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Important Medicinal Plants in Ethiopia: A Review in Years 2015–2020

Abebe Ayele Haile

Abstract

Many studies on medicinal plants have been taking place in different parts of Ethiopia and the people use them for the preparation of traditional herbal medicine. The purpose of the current study is to review the assessment of the medicinal plants used in Ethiopia, to compile the components used, the method of preparation, the medical uses, and the compilation of the number of medicinal plants in 2015–2020. This review paper took place in the years 2015 to 2020 from the published papers. Various databases, such as Science Direct, PubMed, and Google Scholar, have been searched. The data were analyzed using frequency, percentages, charts, and numbers using the Microsoft Excel spreadsheet 2010. In Ethiopia, a total of 4,007 medicinal plants were identified from different areas by different authors in the years 2015–2020. But, from this total number of identified medicinal plants, there was a similarity between types of plant species. Therefore, this total result has present similarities in plant species and types found in different areas. In 2015, a total of 1,062 medicinal plants were identified from different areas by different authors. Similarly, 315, 613, 944, 341, 732 medicinal plants were identified by different authors in different study areas in the years 2016, 2017, 2018, 2019, and 2020 respectively. The years 2015 and 2018 were the years many plants of medicinal value were documented. The growth forms of medicinal plants were analyzed from 2015 to 2020 in the different study areas with different authors but with the same year and valued for each year and put the average one. To calculate the 2015 growth form of medicinal plants for example to calculate herbs, add all herbs identified by different authors in the same year, and take the average one. This method applied to all growth forms of medicinal plants each year. In all years (2015–2020) the dominant growth forms were herbs. The highest average of growth form was herb in the year 2020 which is 44.2%. In all years the least growth form was a climber. In all growth forms, the parts used for medicine were identified. Add each medicinal plant's parts in the same year and then take the average for all years. In 2020 year, the traditional healers mostly used leaves (56.3%) for the preparation of remedy. In general, in all year leaves was dominant for the preparation of remedy. Oral and dermal ways of the route of administration were the most important in medicinal plants to treat directly different ailments. The route of administration was varying in percentage from year to year and also, a place to place according to the potential of traditional healers and type of diseases. But, different study areas and years showed that oral administration was the dominant one. In 2019, most of the prepared remedy was taken orally. Crushing was the most important and more cited in

the preparation of remedy in the year 2015–2020. Also, powdering, boiling, chewing, concoction, grinding, direct and immediate, chopping, squeezing, decoction, boiling/unprocessed use, liquid form, Homogenizing in water, heating, cooking, smoking, and fumigation are common methods of preparation of remedy. In general, this review highlights the situation of Ethiopian traditional medicinal plants associated with their knowledge from years to years. In addition, this review paper plays an important role in the extraction of potential medicinal plants to discover new drugs through detailed researches in the future.

Keywords: Ethiopia, Medicinal plants, new drugs

1. Introduction

Ethiopia is the sixth major country in tropical Africa in terms of the diversity of flora [1]. The country is endowed with rich flora, having more than 6,500 species of vascular plants out of which an estimated 12% are endemic and many plant species are used as medicinal plants [2, 3]. In Ethiopia, 80% of people depend on traditional medicine for their health care, and more than 95% of traditional medicinal preparations are made from plant origin [4]. Ethiopia is also a home for many languages, cultures and beliefs that have in turn contributed to the high diversity of traditional knowledge and practice of the people, which, among others include the use of medicinal plants [5, 6]. Ethiopian traditional medicines are greatly complex because the country harbors much cultures and endogenous knowledge [7].

Medicinal plants are plants that are used to treat diseases of humans and animals [8]. Traditional healers practice on these plants using their indigenous knowledge and hence, they are called traditional medicines. Primitive peoples in all ages have had some knowledge of medicinal plants derived as the result of trial and error [9]. Medicinal plants were traditionally used for health care and serve as the bases for the emergence of modern medicine. About 6,000 medicinal plants are believed to be used in traditional medicine globally [10–12]. Most of the medicinal plants are directly used from the wild and some from home gardens. However, home gardens played important role in cultivating and retaining medicinal plants beyond other useful plants [13]. Ethnobotanical knowledge as part of living cultural knowledge and practice between communities and the environment is essential for biodiversity conservation [14–16]. Most traditional medical treatments put into performing in Ethiopia rely on an amplification of disease that draw on both the “mystical” and “natural” base of medical circumstance and put together use of a holistic approach to management [17]. The usage of herbal medicine in Ethiopian patients in the treatment of diseases like cancer, liver, neurological and hepatic diseases were reported by some authors [18, 19]. In general plants are very important in Ethiopia to treat various ailments.

The present review was conducted to gather information about the plants used by people of Ethiopia in traditional medicine in the years 2015 to 2020, such as to highlight the description of medicinal plants including local name, the parts used, the preparation methods, traditional uses, and to compile the number of medicinal plants in each year till 2015 to 2020. This is believed to show the importance of traditional knowledge on treating ailments and elucidate the degree of development of this knowledge to marketable business.

2. Methods and materials

This review paper took place in the years 2015 to 2020 from the published papers. Various databases, such as Science Direct, PubMed, and Google Scholar,

