

Ethnomedicinal Review of plants utilized by the Abagusii People of Western Kenya

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Abstract

Introduction: Plants are used in the treatment of diseases by various cultural groups since antiquity. Different ethnic groups of Kenya use plants for medicinal purposes, and over 90 % of Kenyans have used medicinal plants once in their lifetime because they are accessible, affordable, and associated with fewer side effects. The Abagusii people of Western Kenya have rich traditions and cultures, whereby traditional medicine practice is a major and essential cultural component of human and livestock health promotion; however, the ethnomedicinal documentation is scanty, hence the present study.

Methods: The relevant ethnomedicinal information was extracted from relevant-books, journals, MSc. and Ph.D. Theses and dissertations were published before March 2021. Online electronic databases, such as Google Scholar, Web of Science, Scopus, PubMed, Science direct, and flora databases of different countries, were accessed between April 2020 to March 2021 to mine the required information. Specific search terms used were "medicinal plants for Abagusii people", "traditional medicines for Abagusii", and "Indigenous medicine, Abagusii, Kenya". After identifying potential literature sources, an inventory of medicinal plants used by the Abagusii community was created using Excel Spreadsheet (Microsoft 365) and analyzed qualitatively. Informant Consensus Factor values (ICF) were computed as a measure of homogeneity of use of medicinal plants against various disease categories and extent of knowledge sharing.

Results: Two hundred and fifteen (215) plant species, mostly belonging to Asteraceae, Fabaceae, Lamiaceae, and Solanaceae families, are used by the Abagusii people in traditional medicine, with 870 use reports were documented. Further, our findings revealed that most plants were used to treat intestinal/gastric diseases, skin infections, disorders, musculoskeletal disorders, and syndromes. The plant part and form that the Abagusii people commonly use were the leaves and herbs, respectively. The Abagusii people mostly prepare plant medicines as decoctions, often for drinking orally to treat diseases. It was noted that there was substantial sharing of ethnomedicinal information on various diseases among the people of Kisii and Nyamira Counties, except for anthrax, cancer, cardiovascular disorders, and evil eyes conditions, which lacked homogeneity.

Conclusions: Our study reveals the integral role of medicinal plants in promoting health among the Abagusii community of Kenya in managing various diseases. Our study lays a framework for empirical studies towards validating medical plants of the Abagusii people in the management of various ailments and potential development of alternative, efficacious, affordable, accessible, and safe therapeutic remedies.

Keywords: Decoction, Ethnomedicinal usage, Homogeneity, Medicinal herbs, Traditional medicine, Use category.

1. Introduction:

Since antiquity, plants have offered an invaluable source of preventive and curative therapies for many ailments affecting humans and farm animals (1). Currently, the exploitation of plant-based products and their commercialization is rising globally (2–4). Previous reports indicate that over 80 % of the population in developing countries and 40 % in Western world utilize herbal products to treat various diseases (5,6). In Kenya, over 90 % of its inhabitants have, at least once, used herbal therapies to treat and manage health conditions and to promote healthy living (7). Different communities throughout the world have specialized traditional medicine practice and demonstrate profound knowledge on the application of medicinal plants in preventing, managing,

and treating various diseases (8). Medicinal plants are arguably accessible, affordable, and associated with fewer side effects, hence preferred by over 80 % of the world population (9). As a result, in some countries like China and India, traditional medicine has been incorporated into the conventional healthcare system as a fully functional entity, owing to their proven therapeutic efficacy [9]-[11],[13]. In fact, research has shown that most patients, especially in the rural settings of the African continent, combine traditional medicines with conventional medicines to accelerate recovery and avert undesirable effects (15). Moreover, the commercialization of herbal products in Kenya, especially in the Western Region, including Kisii, is profound due to their perceived potency and safety (16)

Due to the promising potential of medicinal plants in offering therapeutic solutions, research has been heightened to elucidate their efficacies in the claimed diseases (8). Currently, there are enormous reports on the efficacy of various plant extracts on various disease conditions. However, there are scanty recapitulations of these reports, presently available, which forestall literature collation to advance research.

The people of the Abagusii community are endowed with a wealth of traditions and cultures, which span many ages (17,18). Herbal medicine practice is the major and essential component of the Abagusii culture, which has fostered their health and animals (19). However, ethnomedical documentation and empirical validation of medicinal plants used by the Abagusii people (18,20) has dragged due to the locals' fear of losing traditional knowledge. Additionally, due to lifestyle change that has contributed to the loss of biodiversity, rural-urban migration, and the death of the elderly, who are usually the custodians of the heritage (7), urgent interventions to preserve the ethnomedical knowledge for heritage, and the advancement of science are warranted.

Despite the available ethnomedical studies on various medicinal plants used by the Abagusii people to meet their healthcare needs (21), these studies are far between, thereby necessitating the need for detailed recapitulation to promote and enhance ethnomedical research. The current study compiled and analyzed available scientific literature on plants used in traditional medicine practices of the Abagusii community in Western Kenya. The findings contribute to the conservation of indigenous knowledge of medicinal plants used in traditional medicine by the Abagusii community.

2 Materials and Methods

2.1 Study area

The area covered for the current study was Gusiiland, inhabited by the native Abagusii people. The Gusiiland covers a total land area of 2,230 Km² of South Western Kenya, about 50 Kilometers East of Lake Victoria. The

region is composed of Kisii and Nyamira Counties with a population of 1,872,436 as per the 2019 Kenya population and housing census, respectively (22). Gusiiland is demarcated by the coordinates 0°30' and 1°00' S and 34°30' and 35°00' E. The area is characterised by Gusii highlands at elevations of 1,190 meters in the north-western corner of the territory and 2,130 meters in the central highlands. It borders Narok County to the South and Homabay and Migori Counties to the West, Bomet County to the East, and Kericho County to the North East. The mean maximum temperatures range from 28.4°C at the lowest elevation to 22.8°C at the highest elevation, while the mean minimum temperatures are 16.4°C and 9.8°C, respectively. Rain falls throughout the year with an annual average of 150-200 milliliters. There are two peak seasons of rainfall: the major rainy season (March to May) and the minor rainy season (September to November). In the nineteenth century, much of present-day Gusiiland was covered by moist montane forests; however, due to the increasing population, all major forests have been cleared with scant indigenous vegetation remaining, and no large mammals can be found.

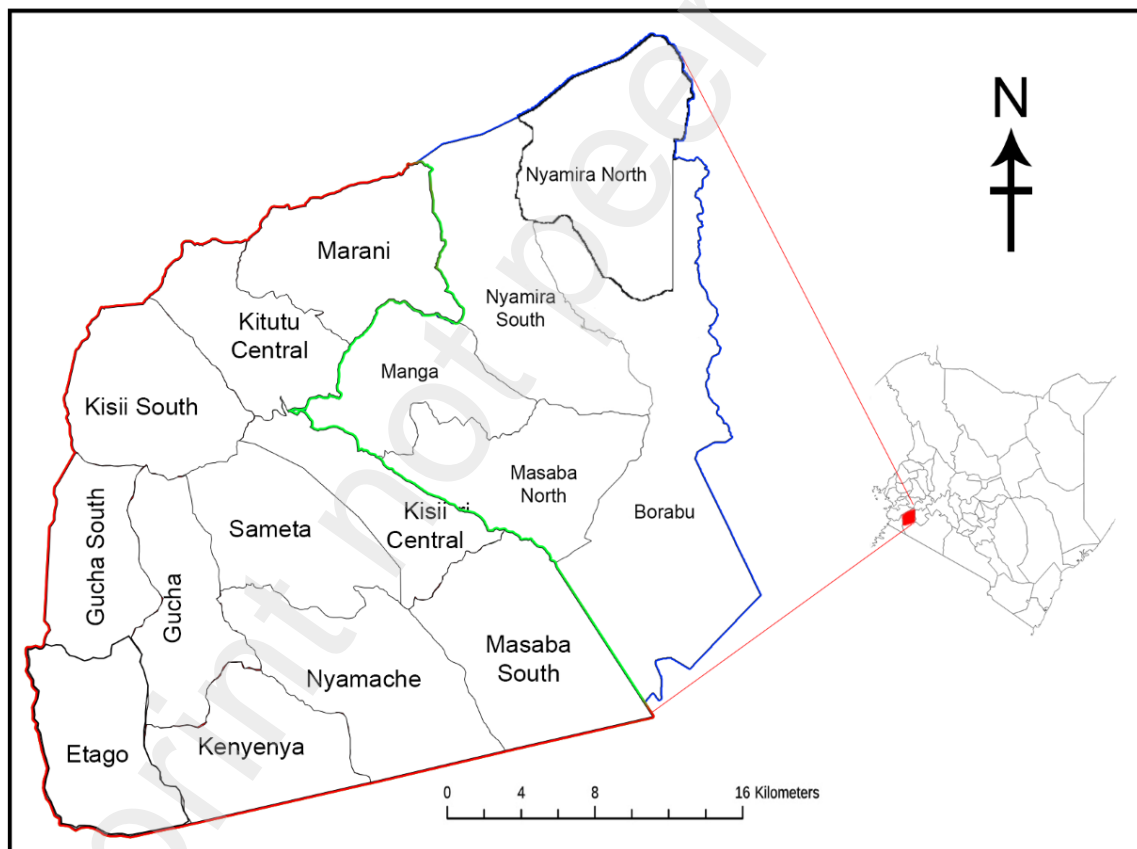


Figure 1: Map of Gusiiland showing Kisii and Nyamira Counties

In the past, Gusiiland was heavily forested with old indigenous broadleaf rainforest trees and other flora and was part of the old Congo Basin forests. The only remnant of this old forest in Kenya is the Kakamega Forest, the westernmost tip of the Equatorial rainforest. Indigenous plant diversity in Gusiiland is constantly on a declining

