient attention to their conservation status, they remain valuable. There is also valuable research conducted in the Assosa zone. Community farmers in these areas have their livelihoods much more dependent on mineral mining, particularly gold. The most prominent crops which are cultivated in the district make it unique among other regional states, which are constituted of medicinal plants such as *Vegania Sbtterania, Abelmoschus esculentus, Hibiscus sabdariffa and Penssitum Galucum*

G. Medicinal Plants Used to Treat Livestock

The most commonly harvested plant part for the treatment of livestock in most parts of the country was the leaf, while the least used plant part was the seed. Leaves were the most harvested plant part for preparing remedies for livestock ailments [37].

The local people used various remedies and applications to treat livestock diseases. The methods of preparation used were crushing, pounding, and mixing with water. For example, the leaf of *Allium sativum L* was crushed, combined with a small amount of water, and then ingested orally using a bottle and similar materials to treat blindness in the study area. The results of this study confirmed previous work conducted in the Sheko and Guba Lafto districts [11]. Valuable research has been conducted on medicinal plants used to treat livestock, including those found in the Ensaro District, which are ethno—veterinary medicinal plant species. Forty-four medicinal plants were collected and identified. People of the Ensaro district used these ethno-veterinary medicinal plant species to treat 16 types of livestock ailments. Blackleg, eye disease, foot rot, leech, jaundice, rabies, tail amputation, tumour and anthrax were frequently occurring livestock diseases [2] This showed that the local people are highly dependent on ethno veterinary medicinal plants .despite the fact that the distribution of modern health services are increasing, ethno veterinary medicinal plants would be necessary for future antimicrobial activity and photochemical studies. At the same time, the direct matrix ranking exercise highlights the urgent need to conserve multipurpose medicinal plants in the study area.

H. Indigenous Knowledge on Medicinal Plants

Indigenous people refer to those who follow a traditional, non-industrial lifestyle in areas that they have occupied for generations. Indigenous knowledge refers to the knowledge, rules, standards, skills and mental sets generated by and kept in custody of local people in a particular area. It is the result of many generations and long years of experiences, careful observations, and trial-and-error experiments [22] Traditional people around the world possess unique knowledge of plant resources on which they depend for food, for the source of income, for soil and water conservation, medicine and general utility [35]. The indigenous knowledge, well-preserved by the Ethiopian indigenous population, could vanish as communities immigrate to urban areas. This is due to employment, industrialisation, rapid loss of natural habitats, and drastic alteration of local ecology. [30] Traditional medicine has contributed significantly to societal well-being, yet it has received little attention in contemporary research and development, with only a

few initiatives aimed at enhancing its practice. Recently, however, Ethiopian higher education institutions and health authorities have begun to take an interest in promoting and advancing this field. The central region of Ethiopia, known for its rich biological and cultural diversity, is particularly abundant in medicinal plants [34]. Medicinal plants are also used for flavours and fragrances in various industries such as bakery, confectionery, alcoholic beverages, foods, soft drinks and pharmaceuticals. They are added to the appetisers, biscuits, bread, butter, cakes, cheese, seasonings, soups, teas, vegetables, and vinegars. The flavour of food makes it palatable, and it is added to pastes, powders, dentifrices, mouthwashes, gargles, breath fresheners, and denture cleaners [41]. There is also a need to develop better institutional research & development support & public policies for the development of the essential oil industry.

I. Factors Threatening Medicinal Plants

The causes of threats to medicinal plants can generally be grouped into natural and human-induced factors. However, as reported in this study, most of the causes for the threats to medicinal plants and the associated indigenous knowledge are the anthropogenic factors such as deforestation due to over-exploitation of plants for different uses, including charcoal making, population pressure, firewood collection, household construction, overgrazing, cutting and burning of plants.

Loss of forests and woodlands, cultivation of marginal lands, and urbanisation appear to be the major threats to the medicinal plants of Ethiopia [4].

J. Medicinal Plant Conservation

Currently, the natural habitats of medicinal plants in the country are highly affected by resource degradation in both the lowlands and highlands, mainly due to increased population pressure. The local people in the countryside have gathered resources from the wild and from their home garden. As a result, many medicinal plants are under serious threat. So, the local people should conserve medicinal plants using in-situ and ex-situ management styles.