Medicinal plants studied by and year	Name of study area	Habit of medicinal plants in percent (%)				Parts utilized in percent (%)						Method of preparation	Principal RA (%)		Total Medicinal Plants
		H	Sh	T	C	L	R	F	Se	St	Ot		Or	De	
[20]	Abaya District (Guji Oromia tribes),	30.3	48.8	20.9	—	30.2	39.5	16.3	—	14	—	Powder, crushing pounding, chewing, concoction	60.46	23.2	43
[21]	Abeshige district, Gurage Zone, SNNP	37.1	29.2	22.5	12	41.6	23.6	7.86	5.6	3.37	17.97	Crushing and pounding	51.7	23.6	89
[22]	Ada’a District,East Shewa Zone, Oromia	37	39	17	7	33.68	38.34	6.22	—	3.63	18.13	Concoction, Powdering, Grinding, Chewing	49.4	38.4	131
[23]	Adwa District, Tigray	28	36	28	8	52	24	4	8	—	12	Crushed/grinded or powdered.	79	12	25
[24]	Yalo Woreda in Afar	28	44	21	7	52.9	17	3.27		3.27	23.5	crushing and pounding	68	—	106
[25]	Dire Sheikh Hussein heritage South-eastern Ethiopia	29	33	31	7	36	26	5	10	7	16	Crushing, pounding, chewing, powdering, grinding, cutting	59	24	87
[26]	Boricha district Southern Ethiopia	16.67	45.24	33.33	4.76	59.3	12.2	—	—	16.3	12.2	Crushing and chewing, boiling	73	18	42
[27]	Bule Hora District,West Guji Zone	42.86	21.42	35.71	—	64.28	—	14.28	—	21.42	13.28	—	—	—	70
[28]	Chilga District, Northwestern Ethiopia	36	30	24	11	45.3	44.6	—	—	—	10.2	Crushing, grinding, boiled	50	33	101
[29]	Chiro district, West Hararghe	36.67	31.67	26.66	5	46.96	24.24	4.55	7.58	4.55	12.03	pounding and grinding, Boiled, squeezing	63.2	26.32	60
[30]	Dale District, Sidama Zone, SNNP	—	49	51	—	41	12	12	—	—	35	Crushing, chewing	76	9	42
[31]	Dale Sedi district, oromia	29.8	40.4	29.8	—	36.2	21.3	—	14.9	—	27.6	Crushing, grinding	57.5	19.2	47
[32]	Debark district, North Gondar	36.56	33.33	19.51	10.6	40	18.57	—	12.86	8.57	20	Crushing, pounded	56.67	29.63	93
[33]	Dega Damot Woreda, Amhara	31.1	35.4	26.8	6.7	25	37.5	8.125	8.125	8.125	13.6	Chopping, pounding and crushing	69	14.8	54

Medicinal plants studied by and year	Name of study area	Habit of medicinal plants in percent (%)				Parts utilized in percent (%)						Method of preparation	Principal RA (%)		Total Medicinal Plants
		H	Sh	T	C	L	R	F	Se	St	Ot		Or	De	
[34]	Dega Damot district, Amhara	30	40	25	5	36.5	15.4	5.8	21.2	1.9	19.2	Decoctions, liquid	44	26.5	60
[35]	Jeldesa Cluster, Dire Dawa Administration, Eastern Ethiopia	38.5	42.8	15	3.7	34	33	5	9	—	19	Crushing, pounding, concoction, squeez	57.7	27.1	52
[36]	Dugda District, Oromia	38.2	32.5	22.8	3.3	41	29	—	11	—	19	Pounding, crushing and cooking/boiling	60.13	34.64	88
[37]	Enarj Enawga District, East Gojjam, Zone, Amhara	47.75	31.53	11.71	9.01	35.81	39.53	3.8	6.05	2.79	12.02	Crushing, boiled, squeezed	43.72	26.98	111
[38]	Local Communities of Gambella	12.3	37.03	32.1	18.5	27	23	10	10	9	21	Squeezing, chewing, boiled, crushing, burning	61.73	18.51	81
[39]	Ganta Afeshum District, Eastern Zone of Tigray	39.88	33.52	21.39	2.89	38.62	17.06	9.58	11.38	2.09	21.27	Direct and immediate/unprocessed use, grinding, boiling, etc.	24.3	22.8	173
[40]	Gera district, Ethiopia	35.7	28.6	23.2	8.9	75	5.4	3.6	8.9	—	7.1	Crushing, exudation, squeezing, concoction	41.1	26.8	63
[41]	Gondar town, North Western Ethiopia	8.9	11.8	64.7	—	40	30	—	3.3	—	26.7	Powder, crushed, chewed, boiled,	64.3	26.2	30
[42]	Gozamin Wereda, East Gojjam Zone	45	31	16	8	41.9	17.2	4.3	14	4.6	18	Crushing, squeezing, powdering, juice, etc.	51.61	24.73	93
[43]	Robe district Bale zone, Oromia	38	33	26	—	33.3	21.4	—	19	—	26.3	Crushed, boiled, chewed, powdered	44.5	34.7	42
[44]	Gubalafto District, Northern Ethiopia	50.37	29.6	14.8	5.9	41.01	32.7	5.9	6.7	2.9	10.8	Crush, powder, chew, grind, and squeezed	61.4	35.4	135
[45]	halaba people, southern Ethiopia	53.06	18.37	22.45	—	52.92	13.46	—	—	25	8.62	Crush, squeezedchewed, pound powder	68.9	28.5	58

Medicinal plants studied by and year	Name of study area	Habit of medicinal plants in percent (%)				Parts utilized in percent (%)						Method of preparation	Principal RA (%)		Total Medicinal Plants
		H	Sh	T	C	L	R	F	Se	St	Ot		Or	De	
[46]	Harari regional State, East Ethiopia	42.6	35.2	14.8	5.6	48.15	20.37	9.26	—	7.41	14.81	Crushing, squeezing, chewing and cooking	53.7	24.1	54
[47]	Hawassa Zuria District, Sidama zone	34	28	32	6	56	12	15	4	4	9	Grinding, chewing, boiling, eating, liquid	74	20	105
[48]	Horro Gudurru Woreda, Western Ethiopia	46.4	28.6	25	—	51.8	19.6	10.7	10.7	—	7.2	Grinding, crushing, chopping, decoction	57.1	33.9	81
[7]	Jigjiga town, Somali region, Ethiopia	26	39	35	—	32.7	30.8	3.85	9.6	3.85	19.2	Homogenizing in water, crushing, decoction, chewing	55.6	27.8	46
[49]	Kembatta Tembaro (KT) Zone, Southern Ethiopia	54	25	13	—	41	26	3	15	—	15	Crushing, decoction, chewing, squeezing	69	22	145
[50]	Kilte Awulaelo District, Tigray	44	38	12	6	40.98	34.43	2.7	5.8	2.9	13.19	Crushing, chewing unprocessed,	25	29.69	50
[51]	Kunama ethnic group in Northern Ethiopia	37	13	43	13	21.74	35.5	8.9	9.5	2.6	21.76	pounding/crushing, smoking,	50.43	30.43	115
[52]	LaelayAdi-yabo District, Northern Ethiopia	29	29	29	10	34	24	2.7	6	13	20.3	Crushing, grind	48.65	48.65	37
[53]	Libo Kemkem District, northwest Ethiopia	41.1	38	14.7	6.1	31.2	30.9	7.2	2	1.7	27	Crushing, grinding, concoction, boiling	44.9	37.7	163
[54]	Menz Gera Midir District, North Shewa Zone, Amhara	43.87	30.32	18.45	6.45	43.9	31	8	3	4	10.1	Pounding, powdering, squeezing	47.96	28.57	155
[55]	Minjar-Shenkora District, North Shewa Zone of Amhara	38.98	40.67	13.55	6.48	45.7	18.5	13.5			22.3	liquid forms, exudates, powder, smash	54.21	41.78	118
[56]	Misha Woreda, Hadiya Zone, southern Ethiopia	43	27	21	9	41	26				33	Crushing, powdering, Boiling, chewing	47	31	126