trend and is aggravated by the need for agricultural land and settlement area due to the increasing human population. On the other hand, the reduced need for traditional herbal medicine, which has now been surpassed by modern medicine in hospitals and medical care, is also why the Abagusii are not keen on indigenous plants (23). As a result, several traditional medical practitioners in the two counties operate without recognition, with only about twenty registered in Kisii county and none in Nyamira county (24,25).

2.2 Data collection and Analysis

2.2.1 Data extraction and management

Data was extracted from one textbook (26), articles published in peer-reviewed journals (27–32), and published and unpublished Masters and Ph.D. theses (18,19,33–38). Online electronic databases used for literature search were Google Scholar, Web of Science, Scopus, PubMed, Science direct, and flora databases of different countries, accessed between April 2020 and March 2021. Specific search terms used were "medicinal plants for Abagusii people", "traditional medicines for Abagusii", and "Indigenous medicine, Abagusii, Kenya". After identifying potential literature sources, an inventory of medicinal plants used by the Abagusii people was created using Excel Spreadsheet (Microsoft 365).

The consolidated inventory included scientific plant names with their families in parentheses, common name, reference, origin of the plant, growth habit, county of original research, original use reports, plant parts used, preparation methods, route of administration, and medicinal use category. The classification of various use reports into various categories of health disorders was based on the International Classification of Primary Care – 2nd Edition (ICPC-2 and International classification of diseases (ICD-11) (39,40).

2.2.2 Inclusion and exclusion criteria

Only primary data obtained from original research was used to develop the inventory. Plants whose use reports were referred by their vernacular names or genus names, and their identities were authenticated after collecting and depositing voucher specimens at the East Africa herbaria, hosted at the National Museums of Kenya, were included in this study.

Plants whose use reports were referred by their vernacular names or genus names or even were assigned scientific names without proper authentication were excluded from this study. Also, plants with incomplete, unauthenticated, and incorrect information were not included in this study.

A summarized flow chart of literature screening with inclusion and exclusion criteria is presented in Figure 2.

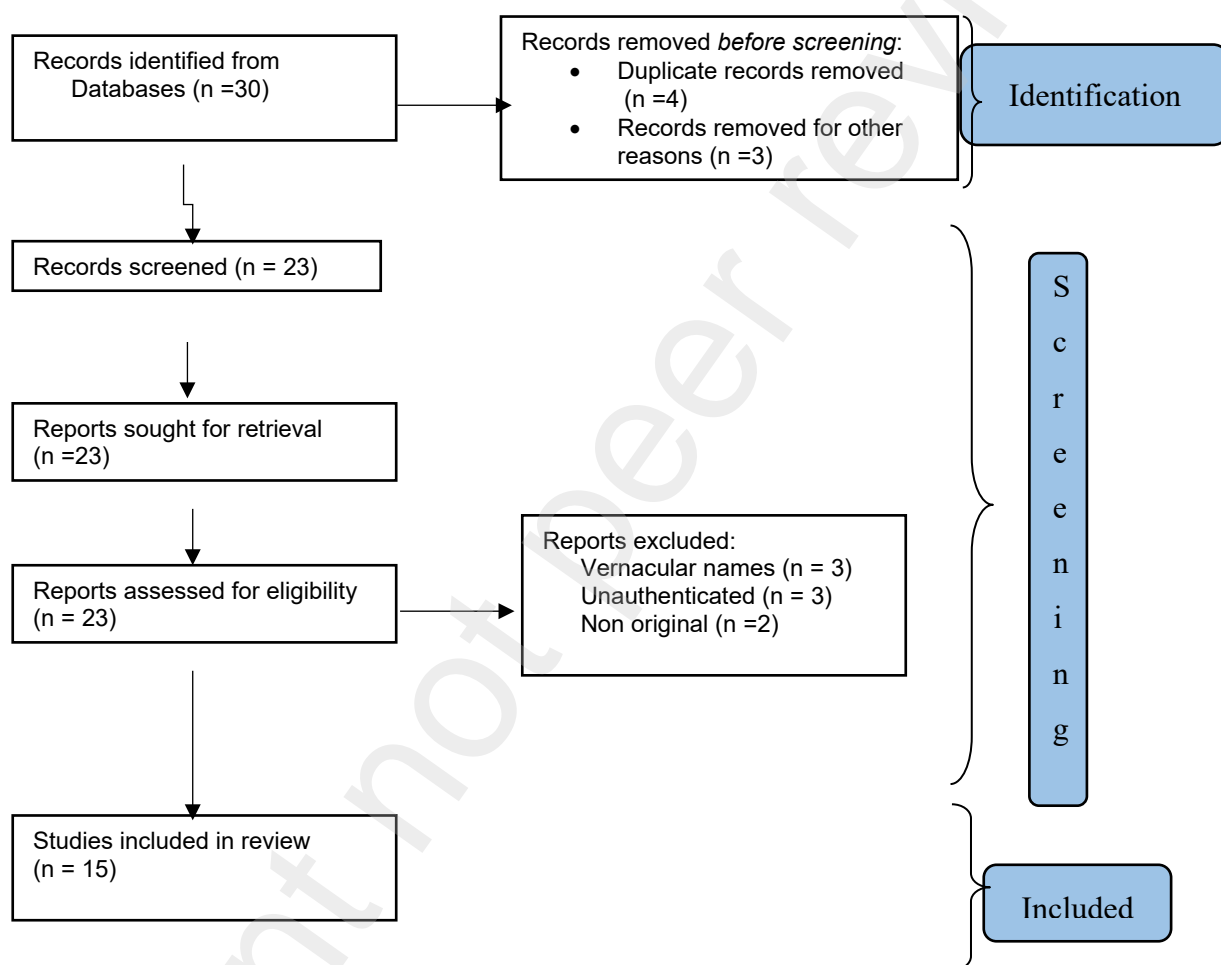


Figure 2: Literature screening flow chart

2.2.3 Scientific names of plants

Scientific names of medicinal plants from primary sources were corroborated and updated to accepted names as stated in The Plant List (41). After that, the medicinal plants were assigned their respective families according to the Angiosperm Phylogeny Website (42).

2.2.4 Use reports and medicinal use categories

Raw data was classified by year of publication, medicinal plant species and family, origin, habit, plant parts used, mode of preparation and administration, use report, and medicinal use category. Use report in this study referred to the local uses of medicinal plant species as reported in the primary reference.

2.2.5 Homogeneity

The index of Informant Consensus Factor (ICF) was calculated using the Eq. (1) described by Trotter and Logan (43):

$$ICF = \frac{Nur - Nt}{Nur - 1} \dots \dots \dots (1)$$

Where; *Nur* is the number of use reports in a particular category, and *Nt* is the number of species used as medicine in a particular use category.

The index of Informant Consensus Factor (ICF) values close to one indicate homogeneity in the use of medicinal plants among the informants, who in this case were the Abagusii people from different localities that use the same medicinal plant species for the same ailment. On the other hand, the index of Informant Consensus Factor (ICF) values close to zero suggests little or no exchange or sharing of knowledge among the informants (43).

3 Results and discussion

3.1 Diversity of medicinal plants

In the current study, two hundred and fifteen (215) plant species were used by the Abagusii people of Western Kenya. The plants belonged to sixty-nine families of which Asteraceae (26) had the most number of species, followed by Fabaceae (20), Lamiaceae (15), Solanaceae (13), Malvaceae (8), Euphorbiaceae (7), Poaceae (7), Papilionaceae (5), Moraceae and Phyllantaceae (5), Asparagaceae and Amaranthaceae (4), Apocynaceae, Rutaceae, Myrtaceae, Verbenaceae and Meliaceae (3), Anacardiaceae, Cactaceae, Ebenaceae, Oxalidaceae, Salicaceae, Amaryllidaceae, Arecaceae, Polygonaceae, Proteaceae, Apiaceae, Urticaceae, Rhamnaceae, Celastraceae, Crassulaceae, Bignoniaceae (2) and 35 families were represented by one medicinal plant species (Table 1).