Ecosystem conservation will ensure the in-situ conservation of medicinal plants by applying sustainable harvesting methods to collect them from wild habitats. Experience from South Africa would be essential to develop innovative strategies for harvesting individual plants [24]. Different practices for maintaining eco-friendly options, such as agricultural methods, the upkeep of traditional farming systems, and the integration of conservation with community utilisation, need to be carefully developed and implemented [12]. In situ conservation approach to medicinal plants. Medicinal plant conservation as part of nature conservation with local knowledge, Skills and practices, Conservation of medicinal plants in special medicinal plant areas, medicinal plant hotspot areas and Medicinal plants in special places within the cultivated landscape, places of worship, sacred groves, farm margins, river banks [27].

The ex-situ approach to medicinal plant conservation, including genebanks, field genebanks, botanical gardens, and aromatic plant conservation in Wondo Genet, needs to be accelerated and cultivated in home gardens. For example, Ocimum lamifolium and Thymus serrulakus are maintained in home gardens in both urban and rural areas. Plantations of medicinal plants can be made in degraded and degrading regions [32]. Many medicinal plants of Ethiopia have good properties for land rehabilitation and erosion control, which could be planted in different agro-ecological settings. In situ and ex situ conservation strategies work well when they complement one another, as what one method cannot achieve is supported by the other. In addition to this scheme, a framework should be developed to enable the sustainable use of medicinal plants and the associated indigenous knowledge, incorporating the best practices of benefit sharing.

III. MEDICINAL AND SPICE PLANTS IN ETHIOPIA

Ethiopia has diverse climates and soil types that enable the growth of several indigenous and exotic spices, medicinal plants, and other essential oil-bearing plants. These plants have enormous economic benefits. However, despite the vast potential for production and the subsequent benefits from these commodities, no strong attention has been given to improving their cultivation, production, and processing technologies. The country is currently growing endemic spices, including korarima, ginger, black and white cumin, coriander, fenugreek, chillies, mustard, and Lippodem sativum. In addition, recently introduced exotic species, including black pepper, cardamom, turmeric, and cinnamon, are widely adapted to the southwestern humid and subhumid areas of the country. Of these, turmeric has already gained a strong foothold in the farming system. It is currently produced on a broader scale by local farmers across different parts of the country as a supplementary cash crop. Besides, different medicinal and essential oil-bearing plants are also growing widely in the country. The prominent potential herbs successfully growing include thyme, white mugwort, fennel, dill, basil, mint, rosemary, and Lippia spp. Etc. Among medicinal plants, endod, rue, Hygenia, garden cress, croton, African black pepper, and Embelia are some endemic species commonly used for preventing and curing various diseases.

A. Abundance and Distribution of Medicinal Plants in Ethiopia

Ethiopia is renowned for its diverse ecosystems and a rich heritage of herbal medicine. Numerous studies have reported the ethno-botanical knowledge held by local communities regarding the medicinal uses of plants [7].

Different vegetation types found in the various agro-ecological zones of Ethiopia accommodate diverse medicinal plants.

Ethiopia has rich medicinal plants, and almost all plants of the Ethiopian flora are used in some way, either medicinally or otherwise. Other workers, on the other hand, estimated about 60% of the flora to be medicinal, while most sources indicate that about 10% of the vascular flora is medicinal.

The list covers a wide range of plants. Local communities use this product in the lowlands and the 18 highlands for treating human and livestock ailments, as well as preventing pests and vectors. The abundance and distribution of medicinal plants are found in the southwestern parts of Ethiopia, the region is known for its concentration of biological

and cultural diversity. The citations from written records of medicinal plants in the central, north, and northwestern parts of Ethiopia represent only small fractions of the medicinal plants present in the country.

A study on the Bale Mountains National Park in Southeast Ethiopia revealed that the area, despite being a biodiversity hotspot, includes 283 species used as human medicine, 47 for livestock medicine, and 76 species used for both humans and livestock by community healers, harvesters, traders, and users. This work further suggested spots that could be considered medicinal plant micro-hotspots within the Bale Mountain area in their ethnobotanical studies.

B. Importance of Indigenous Knowledge on Traditional Medicine

Traditional medicine encompasses the accumulation of knowledge, beliefs, and practices used in diagnosing, preventing, and eliminating physical, mental, or social imbalances. It relies exclusively on practical experiences and observations handed down from generation to generation.