Medicinal plants studied by and year	Name of study area	Habit of medicinal plants in percent (%)				Parts utilized in percent (%)						Method of preparation	Principal RA (%)		Total Medicinal Plants
		H	Sh	T	C	L	R	F	Se	St	Ot		Or	De	
[57]	Raya Kobo District of Amhara Region	46.2	31.8	22	—	53.1	21.8	6.45	6.45	9.8	2.4	Grinding/pounding, Crushing, Boiling, Chewing, Squeezing	53.7	28.9	91
[58]	Sayo and Hawa Gelan Districts of Kelem Wollega Zone, Oromia	15.1	45.5	39.4	—	57.47	17.24	5.45	6.45	—	13.39	Concoction, squeezing, boiling, smoking, chewing	55	32	66
[59]	Seharti Samre District, Southern Tigray	39	42.2	14.4	4.4	44	16	4	8	3	25	Crushing, pounding, Chewing, Squeezing	64.6	35.4	90
[60]	Sheka Zone of SNNP State, Ethiopia	53	23.7	12.4	10.9	42	16	6	3	3	30	Liquid form, chewed.	47	33	266
[61]	Boricha District, Sidama Zone, South Region	30	39	16	15	59	10	—	7		24	Grinding, Decoction, homogenization, concoction	97.4	2.4	42
[62]	Abergelle, Sekota and Lalibela districts of Amhara region	15.69	19.6	60.13	4.57	32.08	32.08	—	11.32	—	24.52	Crushing, grinding, squeeze, fumigation	35.85	33.96	53
[63]	Tepi Town, Southwest Ethiopia	33.3	24.24	24.24	15.15	36.36	12.12	—	—	3.03	49.49	Crushing and grinding	75.75	9.09	33
[52]	Cheha district	49	19	29.41	2	65	14	5	10	3	3	Cooking, smoking, heating and boiling	69	24	102

N.B. H = herb, Sh = shrub, T = tree, mpts = medicinal plants, C = climber, L = leaf, R = root, F = fruit, Se = seed, St = stem, Or = oral, Ot = other, De = dermal, RA = Route of administration, SNNP = South nation and nationality of people.

Table 1.

List of medicinal plants studied by and year, study area, habit, parts utilized, mode of preparation in Ethiopia (2015–2020 years).

have been searched. The data were analyzed using frequency, percentages, charts, and numbers using the Microsoft Excel spreadsheet 2010.

3. Medicinal plants in Ethiopia

In Ethiopia many medicinal plants are useful for treatment of different health problems. As indicated in **Table 1**, (review of recent literature: 2015–2020 years) medicinal plants in Ethiopian pharmacopeia are studied in different parts of the country by different authors. The review was restricted to the years 2015–2020 because the study made so far is bulky. This review showed that the total number of medicinal plants documented varied from year to year. In 2015, a total of 1,062 medicinal plants were identified from different areas by different authors. Similarly, 315, 613, 944, 341, 732 medicinal plants were identified by different authors in different study area in years 2016, 2017, 2018, 2019 and 2020 respectively.

4. Identified medicinal plants in Ethiopian in the years 2015–2020

The pattern of number of identified medicinal plants per year in Ethiopia in the years 2015–2020 was different (**Figure 1**). In 2015, 1,062 of medicinal plants were identified. When compared to the year 2016, it was greater by 747. Years 2015 and 2018 were the years many plants of medicinal value were documented (**Figure 1**).

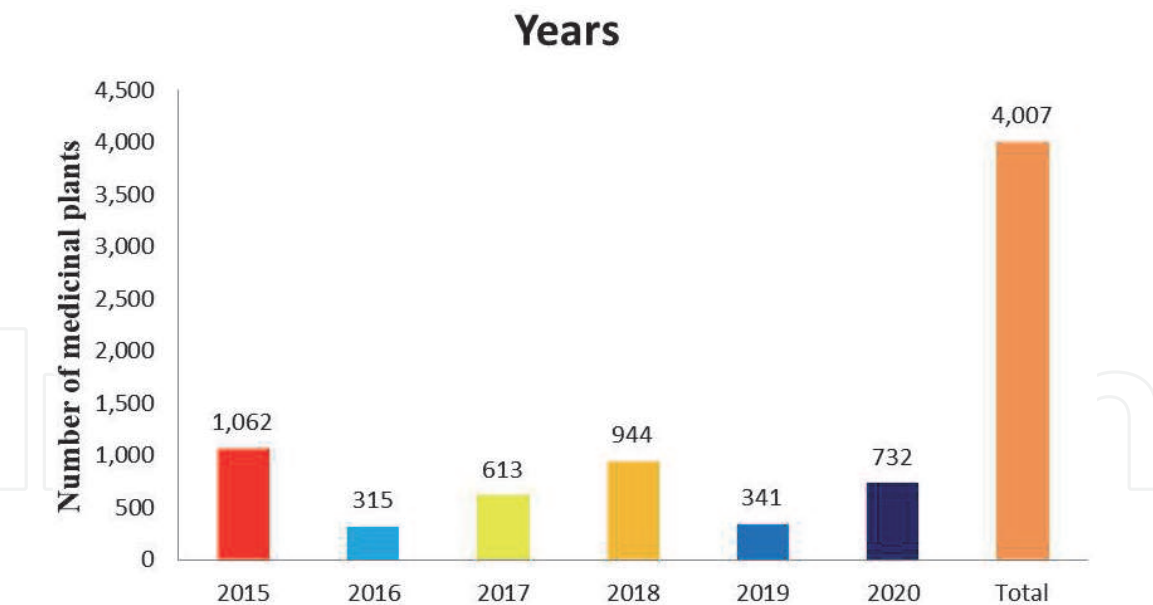


Figure 1.
Pattern of number of identified medicinal plants in Ethiopia years 2015–2020.