Table 1. Plant families and the number of medicinal plants used by the Abagusii community of Kenya

Family	Plant species
Asteraceae	26
Fabaceae	20
Lamiaceae	15
Solanaceae	13
Malvaceae	8
Euphorbiaceae, Poaceae	7
Cucurbitaceae	6
Papilionaceae, Moraceae and Phyllanthaceae	5
Rosaceae and Asparagaceae	4
Amaranthaceae, Apocynaceae, Rutaceae, Myrtaceae, Meliaceae, and Verbenaceae	3
Anacardiaceae, Cactaceae, Ebenaceae, Oxalidaceae, Salicaceae, Amaryllidaceae,	2
Arecaceae, Polygonaceae, Proteaceae, Apiaceae, Urticaceae, Rhamnaceae, Celastraceae, Crassulaceae, Bignoniaceae	
Acanthaceae, Vitaceae, Agaricaceae, Zygophyllaceae, Balanitaceae, Dryopteridaceae, Basellaceae, Primuaceae, Colchicaceae, Passifloraceae, Piperaceae, Theaceae, Cannabaceae, Zingiberaceae, Convolvulaceae, Cupressaceae, Brassicaceae, Cyperaceae, Dioscoreaceae, Chrysobalanaceae, Combretaceae, Lauraceae, Canellaceae, Asphodelaceae, Campanulaceae, Cannabiceae, Capparidaceae, Caricaceae, Commelinaceae, Musaceae, Peraceae, Ranunculaceae, Hypericaceae, Loranthaceae and Melianthaceae	1

The plant diversity results recorded in this study corroborate Zhou *et al.* (44), who described Asteraceae, Fabaceae, Lamiaceae, Malvaceae, Euphorbiaceae, and Poaceae as the largest families of the vascular flora of Kenya. Therefore, there was a higher likelihood of many plant species of medicinal significance belonging to the larger families. However, other families with more than five medicinal plant species, including Solanaceae, Cucurbitaceae, Papilionaceae, Moraceae, and Phyllanthaceae, have also been described as families with medicinal plant species that are used by other communities in Kenya (45–47).

The recorded plant species in the current study were mostly herbs (80), followed by shrubs or trees (39), shrubs or trees (29), herb or shrubs (9), woody annuals (2), fern and sedge (1), respectively (Figure 3). Nineteen (19) plant species were not identified with any listed growth form (Figure 3). Of the 215 plant species, 68 % were indigenous, 24% exotic, and 8% were not classified.

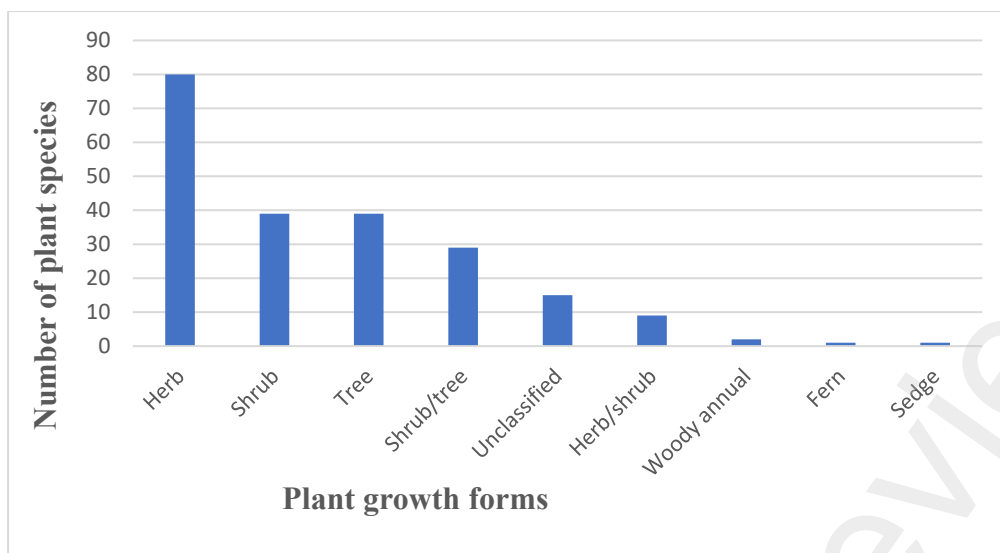


Figure 3: Growth form of plant species used by the Abagusii community

3.2 Medicinal plant use reports

Of the two hundred and fifteen medicinal plant species recorded in the current study, twenty of them had ten or more use reports (Figure 4 and Table 2). *Urtica massaica* had the highest number of use reports (30), followed by *Senna didymobotrya* (29), *Carissa edulis* and *Aloe secundiflora* (20), *Erythrina abyssinica* and *Solanum incanum* (18), *Toddalia asiatica* and *Bidens pilosa* (17), *Citrus aurantium* (16), *Warburgia ugandensis* and *Croton macrostachyus* (14), *Persea americana*, *Solanum aculeastrum* and *Capsicum frutescens* (12), *Coffea arabica* (11), *Eucalyptus globulus*, *Ocimum lamiifolium*, *Daucus carota*, *Carica papaya* and *Rotheca myricoides* (10), respectively.

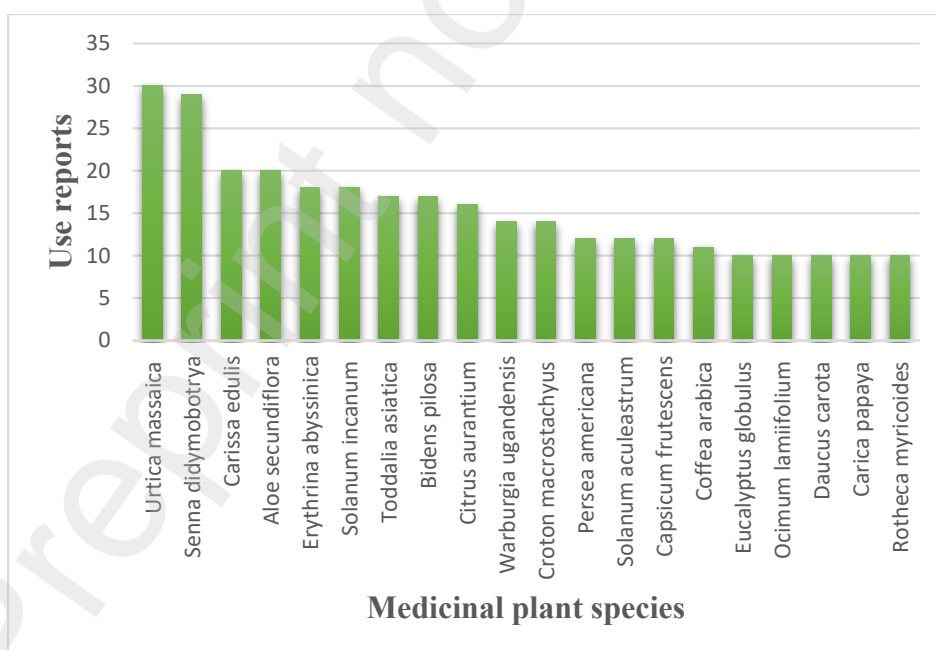


Figure 4: Twenty medicinal plant species which had ≥ 10 use reports.

The high number of medicinal plant use reports in our present study has also been demonstrated by other researchers in different communities (46–49).

3.3 Parts of medicinal plants used by the Abagusii people of Western Kenya

Twenty-one (21) different plant parts were used to prepare medicines by the Abagusii people of Western Kenya. The parts were broadly classified as unorganized (4.6%) and organized (95.4%). The former constituted plant parts with no cellular structures included juice, latex, seed oil, and gum. On the other hand, drugs that consisted of cellular organization, in the form of anatomical features of plants, were leaves, roots, whole plants, stem bark, peels, stems, seeds, flowers, root barks, shoots, woods, bulbs, root tubers, rhizomes, twigs and maize cobs (Figure 5).

The leaves were the most commonly cited plant parts used by the Abagusii people to treat different categories of diseases, yielding 224 use reports (Figure 5). Similarly, other researchers have demonstrated that leaves are preferred in traditional medicine because of their role in photosynthesis and the related pathways, which are responsible for the synthesis of secondary metabolites like alkaloids and phenolics, with pharmacologic significance (46,50–53). Additionally, the high frequency of leaves in plants and availability in large quantities compared to other plant parts contributes to their high preference.