The transfer of indigenous knowledge on traditional medicine, in most developing countries, including Ethiopia, is passed from one generation to the next by word of mouth. In many communities, women play a key role in managing the garden and utilising its produce, either in their own kitchen or by selling it in the market. For instance, all spices, except Kororima(Aframomum *corrorima*), were regarded as women's plants and men hardly had contact with them in Basketo and Kafecho Weredas of SNNPR [21]. Although the majority (70%) believe that oral transfer of indigenous knowledge is effective, they have also expressed their grave concern about the future validity of the method. The main reason for this concern is the young generation's unwillingness to acquire indigenous knowledge. The young generation has other ambitions and priorities than seeking knowledge on traditional practices. As a result, collecting and compiling indigenous knowledge, as documented in 41 accounts, seems to be a necessity. This unwillingness of the young generation originates from the fact that modern schools, health professionals and the so-called educated sector of the community tend to look down upon the practice of traditional medicine. Accordingly, it is highly recommended to include aspects of traditional medicine and medicinal plants in the school curriculum. School children should be introduced to the vital role of traditional medicine. They need to understand that conventional medicine is still valid and critical, and that medicinal plants have been sources of several essential drugs and remain potential sources of more wonder drugs. In addition, students and pupils alike should be encouraged to ask and learn from their parents and community elders about the indigenous knowledge and the practice of traditional medicine.

C. Traditional Medicinal Plants for Future Prospective

Traditional medicinal plant knowledge is complementary to the local culture, holds social value, and includes a diversity of plants used for the healthcare of both human and animal ailments. However, challenges such as the ageing healer population, lack of successors, and resource overharvesting threaten this knowledge.

The path to learning about traditional medicine is not as easy as it seems. Anyone who wants to learn about conventional medicine plants must formally study with professional practitioners. However, these professionals do not wish to teach and transfer their wisdom to others, as increased competition would result in many more practitioners. Collaborating traditional and modern medicine in Ethiopia, experiences from developed countries like the Chinese, Japanese, or Indian patterns, or a combination of these, could help enhance local traditional medicine, which has been significantly contributing to and boosting the country's economic capacity.

Rural community members have coped with medicinal plants, which have played an essential role in both religions and various ceremonies. There are many modern medicines, and a great deal of them are produced indirectly from medicinal plants, such as garlic. Studying medicinal plants helps to understand plant toxicity and protect humans and animals from natural poisons. The medicinal effects of plants are due to their secondary metabolite production. This interest can be due to several factors, including therapeutic needs, the remarkable diversity of both chemical structure and biological activities of naturally occurring secondary metabolites, the utility of novel bioactive natural compounds as biochemical probes, the development of novel and sensitive techniques to detect biologically active natural products, improved methods to isolate, purify, and structurally characterize these active constituents, and advances in solving the demand for supply of complex natural products. The importance of traditional medicine has also been recognised by the World Health Organisation (WHO), which has created strategies, guidelines, and standards for botanical medicines. The wisdom of knowledge about medicinal plants is deliberately transferred from elders to youngsters through oral and personal experiences. But this way of knowledge transmission will lead to the distortion of the original knowledge or the total disappearance of the practice. Therefore, raising awareness of use and management systems among healers should be prioritised to avoid the erosion of indigenous knowledge and ensure its sustainable use.

IV. CONCLUSIONS AND RECOMMENDATIONS

This review article indicated that Medicinal plants play an enormous role in the social, Environmental, and economic values of the community in Ethiopia. The beneficiaries of medicinal plants gain monetary benefits through lower costs and reduced time spent seeking treatment. Practices of traditional medicine also create employment and income opportunities for practitioners and vendors. The needs of human beings have been met
mainly by plants; however, the extent to which most plants are endangered by anthropogenic and natural factors, including overharvesting, construction, population pressure, fuel, and invasive alien species, is concerning. These factors are implemented without considering the natural use of cultivation and domestication, which compromises future generations. Therefore, there

There is a need to provide training to improve their skills and to test the effectiveness and selection methods necessary for sustaining the conservation of medicinal plants. This can be achieved either by learning indigenous knowledge from elders and documenting it for future generations or by conserving and managing traditional medicinal plants. Indigenous Knowledge of medicinal plants is wider among elderly women and men, while the young are comparatively less knowledgeable. This indigenous knowledge of medicinal plants was gradually disappearing due to secrecy, the young generation's unwillingness to learn, their disinterest in traditional medicine, and the influence of modern education. Local administration, NGOs, and other stakeholders must engage in raising awareness about conventional healers to ensure their knowledge is passed to the next generation without secrecy and biodiversity loss. Moreover, the Current documented information on medicinal plants can serve as baseline data for future studies aimed at treating human and animal ailments.