5. Growth forms (habits) of medicinal plants

The growth forms (habits) of medicinal plants was analyzed from 2015 to 2020 in different study area with different authors but with the same year and valued for each year and put the average one. To calculate the 2015 growth form of medicinal plants for example to calculate herbs, add all herbs identified by different authors in the same year and taken the average one. This method applied for all growth form

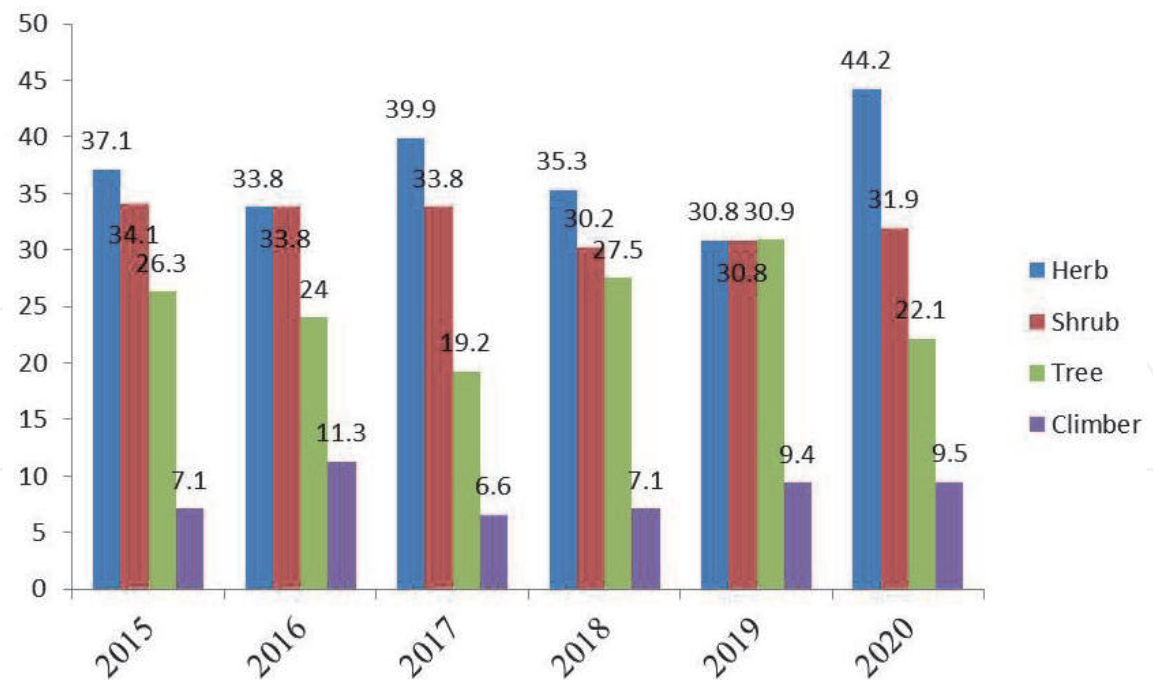


Figure 2.
Growth forms (habits) of medicinal plants years 2015–2020.

of medicinal plants to each year (**Figure 2**). In all years (2015–2020) the dominant growth forms were herbs. The highest average of growth form was herb in year 2020 which is 44.2% (**Figure 2**). In all years the least growth form was climber (**Figure 2**).

6. Parts of medicinal plants

In all growth forms, the parts used for medicine were identified. Add each medicinal plants parts in the same year and then taken the average for all years (**Figure 3**). In 2020 year the traditional healers mostly used leaves (56.3%) for the

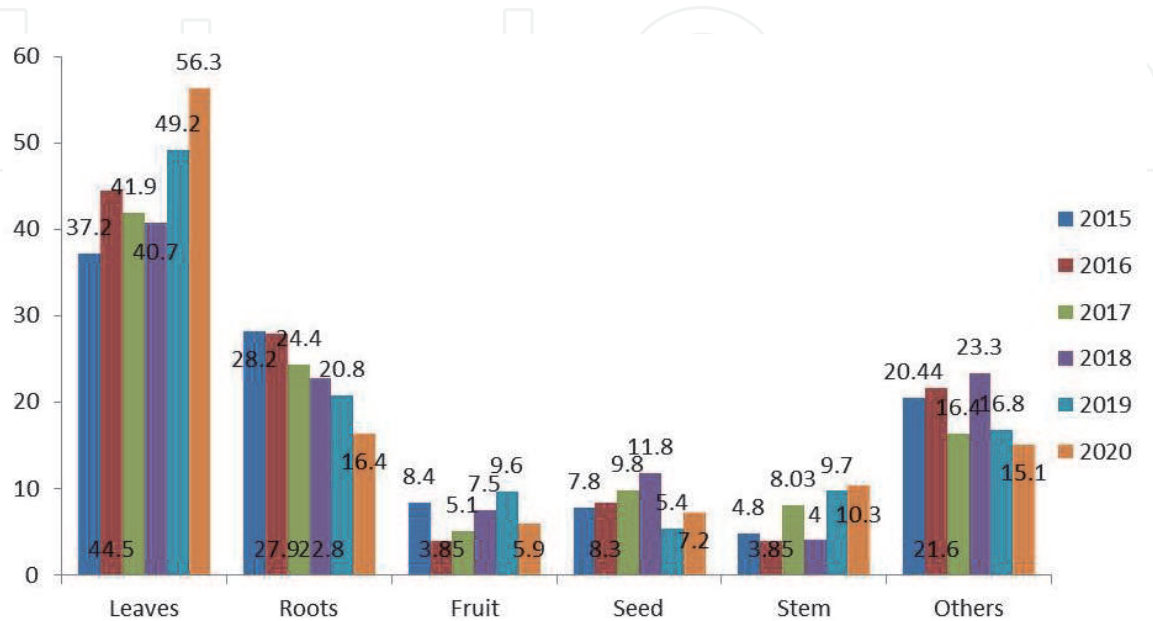


Figure 3.
Average of plant parts used in preparation of remedies 2015–2020.