The second highly used plant parts by the Abagusii people were the root, with one hundred and twenty-two (122) use reports, which was about half the leaves' use frequency (Figure 5). Some studies elsewhere have indicated high use of roots (47). Nevertheless, there is a great similarity of chemical composition between the leaves and roots, therefore, appealing to use leaves as alternatives renewable plant parts such as leaves, young stems, and fruits in place of bark and underground parts like root, rhizome for sustainable use of medicinal plants (54).

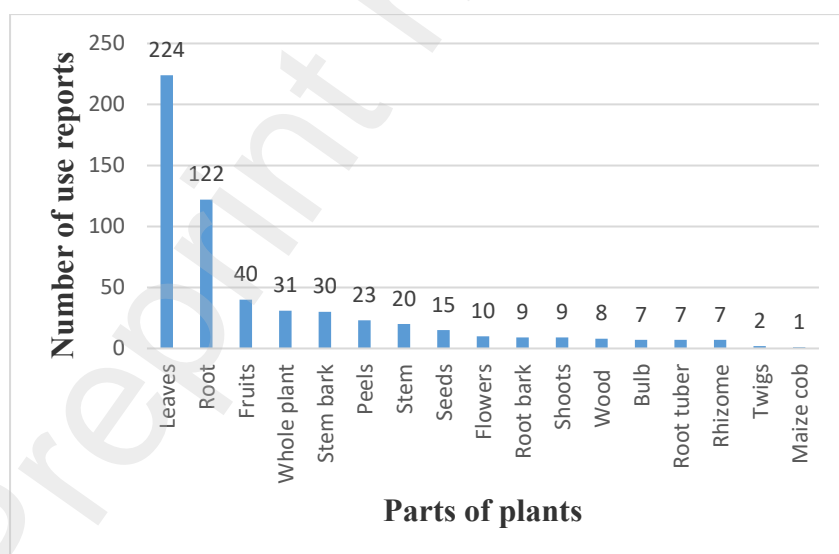


Figure 5: Parts of medicinal plants used by the Abagusii people of Western Kenya.

3.4 Preparation and administration of medicinal plants used by the Abagusii people

The current study revealed different methods to prepare traditional medicines by the Abagusii people (Table 2). The methods identified were: decoction, infusion, concoction, pounding, roasting, steaming, chewing, and poultices. The decoction was the most common preparation method with 218 use reports, followed by infusion (98) and concoction (82). Our findings are consistent with those of other researchers, who have shown that decoctions, concoctions, and infusions dominate other methods in different cultures because they are easy to prepare (6,55). The addition of honey, sugar, salt, or milk to the decoctions, infusions, and concoctions was noted and can be attributed to taste improvement, as demonstrated among the Maasai people of Kenya (47). Macerates, juices, pastes, and eating without preparation were the least common preparation methods used by the Abagusii people.

The routes of administration of traditional medicines by the Abagusii community that were predominant included oral, topical, inhalation, poultice, and dropping. The oral route was the most common with 514 use reports, followed by topical (152). Inhalation and drops were the least common methods (< 10 use reports). Various studies have demonstrated the supremacy of oral and topical routes of administration of herbal medicines (56–58). In addition, these routes may be preferred because of the associated advantages that include simplicity, convenience, safety, economic, and non-requirement for special sterility, knowledge, and special supplies (59,60).

3.5 Disease categories managed by the medicinal plants of the Abagusii people

Eight hundred and seventh (870) use reports of medicinal plants by the Abagusii people of Western Kenya were documented in this study. The use reports were classified into twenty (20) health disorder categories according to the international classification of Primary care classification system 2nd edition (ICDP-2) and the International classification of diseases version 11 (ICD-11) (20, 21). The study revealed that the Abagusii people mostly utilize medicinal plants to treat gastric/intestinal disorders, positing the highest number of use reports (228 use reports). The second most common medicinal plant use was for managing skin infections and disorders (131 use reports). Other health disorders managed by the medicinal plants of the Abagusii people with more than fifty (50) use reports were: musculoskeletal disorders and swelling/oedema (97 use reports), urinogenital infections (92 use reports), and respiratory diseases (76 use reports) (Table 2).

Table 2: A recap of the ethnomedicinal usage of medicinal plants by the Abagusii people of Western Kenya

Disease category	Plant species	Family	Ethno-medicinal use	Plant part used	Preparation method	Use report(s)	
Malaria	<i>Justicia betonica</i> L.	Acanthaceae	Malaria	Leaves, stem, and flowers	Decoction	1	
	<i>Achyranthes aspera</i> L.	Amaranthaceae	Malaria	Whole plant	Ash and infusion	1	
	<i>Carissa edulis</i> (Forssk.) Vahl	Apocynaceae	Malaria	Roots and Leaves	Decoction and ash	3	
	<i>Tabernaemontana stapfiana</i> Britten	Apocynaceae	Malaria	Leaves	Decoction	1	
	<i>Aloe secundiflora</i> Engl.	Xanthorrhoeaceae	Malaria	Leaves	Decoction	1	
	<i>Aspilia pluriseta</i> Schweinf. ex Schweinf.	Asteraceae	Malaria	Leaves	Decoction	1	
	<i>Baccharoides lasiopus</i> (O.Hoffm.) H.Rob.	Asteraceae	Malaria	Leaves	Decoction	1	
	<i>Microglossa pyrifolia</i> (Lam.) Kuntze	Asteraceae	Malaria	Leaves	Decoction	1	
	<i>Psiadia punctulata</i> (DC.) Vatke	Asteraceae	Malaria	Leaves and roots	Decoction	1	
	<i>Vernonia auriculifera</i> Hiern	Asteraceae	Malaria	Leaves	Infusion	1	
	<i>Warburgia ugandensis</i> Sprague	Canellaceae	Malaria	Stem bark and root	Decoction	3	
	<i>Croton macrostachyus</i> Hochst. ex Delile	Euphorbiaceae	Malaria	Roots and leaves	Decoction	1	
	<i>Euphorbia inaequilatera</i> Sond.	Euphorbiaceae	Malaria	Whole plant	Decoction	1	
	<i>Acacia abyssinica</i> Benth.	Leguminosae	Malaria	Roots and stem bark	Decoction and ash	1	
	<i>Acacia hockii</i> De Wild.	Leguminosae	Malaria	Roots and stem	Ash and decoction	1	
	<i>Acacia nilotica</i> (L.) Delile	Leguminosae	Malaria	Stem bark	Decoction	1	
	<i>Senna didymobotrya</i> (Fresen.) H.S.Irwin & Barneby	Leguminosae	Malaria	Roots	concoction	3	
	<i>Senna septemtrionalis</i> (Viv.) H.S.Irwin & Barneby	Leguminosae	Malaria	Root	Decoction	1	
	<i>Rothea myricoides</i> (Hochst.) Steane & Mabb.	Lamiaceae	Malaria	Roots and leaves	Decoction and ash	1	
	<i>Melia azedarach</i> L.	Meliaceae	Malaria	Leaves	Infusion	1	
	<i>Ficus sur</i> Forssk.	Moraceae	Malaria	Stem bark	Decoction	1	
	<i>Tephrosia nana</i> Schweinf.	Leguminosae	Malaria	Root bark and root	Decoction	2	
	<i>Bambusa vulgaris</i> Schrad.	Poaceae	Malaria	Leaves	Infusion	1	
	<i>Rumex usambarensis</i> (Dammer) Dammer	Polygonaceae	Malaria	Whole plant	Ash	1	
	<i>Faurea saligna</i> Harv.	Proteaceae	Malaria	Root	Decoction	1	
	<i>Rhamnus prinoides</i> L'Hér.	Rhamnaceae	Malaria	Root bark	Decoction	3	
	<i>Rhamnus staddo</i> A.Rich.	Rhamnaceae	Malaria	Root bark	Decoction	1	
	<i>Spermacoce princeae</i> (K.Schum.) Verdc.	Rubiaceae	Malaria	Whole plant	Boiled in water	1	
	<i>Toddalia asiatica</i> (L.) Lam.	Rutaceae	Malaria	Roots	Decoction and Ash	1	
	<i>Solanum mauense</i> Bitter.	Solanaceae	Malaria	Root	Decoction	1	
	<i>Urtica massaica</i> Mildbr.	Urticaceae	Malaria	Leaves	Decoction	1	
	Intestinal/gastric disorders	<i>Agaricus campestris</i> L. ex Fries	Agaricaceae	Emetic	Whole plant	Decoction	1
		<i>Achyranthes aspera</i> L.	Amaranthaceae	Stomach problems	Whole plant	Ash	2
<i>Allium cepa</i> L.		Amaryllidaceae	Intestinal worms, digestive problems	Bulb	Salad	2	
<i>Mangifera indica</i> L.		Anacardiaceae	Constipation	Leaves	Decoction	1	
<i>Daucus carota</i> L.		Apiaceae	Stomach ache and acidity	Seeds	Infusion	2	
<i>Petroselinum crispum</i> (Mill.) Fuss		Apiaceae	Bloating	Fruit	Infusion	1	