A. Recommendations

Based on the comprehensive analysis in deeply by searching, reading, which is obtained from various scientific articles, books and published articles, I have been suggested or recommended the following, which are forwarded for the sustainable use of medicinal plants:

i. Identifying effective medicinal plants and encouraging local people to grow them in home gardens, mix them with crops in farmlands, and use them as live fences.
ii. Identification of experienced, knowledgeable and registered traditional medicine practitioners
iii. Medicinal plants are central to the indigenous cultures and material needs. Therefore, formal and non-formal education systems should be designed to foster a positive attitude among young people by incorporating information about the traditional use of plants, in general, and medicinal plants, in particular, into the curricula.
iv. Promoting regular training for traditional medicine practitioners is a valuable contribution to the use of medicinal plants. In developing countries, 85% of people live in rural areas and lack access to the health care system. Therefore, community members should receive medicine training at the right time.
v. A storage place for medicinal plants should be clean and free from insects, pests, and environmental hazards to ensure quality and safety. There, close supervision of activities should be undertaken. Indigenous people of the study area should be involved in conservation and management plans for plant resources.

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After aggregating input from all authors, I must verify the accuracy of the following information as the article's author.

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AUTHOR'S PROFILE

Mr. Girum Faris was born on February 17, 1980, in Bedele Town, Ilubabor Zone. He completed his junior and secondary education at Bedele Junior Secondary School and Bedele Senior Secondary School in 1995 and 1998, respectively. He then joined Haramaya University and graduated with a Bachelor of Science degree in Biology in 2008. After graduation, he worked as a biology teacher. In January 2009, he returned to Haramaya University, School of Graduate Studies. He completed his studies and completed his Master's degree in Microbiology in November 2011. Since February 2012, he has been working as a researcher in the Microbial Biodiversity Directorate at the Ethiopian Biodiversity Institute. He also served as a Microbiologist in the Genetic Resource Access and Benefit Sharing Directorate starting in 2016. Since 2018, he has been serving as the Director of the Biodiversity Centres Coordination Office. Girum was born on February 17, 1980, in Bedele Town, Ilubabor Zone. He completed his junior and secondary education at Bedele Junior Secondary School and Bedele Senior Secondary School in 1995 and 1998, respectively. He then joined Haramaya University and graduated with a Bachelor of Science degree in Biology in 2008. After graduation, he worked as a biology teacher. In January 2009, he returned to Haramaya University, School of Graduate Studies, and completed his Master's degree in Microbiology in November 2011. Since February 2012, he has been working as a researcher in the Microbial Biodiversity Directorate at the Ethiopian Biodiversity Institute. He also served as a Microbiologist in the Genetic Resource Access and Benefit Sharing Directorate starting in 2016. Since 2018, he has been serving as the Director of the Biodiversity Centres Coordination Office.

Mesay Paulos, Birth Date: August 20/1987, Address: Woliyita, Southern Ethiopia, Phone: +251955099245. I completed a Bachelor of Science degree in crop production and protection at Ambo University, Ethiopia, on June 28, 2006, and a Master of Science in Agronomy at Woliyta Sodo University, Ethiopia, on August 8, 2014. From April 15, 2011, to September 15, 2013, I worked as a crop production and protection expert in Ethiopia. From September 1, 2007, to 2018, I was transferred to the Ethiopian Biodiversity Institute, where I worked as an Associate Researcher in Crop and Horticulture. I have one published article in the Journal of Applied and Environmental Soil Science Research, titled "Characterisation and Evaluation of Bambara Groundnut (Vigna subterranea (L.) Verdc.)." For Yield and Related Traits in Assosa Zone, Northwestern Ethiopia. 2022.