preparation of remedy. In general, in all year leaves was the dominant for the preparation of remedy (**Figure 3**).

7. Route of administrations

Oral and dermal ways of route of administration were the most important in medicinal plants to treat directly different ailments. The route of administration was varying in percentage from year to year and also, place to place according to the potential of traditional healers and type of diseases. But, in different study areas and years showed that oral administration was dominant one (**Figure 4**). In 2019, most of the prepared remedy was taken orally.

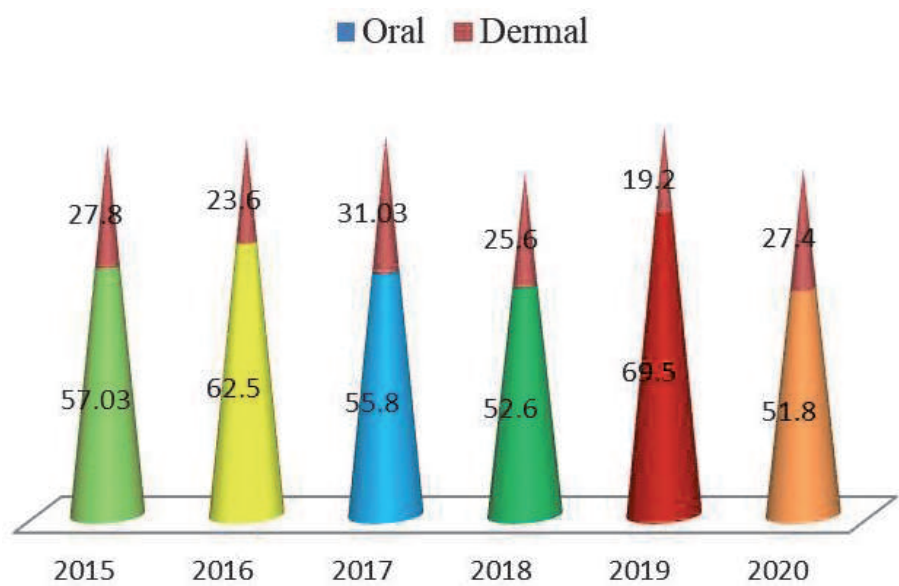


Figure 4.
Route of administration of remedies years 2015–2020.

8. Methods of preparation of medicinal plants

Crushing was the most important and more cited in the preparation of remedy in the year 2015–2020 (**Table 2**). Also, powdering, boiling, chewing, concoction, grinding, direct and immediate, chopping, squeezing, decoction, boiling/unprocessed use, liquid form, Homogenizing in water, heating, cooking, smoking and fumigation are almost common for many traditional healers were shared methods to preparation of remedy.

9. Conclusion

All the medicinal plants reported in the current review work have been used in traditional medicine for the treatment of different human ailments in Ethiopia. But, the studied plants in the present review need further investigation for detailed extraction of natural products, pharmacological and biological activities as well as a safety control. Therefore, today’s review is a gateway for a new researcher to

Plant family	Scientific Name	local name	Habit	used parts	Medicinal uses	Methods of preparation	References
Asteraceae	<i>Vernonia adoensis</i> Sch.Bep. ex Walp.	feres zeng	Herb	root	Menstrual disorder	Root is chewed with honey, then drunk the fluid	[32]
	<i>Echinops hispidus</i> Fresen	Kebericho	Shrub	Stem/root	Cough	Smoke the nasal cavity of the patient with dried stem or root	[64]
	<i>Carthamus tinctorius</i> L	Suf	Herb	Seed	Cough	—	[54]
	<i>Tagetes minuta</i> L	Gimie	Herb	Leaf	Black leg	Take the prepared remedy through orally.	[54]
	<i>Echinops macrochaetus</i> Fresen	kosorruu(or) koshshle	Herb	Stem	Ringworm	Fresh stem of this plant is chopped and fumigated to affected area.	[36]
	<i>Helichrysum</i> sp.	Nechilo	Shrub	Leaf	Impotency	—	[54]
	<i>Artemisia abyssinica</i> Sch.Bip.	Chikugn	Herb	Root/leaf	Common cold, evil eye, typhus	Nasal for common cold Neck hang for the evil eye	[54]
	<i>Carduus leptacanthus</i> Fresen.	guccino(or) Amharic-	Herb	stem	Hemorrhoid	Crushed dry stem concocted with <i>Vernonia amygdalina</i> leaves mixed with water is taken orally	[20]
	<i>Vernonia amygdalina</i> Del.	Girawa	Shrub	leaf	Bloating	Crush and give with water	[53]
	<i>Acmella caulirhizea</i> Del.	yemider berbrie	Herb	leaf	Tonsillitis	Smashed and rubbed, take the juice	[64]
Fabaceae	<i>Kleinia odora</i> (Forssk.)	Wushie	Herb	leaf,stem	heart disease	—	[46]
	<i>Senna singueana</i> L	hambaha mbo (tig) key inchet	Shrub	Root	helminths, abdominal pain	Grind and mix with water, then drinking	[23]
	<i>Tephrosia bracteolata</i> Guill. and Perr.	gerengerie	Herb	leaf	Body lice	—	[54]
	<i>Lupinus albus</i> L	gbto	Herb	seed	Hypertension	The prepared GB to will be eaten	[54]
	<i>Senna septemtrionalis</i> (Viv.) H.S. Irwin & Barneby.	hamashaka (sd)	Herb	leaf	Snake bite	Rubbing	[47]
	<i>Crotalaria karagwensis</i> Taub.	yeayt ater	Herb	leaf	Itchiness	Crush and powder, then cream with butter	[53]
	<i>Pterolobium stellatum</i> (Forssk.) Brenan	harengemmaa/ kontir/kentafa	Shrub	Root	Rhumantic pain	Root boiled in a cooking dish and fumigating the leg with vapor.	[22]