<i>Carissa edulis</i> (Forssk.) Vahl	Apocynaceae	Lower abdominal pains, indigestion, typhoid	Root	Decoction	3
<i>Agave americana</i> L.	Asparagaceae	Digestive disorders, jaundice, hepatitis	Root and leaves	Decoction	1
<i>Aloe secundiflora</i> Engl.	Xanthorrhoeaceae	Stomach and duodenal ulcers, constipation, typhoid	Leaves	juice	6
<i>Ageratum conyzoides</i> L.	Asteraceae	Stomach ache and Bowel complaints	Leaves	Infusion	2
<i>Bidens grantii</i> (Oliv.) Sherff	Asteraceae	Stomach trouble	Leaves	Infusion	1
<i>Bidens pilosa</i> L. (Asteraceae)	Asteraceae	Stomach ache, removal of intestinal worms, colic, constipation, stop diarrhea	Roots, leaves, and flowers	Decoction	8
<i>Centaurea benedicta</i> (L.) L.	Asteraceae	Digestive atony, bloating, vomiting	Leaves	Infusion or decoction	3
<i>Gutenbergia cordifolia</i> var. <i>marginata</i> (O.Hoffm.) C.Jeffrey	Asteraceae	Stomach infections	Leaves	Decoction	1
<i>Helianthus annuus</i> L.	Asteraceae	Liver afflictions	Seeds	Oil	1
<i>Psidia punctulata</i> (DC.) Vatke	Asteraceae	Abdominal pain	Roots and Leaves	Decoction	1
<i>Solanecio mannii</i> (Hook.f.) C.Jeffrey	Asteraceae	Stomach ache	Leaves	Infusion	1
<i>Spilanthes mauritiana</i> (A.Rich. ex Pers.) D.C.	Asteraceae	Diarrhoea	Leaves	Decoction	1
<i>Taraxacum campyloides</i> G.E.Haglund	Asteraceae	Constipation	Rhizome and roots	Decoction	1
<i>Tithonia diversifolia</i> (Hemsl.) A.Gray	Asteraceae	Stomach pain and stomach ache	Leaves	Decoction	3
<i>Basella alba</i> L.	Basellaceae	Constipation	Leaves	Decoction	1
<i>Brassica oleracea</i> L.	Brassicaceae	Gastro-duodenal ulcers	Leaves	Decoction	1
<i>Opuntia ficus-indica</i> (L.) Mill.	Cactaceae	Diarrhoea	Fruits	Infusion	1
<i>Warburgia ugandensis</i> Sprague	Canellaceae	Stomach infections, typhoid	Stem bark	Decoction	2
<i>Gynandropis gynandra</i> (L.) Briq.	Capparidaceae	Stomach problems	Leaves	Decoction	1
<i>Carica papaya</i> L.	Caricaceae	Constipation, stomach upset, expel worms	Leaves and Fruits	Infusion	3
<i>Parinari curatellifolia</i> Planch. ex Benth.	Chrysobalanaceae	Stomach ache and bowel complaints	Leaves	Decoction	2
<i>Gloriosa superba</i> L.	Colchicaceae	Indigestion	Root	Decoction	1
<i>Combretum molle</i> R.Br. ex G.Don	Combretaceae	Stomach ache	Leaves	Decoction	1
<i>Ipomoea batatas</i> (L.)	Convolvulaceae	Anthelmintic	Leaves	Decoction	1
<i>Cucumis dipsaceus</i> Ehrenb. ex Spach	Cucurbitaceae	Constipation	Roots and fruits	Decoction	1
<i>Cucumis prophetarum</i> L.	Cucurbitaceae	Indigestion	Leaves and stems	Infusion	1
<i>Cucurbita maxima</i> Duchesne	Cucurbitaceae	Anthelmintic	Fresh fruit	Decoction	1
<i>Lagenaria siceraria</i> (Molina) Standl.	Cucurbitaceae	Purgative in young children	Roots and fruits	Ash	1
<i>Dioscorea minutiflora</i> Engl.	Dioscoreaceae	Anthelmintic in children	Tubers	Decoction or roast	1
<i>Dryopteris filix-mas</i> (L.) Schott	Dryopteridaceae	Anthelmintic	Rhizome and Roots	Powder	1
<i>Euclea divinorum</i> Hiern	Ebenaceae	Constipation	Root	Decoction	1
<i>Croton macrostachyus</i> Hochst. ex Delile	Euphorbiaceae	Diarrhoea, Dysentery, typhoid	Leaves	Infusion	5

<i>Euphorbia hirta</i> L.	Euphorbiaceae	Diarrhoea, Dysentery	Dry leaves	Powder	2
<i>Ricinus communis</i> L.	Euphorbiaceae	Constipation	Seed	Oil	2
<i>Acacia abyssinica</i> Benth. Spp. <i>calophylla</i> Brenan	Leguminosae	Digestive problems	Gum	Concoction with honey	1
<i>Acacia gerrardii</i> Benth.	Fabaceae	Stomach infections	Stem bark	Decoction	1
	Leguminosae				
<i>Acacia hockii</i> De Wild.	Fabaceae	Diarrhoea	Roots and stem bark	Decoction and ash	1
	Leguminosae				
<i>Acacia nilotica</i> (L.) Delile	Fabaceae	Stomach infections	Stem bark	Decoction	2
	Leguminosae				
<i>Acacia sieberiana</i> D.C.	Fabaceae	Digestive problems, Stomach problems	Gum	Concoction with honey	2
	Leguminosae				
<i>Albizia gummifera</i> (J.F.Gmel.) C.A.Sm.	Fabaceae	Digestive problems	Gum	Concoction with honey	2
	Leguminosae				
<i>Erythrina abyssinica</i> DC.	Fabaceae	Anthelmintic	Stem bark, root	Decoction	2
<i>Kotschyia africana</i> Endl.	Fabaceae	Stomach ache	Root	Decoction	1
	Leguminosae				
<i>Mimosa pudica</i> (L.)	Fabaceae	Dysentery, Diarrhoea	Whole plant	Decoction	2
	Leguminosae				
<i>Senna didymobotrya</i> (Fresen.) H.S.Irwin & Barneby	Fabaceae	Emetic, Stomach problems/infections, constipation, anthelmintic	Leaves and roots	Decoction	8
	Leguminosae				
<i>Senna occidentalis</i> (L.) Link	Fabaceae	Constipation	Seeds	Powder	1
	Leguminosae				
<i>Senna septemtrionalis</i> (Viv.) H.S.Irwin & Barneby	Fabaceae	Diarrhoea, Stomach problems/Constipation	Leaves and Roots	Powder	4
	Leguminosae				
<i>Sesbania sesban</i> (L.) Merr.	Fabaceae	stomach ache	Leaves	Infusion	1
	Leguminosae				
<i>Ajuga remota</i> Benth.	Lamiaceae	Constipation, amoeba	Leaves and stem	Decoction	3
<i>Rothea myricoides</i> (Hochst)R.Br.& Vatke	Lamiaceae	Stomach infections, typhoid, amoeba, stomach ache, worms	Roots and leaves	Decoction	5
<i>Leonotis nepetifolia</i> (L.) R.Br.	Lamiaceae	Stomach infections, stomach ache	Leaves	Infusion	2
<i>Leucas calostachys</i> Oliv.	Lamiaceae	Amoeba	Leaves	N/A	1
<i>Mentha piperata</i> L.	Lamiaceae	Dyspepsia, intestinal gas, digestive colic, spasms, gastric atony, hepatitis	Leaves	Infusion	6
<i>Ocimum basilicum</i> L.	Lamiaceae	Stomach pain, constipation	Leaves	Decoction	2
<i>Ocimum gratissimum</i> L.	Lamiaceae	Abdominal pain, stomach problems	Leaves	Decoction	2
<i>Ocimum kilimandscharicum</i> Gürke	Lamiaceae	Stomach problems	Leaves	Decoction	1
<i>Ocimum lamiifolium</i> Hochst. ex Benth.	Lamiaceae	Ulcer, stomach ache, abdominal pain	Leaves	Decoction	5
<i>Orthosiphon hildebrandtii</i> Vatke	Lamiaceae	Stomach infections/problems	Leaves	Decoction	3