Plant family	Scientific Name	local name	Habit	used parts	Medicinal uses	Methods of preparation	References
	<i>Albizia schimperiana</i> Oliv.	Sesa/shimoro	Tree	Root	evil eye swelling	—	[47]
	<i>Cicer arietinum</i> L.	shimbra		seed	Malaria	Powdered, boiled and drunk	[55]
	<i>Calpurnia aurea</i> Benth	Digita	Shrub	leaf	eye disease, snake bite	—	[55]
	<i>Vicia faba</i> L.	Baaqelaa/or oral	Herb	seed	tapeworm	Fresh seeds are soaked in water overnight and eaten for five days	[36]
Lamiaceae	<i>Clerodendrum myricoides</i> (Hochst.) Vatke	Misrch	Shrub	leaf/root	evil eye & evil sprit	Crush, powder, then tie on the neck or take with tooth	[54]
	<i>Satureja punctata</i> Benth. Briq	lomishet	Herb	leaf	liver	Cooked fresh and drink the juice	[53]
	<i>Ocimum lamifolium</i> Hochst	demakese	Shrub	leaf	vaginal bleeding	Crush and Smearing in the vaginal part	[23]
	<i>Thymus schimperii</i> Ronniger	Tosign	Herb	Leaf	Lung tuberculosis	—	[54]
	<i>Salvia schimperii</i> Benth	Dibreq	Herb	Seed	Diarrhea	—	[54]
	<i>Otostegia integrifolia</i> Benth	Tunjut	Shrub	Whole plant	evil eye	Chopped and fumigate home using local stoves; chopped and used to take a smoke bath; people chew the leaves and spit into the mouth	[34]
	<i>Salvia nilotica</i> L.	cheguri habesha(tig) hulegeb	Herb	Root	snake bite	Crushing, homogenize with water and drink a cup of the solution	[51]
Solanaceae	<i>Datura stramonium</i> L.	Astenagir/etsefaris	Herb	Leaf	Ring worm	Rubbing and painting	[28]
	<i>Solanum incanum</i> L.	Enbuay/yekola	Herb	Root	Abdominal pain	Drinking Crushed and mixing with Water	[23]
	<i>Nicotina tabaccum</i> L.	Tinbaho	Herb	Leaf	Cough	Powdered and smoked	[55]

Plant family	Scientific Name	local name	Habit	used parts	Medicinal uses	Methods of preparation	References
	<i>Solanum anguivi</i> Lam.	zerch enboy	Shrub	Leaf	Mastitis	Dried and crushed leaves mixed with butter	[46]
	<i>Lycopersicon esculentum</i> Mill.	Timatim	Herb	Leaf	Spider poison	Leaf Chewed and put on the affected area	[33]
	<i>Capsicum annuum</i> L	Karia	Herb	Fruit	Malaria	—	[54]
	<i>Solanum marginatum</i> L	Geber embouy	Shrub	Leaf	Tapeworm	Take the prepared remedy through orally	[54]
	<i>Solanum nigrum</i> L.	Xunaye(sd)/tkurawut	Herb	Leaf	Snake bite	Fresh leaf immediately after bit chewed and swallowing	[26]
	<i>Withania somnifera</i> (L.) Dunal.	bula(sd)/girawa	Shrub	Root	Pneumonia	Fresh root is crushed andboiled then infusion is filtered and drunk in the morning for human until recovery and for four days for livestock.	[55]
Euphorbiaceae	<i>Euphorbia abyssinica</i> J. F. Gmel. T	Kulkual	Tree	Root/leaf	Jaundice	Crush, immerse in water, then drink or bake bread then eat	[54]
	<i>Bridelia micrantha</i> (Hochst.) Brain.	yenebr tafir	Tree	Bark	Expel placenta	Crush is then given with water	[55]
	<i>Clutia lanceolata</i> Forssk.	Fiyelefej	Shrub	Root	Diarrhea	Crush then tie on neck region	[53]
	<i>Euphorbia tirucalli</i> L.	Kinchib	Shrub	Sap	Swelling	Painting	[28]
	<i>Croton macrostachyus</i> Del.	Bisana	Tree	Leaf/root	Evil eye, Jaundice, Eye disease	—	[54]
	<i>Ricinus communis</i> L.	Qobboo (or) Gulo	Shrub	Seed	Impotency	The dried seeds are pounded, mixed with small quantity of latex from Aloe spp. And drunk two coffee cups before bedtime for two days	[23]
	<i>Tragia cinerea</i> (Pax) Gilbert & Radcl. Smith	alebelabit	Herb	Root	Kintarot	Fine powder of plant part mixed with butter /honey and drink before sexual intercourse with his partner.	[20]
	<i>Phyllanthus ovalifolius</i> A. Radcliffe-Smith	gurbi adi/gechemo	Shrub	leaf	Scabies	Leaves squeezed by hand and applied on the skin	[24]