<i>Plectranthus barbatus</i> Andrews	Lamiaceae	Stomach ache, worms, diarrhoea	Leaves	Infusion	5
<i>Rosmarinus officinalis</i> L.	Lamiaceae	Carminative	Leaves	Decoction	1
<i>Persea americana</i> Mill.	Lauraceae	Diarrhea, Dysentery	Seed	Decoction	3
<i>Abutilon abutiloides</i> (Jacq.) Garcke ex Hochr.	Malvaceae	Diarrhoea, stomach cramps	Dry leaves and roots	Powder to make infusion, Decoction	2
<i>Gossypium barbadense</i> L.	Malvaceae	Constipation in children	Leaves	Decoction	1
<i>Hibiscus rosa-sinensis</i> L.	Malvaceae	Intestinal pain	Seeds	Infusion	1
<i>Ekebergia capense</i> Sparrm.	Meliaceae	Anthelmintic	Bark	Decoction	1
<i>Melia azedarach</i> L.	Meliaceae	Typhoid	Leaves	Infusion	1
<i>Ficus natalensis</i> Hochst.	Moraceae	Stomach problems	Leaves	Ash	1
<i>Ficus sansibarica</i> Warb.	Moraceae	Stomach problems	Leaves	Ash	1
<i>Ficus sur</i> Forssk.	Moraceae	Stomach problems	Leaves	Ash	2
<i>Eucalyptus globulus</i> Labill.	Myrtaceae	Colitis, intestinal problems, diarrhoea	Wood	Ash infused in water	5
<i>Psidium guajava</i> L.	Myrtaceae	Diarrhoea, Dysentery	Leaves	Decoction	2
<i>Oxalis corniculata</i> L.	Oxalidaceae	Stomach ache, diarrhoea	Leaves	Infusion	3
<i>Oxalis latifolia</i> Kunth	Oxalidaceae	Stomach ache, diarrhoea, inflamed rectum	Leaves	Infusion	3
<i>Indigofera arrecta</i> A.Rich.	Papilionaceae	Stomach problems	Root	Infusion	2
<i>Tephrosia nana</i> Schweinf.	Leguminosae				
	Papilionaceae	Indigestion	Root bark	Decoction	1
	Leguminosae				
<i>Bischofia javanica</i> Blume	Phyllanthaceae	Stomach infections	Roots	Decoction	1
<i>Bridelia micrantha</i> (Hochst.) Baill.	Phyllanthaceae	Constipation	Root	Decoction	1
<i>Sorghum bicolor</i> (L.) Moench	Poaceae	Diarrhoea	Seeds	Flour	1
<i>Maesa lanceolata</i> Forssk.	Primulaceae	Diarrhoea, Dysentery	Leaves	Decoction	4
<i>Faurea rochetiana</i> (A.Rich.) Chiov. ex Pic.Serm.	Proteaceae	Intestinal worms	Rhizome and root	Powder	1
<i>Clematis brachiata</i> Thunb.	Ranunculaceae	Dysentery, anthelmintic	Dry bark and young twigs	Powder decoction	3
<i>Rhamnus prinoides</i> L. 'Hérit	Rhamnaceae	Indigestion	Root	Decoction	1
<i>Malus domestica</i> Borkh.	Rosaceae		Fruits	Grated and eaten	1
<i>Prunus africana</i> (Hook.f.) Kalkman	Rosaceae	Constipation	Stem bark	Powder infused in water	2
<i>Coffea arabica</i> L.	Rubiaceae	Stomach ache	Fruit peel	Concocted with honey	1
<i>Rubia cordifolia</i> L.	Rubiaceae	Stomach ache and diarrhoea	Roots, Leaves, and Stems	Decoction	3
<i>Rytigynia acuminatissima</i> (K.Schum.) Robyns	Rubiaceae	Intestinal worms, stomach ache	Leaves, roots	Infusion, Decoction	2
<i>Vangueria apiculata</i> K.Schum.	Rubiaceae	Intestinal worms, stomach ache	Leaves, roots	Infusion, Decoction	2
<i>Citrus aurantium</i> L.	Rutaceae	Indigestion, stomach spasms, belching, digestive colic	Dry peel	Decoction sweetened with honey	6
<i>Clausena anisata</i> (Willd.) Hook.f. ex Benth.	Rutaceae	Stomach ache	Root	Decoction	1

	<i>Toddalia asiatica</i> (L.) Lam.	Rutaceae	Stomach ache, typhoid	Roots and Leaves	Decoction	3
	<i>Capsicum frutescens</i> L.	Solanaceae	Bloating and nausea	Fruits	Decoction	3
	<i>Datura arborea</i> L.	Solanaceae	stomach ache	Leaves and flowers	Decoction	1
	<i>Datura stramonium</i> L.	Solanaceae	Colic pain	Leaves	Powder	1
	<i>Solanum aculeastrum</i> Dunal	Solanaceae	Diarrhea, vomiting, abdominal pains	Root	Decoction	6
	<i>Solanum renschii</i> Vatke	Solanaceae	Stomach infections	Roots	Decoction	1
	<i>Solanum incanum</i> L.	Solanaceae	Diarrhea, vomiting, abdominal pains	Root	Root infusion	4
	<i>Camellia sinensis</i> (L.) Kuntze	Theaceae	Diarrhoea, colic, indigestion, stomach upset, tonic	Leaves	Infusion	4
	<i>Urtica massaica</i> Mildbr.	Urticaceae	Purgative for children, intestinal parasites, stomach ache, gastroenteritis	Roots, Leaves, and stems	Decoction	6
	<i>Rhoicissus tridentata</i> (L.f.) Wild & R.B.Drumm	Vitaceae	Stomach infections	Leaves	Decoction	1
	<i>Zingiber officinale</i> Roscoe	Zingiberaceae	Bloating, Flatulence	Rhizome	Decoction	3
Skin infections and disorders	<i>Achyranthes aspera</i> L.	Amaranthaceae	Boils	Leaves	Paste and decoction	1
	<i>Amaranthus</i> spp.	Amaranthaceae	Boils	Leaves	Paste and decoction	1
	<i>Cyathula polycephala</i> Baker	Amaranthaceae	Hemostatic	Leaves	Infusion for poultice	1
	<i>Allium cepa</i> L.	Amaryllidaceae	Wound, Abscesses, and Furuncles	Bulb	Compressions	3
	<i>Mangifera indica</i> L.	Anacardiaceae	Ringworm, burns, and scalds	Wood	Ash	3
	<i>Rhus natalensis</i> Meikle	Anacardiaceae	Wound	Stem and stem bark	Decoction	1
	<i>Daucus carota</i> L.	Apiaceae	Wounds, Burns, Eczema, Abscesses, and Acne	Root tubers	Cooked and mashed	5
	<i>Phoenix reclinata</i> Jacq. (Arecaceae)	Arecaceae	Skin diseases	Fresh fruits	Eaten raw, grated, or sliced as salad	1
	<i>Asparagus africanus</i> Lam.	Asparagaceae	Boils	Leaves	Paste	2
	<i>Aloe secundiflora</i> Engl.	Asphodelaceae	Skin wounds, Burns, Fungal infections, skin diseases	Leaves	Juice and paste	4
	<i>Ageratum conyzoides</i> L.	Asteraceae	Wound	Leaves	Infusion	1
	<i>Bidens pilosa</i> L.	Asteraceae	Stop bleeding in wounds	Flowers and Leaves	Paste	2
	<i>Centaurea benedicta</i> (L.)	Asteraceae	Cleanse wounds and Skin sores	leaves, stems, or flowers	Infusion	2
	<i>Crassocephalum vitellinum</i> (Benth.) S.Moore	Asteraceae	Stop wound bleeding, and Skin disorder	Flowers	Decoction and Paste	2
	<i>Galinsoga parviflora</i> Cav.	Asteraceae	Stop wound bleeding, and Skin sores	Leaves	Decoction and Paste	3
	<i>Gutenbergia cordifolia</i> var. <i>marginata</i> (O.Hoffm.) C.Jeffrey	Asteraceae	Skin infections, Ringworms, Hemostatic, and skin rashes	Leaves	Poultice, decoction for bath	5
	<i>Helianthus annuus</i> L.	Asteraceae	Eczema, Furuncles	Seeds	Oil	2

<i>Psiadia punctulata</i> (DC.) Vatke	Asteraceae	Vertigo	Fresh leaves/root	Decoction	1
<i>Tagetes minuta</i> L.	Asteraceae	Wound	Leaves	Paste	1
<i>Tanacetum cinerariifolium</i> (Trevir.) Sch. Bip.	Asteraceae	Scabies	Dry and ground flowers	Decoction for body wash	1
<i>Brassica oleracea</i> L.	Brassicaceae	Wounds, Torpid ulcers, Acne, Furuncles, Eczema	Raw or cooked leaves	Infusion and paste	5
<i>Vernonia auriculifera</i> Hiern	Asteraceae	Hemostatic	Leaves	Infusion	1
<i>Pachycereus pecten-aboriginum</i> (Engelm. ex S.Watson) Britton & Rose	Cactaceae	Wound	Leaves	Infusion	2
<i>Lobelia gibberoa</i> Hemst.	Campanulaceae	Skin malady	Fresh leaves	Decoction for body wash	1
<i>Carica papaya</i> L.	Caricaceae	Ringworm and Rashes in children	Fresh fruit	Rubbed on the skin, Skin wash	2
<i>Parinari curatellifolia</i> Planch. ex Benth.	Chrysobalanaceae	Wound	Leaves	Infusion	1
<i>Cucumis dipsaceus</i> Ehrenb. ex Spach	Cucurbitaceae	wound	Roots and Leaves	Paste	1
<i>Croton macrostachyus</i> Hochst. ex Delile	Euphorbiaceae	Hemostatic and Bleeding	Leaves	Infusion and poultice	2
<i>Euphorbia tirucalli</i> L.	Euphorbiaceae	Wound	Latex	Paste	1
<i>Manihot esculenta</i> Crantz	Euphorbiaceae	Boils, Abscesses, and sores	Root tubers	Paste	3
<i>Acacia hockii</i> De Wild.	Fabaceae	Fungal infection	Root and stem bark	Decoction and ash	1
	Leguminosae				
<i>Caesalpinia decapetala</i> (Roth) Alston	Fabaceae	Skin infections	Roots	Decoction	1
	Leguminosae				
<i>Senna didymobotrya</i> (Fresen.) H.S.Irwin & Barneby	Fabaceae	Measles, Ringworms, Skin infections, skin disease, chickenpox, hemostatic, athlete's foot, and skin swellings	Whole plant	Ash /paste for Poultice, Decoction for body wash	8
	Leguminosae				
<i>Senna occidentalis</i> (L.) Link	Fabaceae	Bruises, Furuncles	Seeds	Paste of roasted ground seed	2
	Leguminosae				
<i>Senna septemtrionalis</i> (Viv.) H.S.Irwin & Barneby	Fabaceae	Ringworm, measles	The whole plant, root	Ash mixed with ghee/ Paste, Decoction for body wash	2
	Leguminosae				
<i>Ocimum kilimandscharicum</i> Gürke	Lamiaceae	Measles	Leaves	Infusion of pounded leaves	1
<i>Ocimum lamiiifolium</i> Hochst. ex Benth.	Lamiaceae	Wound	Leaves	Pressed sap	1
<i>Orthosiphon hildebrandtii</i> Vatke	Lamiaceae	Skin infections	Leaves	Paste for Poultice	1
<i>Plectranthus barbatus</i> Andrews	Lamiaceae	Measles	Fresh leaves	Infusion	2
<i>Gossypium barbadense</i> L.	Malvaceae	Wounds	Wool	Padding and Bandage	1
<i>Sida tenuicarpa</i> Vollesen	Malvaceae	Wound	Dry leaves	Paste	2
<i>Triumfetta rhomboidea</i> Jacq.	Malvaceae	Wounds, wounds from burns, circumcision wound	Leaves and roots	Paste	3
<i>Ficus exasperata</i> Vahl	Moraceae	Skin diseases	Leaves	Ash and Decoction	2
<i>Ficus natalensis</i> Hochst.	Moraceae	Skin diseases	Leaves	Ash	1
<i>Ficus sansibarica</i> Warb.	Moraceae	Skin diseases	Leaves	Ash and Decoction	2

	<i>Oxalis corniculata</i> L.	Oxalidaceae	Ringworms, Skin infections, Ringworms	Leaves	Infusion and Paste	3
	<i>Oxalis latifolia</i> Kunth	Oxalidaceae	Ringworms	Leaves	Infusion	1
	<i>Cajanus cajan</i> (L.) Millsp.	Papilionaceae	Wounds, Skin diseases, and skin ulcers	Raw leaves	Decoction	3
	<i>Crotalaria lachnocarpoides</i> Engl.	Papilionaceae	Wounds, skin diseases, and skin ulcers	Leaves mixed with barks	Decoction	3
	<i>Eleusine coracana</i> (L.) Gaertn.	Papilionaceae	Wounds, skin diseases, and skin ulcers	Leaves mixed with barks	Decoction	3
	<i>Oxygonum sinuatum</i> (Hochst. & Steud ex Meisn.) Dammer	Leguminosae	Itchy rashes	Seeds	Four made into a paste	1
	<i>Rumex usambarensis</i> (Dammer) Dammer	Polygonaceae	Boils	Leaves	Macerated to make a paste	1
	<i>Rubia cordifolia</i> L.	Polygonaceae	Wound, Scabies	Whole plant	Decoction	2
	<i>Solanum indicum</i> L.	Rubiaceae	Skin infections, skin rashes	Leaf	Poultice, Decoction	2
	<i>Solanum mauense</i> Bitter.	Solanaceae	boils, wounds	Leaves	Ground into paste, Poultice	2
	<i>Solanum mauritanium</i> Scop.	Solanaceae	Measles	Whole plant	Decoction	1
	<i>Solanum nigrum</i> L.	Solanaceae	Ringworms, Scabies, herpes, itching vagina, itching anus	Leaves and Stems	Juice mixed with lotion	7
	<i>Urtica massaica</i> Mildbr.	Solanaceae	Scabies, Ringworms, itching vagina, itching anus	Leaves, stems	Decoction	6
	<i>Lippia javanica</i> (Burm.f.) Spreng.	Urticaceae	Skin infections, boils, Eczema, eruptions, acne, hair loss	Fresh whole plant	Juice	6
	<i>Rhoicissus tridentata</i> (L.f.) Wild & R.B.Drumm.	Verbenaceae	Antiseptic	Root	Decoction	1
	<i>Achyranthes aspera</i> L.	Vitaceae	Antiseptic	Stem	Decoction	1
Urinogenital infections and disorders	<i>Rhus natalensis</i> Meikle	Amaranthaceae	Syphilis	Whole plant	Ash	1
	<i>Daucus carota</i> L.	Anacardiaceae	Urinary tract infections, diuresis	Stem and stem bark	Decoction	1
	<i>Petroselinum crispum</i> (Mill.) Fuss	Apiaceae	Induction of menstruation	Seeds	Infusion	1
	<i>Carissa edulis</i> (Forssk.) Vahl	Apiaceae	Amenorrhoea, Dysmenorrhoea, Induce diuresis	Ripe fruit	Infusion	3
	<i>Rauwolfia caffra</i> Sond.	Apocynaceae	Gonorrhoea, pelvic pain, Urinary tract infections	Root	Decoction and ash	3
	<i>Tabernaemontana stapfiana</i> Britten	Apocynaceae	Gonorrhoea, Sexually Transmitted diseases	Root	Decoction	2
	<i>Serenoa repens</i> (W.Bartram) Small	Apocynaceae	Gonorrhoea	Root	Decoction	1
	<i>Asparagus africanus</i> Lam.	Arecaceae	Cystitis, Enlargement of prostate glands, Senile impotence	Ripe fruits	Powder decoction	3
	<i>Aloe secundiflora</i> Engl.	Asparagaceae	Urinary tract infections	Roots	Decoction	1
		Asphodelaceae	Increase menstrual flow	Leaves	Juice	1