Plant family	Scientific Name	local name	Habit	used parts	Medicinal uses	Methods of preparation	References
Malvaceae	<i>Sida ovate</i> L	umer kope (or)	Herb	leaf	Swelling	Fresh leaves pounded tied on the swelling.	[54]
	<i>Gossypium barbadense</i> L.	Tit	Shrub	Root	Snake bite	Tie on neck or chew, absorb the Juice	[53]
	<i>Malva parviflora</i> Hojer	nacha	Shrub	leaf	Wound	Chew and cream with cotton	[54]
	<i>Sida schimperiana</i> ochst. exA. Rich.	harmellaa (or)/ chfrg	Shrub	Root/leaf	Evil eye, intestinal parasite	—	[46]
	<i>Malva verticillata</i> L	Lut	Shrub	Root	Headache	Crush the root and mix with water and wash the head	[47]
Rutaceae	<i>Citrus limon</i> (L.) Burm.f	betre lomi/ yeferenji lomi	Tree	fruit	Liver disease	—	[54]
	<i>Clausena anisata</i> (Willd.) Benth.	limich	Shrub	Root	Evil eye	Sniff, drink and fumigate with the concoction	[53]
	<i>Citrus aurantium</i> L.	Komtatie/bahre lomi	Shrub	leaf	Hypertension	Drink the juice leaf	
	<i>Ruta chalepensis</i> L.	Tenadam	Shrub	leaf	Evil eye	Crushed, powdered and sniffed	[41]
			Herb	leaf	Cough	Leaves boiled in milk are taken orally and take medicine orally for three days	[41]
				leaf	Malaria	Crushed the leaves of the plant with bulb of <i>A. sativum</i> by adding ginger then drunk.	[24]
			Herb	leaf	flue	Leaf of <i>R. chalepensis</i> pounded with bulb of <i>A. Sativum</i> , mixed with soup and used as a drink	[65]
Alliaceae	<i>Allium sativum</i> L.	nech shinkurt	Herb	bulb	Evil eye, malaria, virus. Asthma,	Sniff, drink and fumigate With concoction	[53]
Poaceae	<i>Cymbopogon martini</i> L.	tejesar	Herb	Root	Evil eye	—	[54]
				leaf	Boost immunity of breastfeeding infants	The grassy leaf is boiled, macerated, cooled, and given to infants orally (esp. drenching).	[65]
	<i>Arundinaria alpina</i> K.Schum	qerqeha	Herb	Root	Shotelay	The root of <i>Arundinaria Alpina</i> is tied on the neck part of the body	[55]

Plant family	Scientific Name	local name	Habit	used parts	Medicinal uses	Methods of preparation	References
Amaranthaceae	<i>Achyranthes aspera</i> L.	telenj	Herb	Root/leaf	wound	Rubbing the leaf or root and applying for the wounded part	[28]
Acanthaceae	<i>Hypoestes forskaoli</i> (vahl) R.Br	gerbya	Shrub	Root	bone fracture	Tie Cut the root parts and tie the damaged part	[23]
	<i>Justicia schimperiana</i> (Hochst. Ex Nees)	Sensel/ Ciikkicho (sd)	Shrub	leaf	Helminthiasis	The leaf is pounded, macerated, and drunk	[65]
Celastraceae	<i>Maytenus arbutifolia</i> (A. Rich.) Wilczek	atat	Shrub	Root	Kidney problem	—	[54]
Asclepiadaceae	<i>Calotropis procera</i> L.	Tobia/ginda/ qinba	Shrub	leaf	swelling	Warming the leaf and rubbing the swelled part.	
Simarobaceae	<i>Brucea antidysenterica</i> J.F. Mill.	abalo/ Waginos	Tree	leaf	wart	The leaf is crashed with <i>Clematis simensis</i> , <i>Brucea antidysenterica</i> , and <i>Oenanthe Palustris</i> , and the powder is applied on the affected part.	[28]
Cucurbitaceae	<i>Cucumis dipsaceus</i> Ehrenb.	Yeamora msa/ hafafelo (tig)	climber	Root	belly ache, snake bite, insect bite,	Grind and mix with water drinking	[62]
	<i>Cucumis ficifolius</i> A. Rich	yemdir embway	Herb	Root	Stomach ache, Gonorrhea, Rabies	—	[54]
Rubiaceae	<i>Coffee arabica</i> L.	buna	Tree	fruit	wound,	Apply the powder on affected part	[28]
Moraceae	<i>Dorstenia barnimiana</i> Schwienf.	work bameda	Herb	Root	rabies	Grinding the roots of <i>Malva verticillata</i> , <i>Croton macrostachyus</i> , and <i>Cucumis ficifolius</i> separately and mixing them, then drinking with Skimmed milk, after that drinking coffee.	[28]
	<i>Ficus vasta</i> Forssk	warka	Tree	Root	Eye disease	—	[54]
Rhamnaceae	<i>Rhamnus prinoides</i> L'Herit	gesho	Shrub	Shoot	tonsillitis	Crush and drink with water	[53]
Oleaceae	<i>Jasminum abyssinicum</i> Hochst. ex DC.	tenbelel	Tree	leaf	toothache	Take with teeth	[53]

Plant family	Scientific Name	local name	Habit	used parts	Medicinal uses	Methods of preparation	References
Polygalaceae	<i>Polygala abyssinica</i> Fres.	etse libona	Herb	Root	evil eye	Grinding the roots of <i>Polygala abyssinica</i> , <i>Carisa spinarum</i> , <i>Phytolacca dodecandra</i> , <i>Capparis tomentosa</i> , <i>Securidaca longepedunculata</i> ., <i>Boscia angustifolia</i> , <i>Ruta halepensis</i> , <i>Sida schimperiana</i> , and <i>Croton macrostachyus</i> , then inhaling; additionally bandage	[28]
Convolvulaceae	<i>Dichondra repens</i> J.R.&G. Forst.	afer kocher	Herb	leaf	febrile illness	Rub, squeeze, then cream except the heart	[53]
Boraginaceae	<i>Cordia africana</i> Lam.	wanza	Tree	leaf	eye problem	Burn, then insert ash with butter	[53]
Capparidaceae	<i>Capparis cartilaginea</i> Decne	qelemberur	Tree	fruit	gastritis	Fruit coat is crushed and mixed with ½ glass water and 3 spoon sugar and taken orally	[62]
				Root	Ascaris	Dried roots crushed and boiled and consumed empty stomach	
				leaf	diarrhea	Fresh leaves crushed and mixed with water and sugar is added and consumed	
Loganiaceae	<i>Buddleja polystachya</i> Fresen.	anfar	Shrub	shoot	tonsillitis	Tie and cream concoction	[44]
Cuppressaceae	<i>Juniperus procera</i> Hochst ex. Engl.	Yehebesha tid	Tree	shoot	(painful swelling	The shoot is pounded, decocted, and drunk	[65]
				fruit	urine retention	Boil with TEJ then drink	[53]
Myrtaceae	<i>Eucalyptus globulus</i> (Labill.)	nechbahirzaf	Tree	leaf	Nasalinfluenza	Chopped, boiled and inhale the vapor	[55]
Rosaceae	<i>Rosa abyssinica</i> L.	kega	Shrub	fruit	hypertension	Powdered, mixed with water and drunk	[53]
anunculaceae	<i>Clematis hirsuta</i> Perr.	yazohareg	climber	Leaf/stem	Swellings/ Wart, Eczema	Powdered and tied on affected part	[54]
Urticaceae	<i>Urera Philodendron</i> (A. Rich.) Wedd.	lankusso	Shrub	leaf	retained placenta	Chopped Leaves and mixed with water	[46]

Plant family	Scientific Name	local name	Habit	used parts	Medicinal uses	Methods of preparation	References
Ranunculaceae	<i>Thalictrum rhynchocarpum</i> Dill. and A. Rich	sire-bizu	Herb	Root	scrotum swelling	Crush and drink with Tella	[53]
Apocynaceae	<i>Carissa spirarum</i> L	agam	Shrub	apex	insect poison	For any poisoning by insects or animal bite, seven apexes from seven different places are collected and crushed.	[33]
Sapindaceae	<i>Dodonea angestifolia</i> L	kitkita	Shrub	shoot apex	chife	The apex is charred on an open fire and the powder is mixed with butter and applied on the affected area	[33]
Ebenaceae	<i>Eucleadivinorum</i> Hiern.	Dedho/kuliew (tig)	Shrub	Root	scorpion bite	Roots are chewed to relieve pain	[59]
Meliaceae	<i>Ekebergia capensis</i> Sparrm	Lol/sembo/Olonchoo	Tree	bark	weight loss in children	—	[30]
Plantaginaceae	<i>Plantago lanceolata</i> L	gorteb	Herb	leaf	wound & bleeding	Crush leaf powder, then cream	[53]
Phytolacaceae	<i>Phytolacca dodecandra</i> L Herit	Endod/shebti	Shrub	Root	rabies	The dried root of the plant is powdered and mixed with local alcohol and a cup of solution drunk daily for twelve days. Vomiting is its side effect and, therefore, restricted to children and pregnant women	[30]
				leaf	gonorrhea	Leaves of <i>P. dodecandra</i> and roots of <i>C. Macrostachyus</i> are ground, powdered mixed with water and solution drunk with one to two cups of coffee	
				leaf	jaundice	Leaves are crushed, squeezed and one cup of juice taken daily for 21 days	
Brassicaceae	<i>Lepidium sativum</i> L	Feto/shenfa	Herb	seed	Amoebiasis, diarrhea	Seeds are ground into powder, mixed with honey and then taken for three day	[54]
Asparagaceae	<i>Asparagus africanus</i> L	yesiet kest	Shrub	aboveground	swelling	Above ground is crushed and homogenized in water for washing the swelling.	[66]
Caricaceae	<i>Carica papaya</i> L	Papaye/papaayee	Shrub	seed	diarrhea	Seeds ground and boiled with coffee and taken with hone	[24]

Plant family	Scientific Name	local name	Habit	used parts	Medicinal uses	Methods of preparation	References
Vitaceae	<i>Cyphostemma adenocaula</i> (A.Rich.)	asserkush	climber	Root	rabies	Root boiled with milk, filtered and filtrate taken in empty stomach	[41]
Crassulaceae	<i>Kalancheo petitiana</i> A. Rich,	endahula	Herb	Root	ascaris	For ascaris, the root is cut with a knife of horn and chopped on unmovable stone, and mixed with water, it is squeezed between palms, applied in the left nose, then moved the stomach	[33]
Dipsacaceae	<i>Dipsacus Pinnatifidus</i> Steud. ex A. Rich.	Kelem/galam	Herb	leaf	rabies	Pound and give with water	[53]
Myrsinaceae	<i>Embelia schimperi</i> Vatke .	enkoko	Shrub	fruit	Tape worm	Row eaten; crushed, is drunk mixed with ‘tela difdif’	[54]
Verbenaceae	<i>Lippia adoensis</i> Hochst. exWalp	Koseret/kusaye	Shrub	leaves	fibril illness	The leaves squeezed and the filter is given through the nose and drink	[41]
plumbaginaceae	<i>Plumbago zeylanica</i> L.	Amera	Herb	Root/leaf	Wound	The crushed form of its root and leaf of <i>Dodonaea angustifolia</i> , with latex of <i>Calotropis proceraare</i> mixed together then creamed on the wound	[44]
Melanthaceae	<i>Bersama abyssinica</i> Fresen	azamir	Shrub	Leaf	Ascaris/ Hypertension,	The twig part of the leaf is crushed and powdered then boiled with tea and drunk	S [54]
Aloaceae	<i>Aloe pulcherrima</i> Tod.	eret	Herb	Root	Impotency	Crush and powder, then cream with butter	[53]
Linaceae	<i>Linum usitatissimum</i> L	telba	Herb	seed	Gastric	Pound, mix with honey, then drink	[54]
Anacardiaceae	<i>Rhus vulgaris</i> Oliv	Embis/yeregna qolo	Tree	Root	Evil eye	—	[54]
Tiliaceae	<i>Rewia ferruginea</i> Hochst. ex A. Rich.	lenquata	Shrub	bark	Expel placenta	Pilled the insider part and chopped emilizified then given to cattle, goat and sheep	[53]

N.B.Tig = Tigrigna, Sd = Sidamgna, Or = Oromigna.

Table 2.

List of most common medicinal plants used in Ethiopia with their local name, scientific name, family, parts utilized method of preparation, ailment treated and route of administration.

discover new drugs and screening chemicals resulting from these plants for against different health problems.

Conflict of interest

The authors declare that there is no any conflict of interests.

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