<i>Bidens pilosa</i> L.	Asteraceae	Gonorrhoea	Roots and leaves	Decoction	1
<i>Crassocephalum vitellinum</i> (Benth.) S.Moore	Asteraceae	Gonorrhoea	Leaves	Decoction	1
<i>Psidia punctulata</i> (DC.) Vatke	Asteraceae	Aphrodisiac	Leaves and roots	Decoction	1
<i>Spilanthes mauritiana</i> (A.Rich. ex Pers.) D.C.	Asteraceae	Excessive bleeding during menstruation	Leaves	Decoction	1
<i>Opuntia ficus-indica</i> (L.) Mill.	Cactaceae	Urine production, Cystitis	Fruits	Eaten raw	2
<i>Gynandropis gynandra</i> (L.) Briq.	Capparidaceae	Pelvis/ womb adhesions	Roots and Leaves	Decoction	1
<i>Carica papaya</i> L.	Caricaceae	Sexually Transmitted diseases	Leaves	Infusion	1
<i>Cassine buchananii</i> Loes.	Celastraceae	Urinary tract infections	Stem bark	Decoction	1
<i>Gloriosa superba</i> L.	Colchicaceae	Aphrodisiac	Root	Infusion	1
<i>Acacia abyssinica</i> Benth.	Fabaceae	Gonorrhoea	Roots and stem bark	Decoction and ash	1
<i>Caesalpinia decapetala</i> (Roth) Alston	Fabaceae	Urinary tract infections, gonorrhea,	Root	Decoction	2
<i>Erythrina abyssinica</i> DC.	Fabaceae	Syphilis, Gonorrhoea, Urinary tract infections	Stem bark, root	Decoction	6
<i>Mimosa pudica</i> (L.)	Fabaceae	Sexually transmitted diseases	Whole plant	Decoction	2
<i>Phaseolus vulgaris</i> L.	Fabaceae	Kidney stones, Premenstrual retention	Green pods, Dry pods	Decoction	3
<i>Senna didymobotrya</i> (Fresen.) H.S.Irwin & Barneby	Fabaceae	Gonorrhoea	Roots, Leaves, and stems	Decoction	2
<i>Senna occidentalis</i> (L.) Link	Fabaceae	Dysmenorrhoea, Prostate disorders, Kidney problems	Roots and Seeds	Decoction	3
<i>Ajuga remota</i> Benth.	Lamiaceae	Excess menstrual bleeding	Leaves and stems	Decoction	1
<i>Rotheca myricoides</i> (Hochst)R.Br.& Vatke	Lamiaceae	Urinary tract infections, gonorrhea	Roots and leaves	Decoction and ash	2
<i>Hibiscus rosa-sinensis</i> L.	Malvaceae	Bile or kidney colic, Dysmenorrhoea	Leaves	Infusion	2
<i>Sida cordifolia</i> (L.)	Malvaceae	Stimulate menstruation	Bark	Chewed	1
<i>Melia azedarach</i> L.	Meliaceae	Sexually transmitted diseases	Leaves	Infusion	1
<i>Oxalis corniculata</i> L.	Oxalidaceae	Painful periods	Leaves	Infusion	1
<i>Elymus repens</i> (L.) Gould	Poaceae	Cystitis, Genital tract diseases	Rhizome	Infusion	2
<i>Faurea saligna</i> Harv.	Proteaceae	Venereal diseases	Root	Decoction	1
<i>Clematis brachiata</i> Thunb.	Ranunculaceae	Aphrodisiac	Leaves	Chewed	1
<i>Rhamnus prinoides</i> L'Hér.	Rhamnaceae	Gonorrhoea	Root	Decoction	1
<i>Rhamnus staddo</i> A.Rich.	Rhamnaceae	Venereal diseases	Leave and roots	Decoction	1
<i>Malus domestica</i> Borkh.	Rosaceae	Kidney stones, Kidney inflammation, Diuretic	Fruits, Leaves, and flowers	Decoction	3
<i>Prunus africana</i> (Hook.f.) Kalkman	Rosaceae	Prostate gland problems	Stem bark	Infusion	2
<i>Coffea arabica</i> L.	Rubiaceae	Aphrodisiac	Green fruit	Green or roasted infusion	1
<i>Toddalia asiatica</i> (L.) Lam.	Rutaceae	Urinary tract infections, gonorrhea	Roots	Decoction	2
<i>Datura arborea</i> L.	Solanaceae	Gall bladder pain	Leaves and flowers	Infusion	1
<i>Solanum aculeastrum</i> Dunal	Solanaceae	Syphilis and gonorrhoea	Roots	Decoction	4

	<i>Solanum incanum</i> L.	Solanaceae	Syphilis, gonorrhoea	Root	Infusion or decoction	4
	<i>Solanum indicum</i> L.	Solanaceae	Gonorrhoea	Roots, leaves	Decoction	1
	<i>Urtica massaica</i> Mildbr.	Urticaceae	Kidney stones, Urinary sand, and gonorrhea	Whole plant	Decoction	3
Musculoskeletal disorders	<i>Balanites rotundifolia</i> (Tiegh.) Blatt.	Zygophyllaceae	Urinary tract infections	Root	Decoction	1
	<i>Allium cepa</i> L.	Amaryllidaceae	Rheumatism, Arthritis	Bulb	Powder	1
	<i>Rhus natalensis</i> Meikle	Anacardiaceae	Arthritis	Root	Decoction	1
	<i>Carissa edulis</i> (Forssk.) Vahl	Apocynaceae	Backache, Chest pains, arthritis	Root	Infusion, Decoction	4
	<i>Agave americana</i> L.	Asparagaceae	Edema	Root or Leaves	Infusion	1
	<i>Albuca abyssinica</i> Jacq.	Asparagaceae	Arthritis	Bulb	Poultice	1
	<i>Asparagus racemosus</i> Willd.	Asparagaceae	Arthritis	Root	Decoction for steam inhalation	1
	<i>Berkheya spekeana</i> Oliv.	Asteraceae	Arthritis	Root and Leaves	Ash, Decoction	1
	<i>Bidens pilosa</i> L.	Asteraceae	Pain reliever	Flowers and seeds	Powder and infusion	2
	<i>Carduus schimperi</i> Sch.Bip.	Asteraceae	Arthritis	Whole plant	Decoction and ash	1
	<i>Cirsium vulgare</i> (Savi) Ten.	Asteraceae	Arthritis	Whole plant	Decoction and ash	1
	<i>Echinops amplexicaulis</i> Oliv.	Asteraceae	Arthritis	Root	Decoction	1
	<i>Erigeron bonariensis</i> L.	Asteraceae	Arthritis	Leaves	Infusion	1
	<i>Microglossa pyrifolia</i> (Lam.) Kuntze	Asteraceae	Arthritis	Root	Decoction	1
	<i>Solanecio mannii</i> (Hook.f.) C.Jeffrey	Asteraceae	Arthritis	Leaf	Paste for Poultice	1
	<i>Tagetes minuta</i> L.	Asteraceae	Arthritis	Root	Decoction	1
	<i>Tithonia diversifolia</i> (Hemsl.) A.Gray	Asteraceae	Joint dislocation	Leaves	Warmed on fire for massage	2
	<i>Vernonia amygdalina</i> Delile	Asteraceae	Aching breast	Leaves	Paste for massage	1
	<i>Vernonia auriculifera</i> Hiern	Asteraceae	Aching breasts	Buds	Paste for massage	1
	<i>Markhamia lutea</i> (Benth.) K.Schum.	Bignoniaceae	Arthritis	Root	Decoction	1
<i>Spathodea campanulata</i> P.Beauv.	Bignoniaceae	Arthritis	Stem bark	Decoction	1	
<i>Lobelia gibberoa</i> Hemst.	Campanulaceae	Chronic Rheumatism	Leaves	Decoction for body wash	1	
<i>Cannabis sativa</i> L.	Cannabaceae	Painkiller	Seeds	Decoction	1	
<i>Trema orientalis</i> (L.) Blume	Cannabaceae	Dislocated joints	Leave powder	Decoction	1	
<i>Maytenus obscura</i> (A. Rich.) Cufod.	Celastraceae	Arthritis	Root	Decoction	1	
<i>Kalanchoe densiflora</i> Rolfe	Crassulaceae	Arthritis	Leaves	Poultice	1	
<i>Cucumis dipsaceus</i> Ehrenb. ex Spach	Cucurbitaceae	Swollen neck glands	Fruits	Infusion	1	
<i>Cucumis prophetarum</i> L.	Cucurbitaceae	Swollen organ	Leaves	Infusion	1	
<i>Momordica foetida</i> Schumach	Cucurbitaceae	Arthritis	Root	Decoction	1	
<i>Euclea divinorum</i> Hiern	Ebenaceae	Arthritis	Root	Decoction	1	
<i>Acacia abyssinica</i> Benth.	Fabaceae	Joint aches, arthritis	Stem bark	Decoction	2	
<i>Acacia gerrardii</i> Benth.	Fabaceae	Arthritis	Stem bark	Decoction	1	
<i>Erythrina abyssinica</i> DC.	Fabaceae	Arthritis	Root and stem bark	Decoction	1	
<i>Mimosa pudica</i> (L.)	Fabaceae	Arthritis	Whole plant	Decoction	1	
<i>Phaseolus vulgaris</i> L.	Fabaceae	Edema	Pods	Decoction	2	

<i>Senna didymobotrya</i> (Fresen.) H.S.Irwin & Barneby	Fabaceae	Backache	Root	Decoction	1
<i>Senna occidentalis</i> (L.) Link	Fabaceae	Sprains, Inflammation, Antispasmodic	Seeds	Powder of roasted seeds	3
<i>Senna septemtrionalis</i> (Viv.) H.S.Irwin & Barneby	Fabaceae	Backaches	Root	Decoction	1
<i>Harungana madagascariensis</i> Lam. ex Poir.	Hypericaceae	Arthritis	Stem bark	Decoction	1
<i>Ajuga remota</i> Benth.	Lamiaceae	Arthritis	Whole plant	Decoction	1
<i>Rothea myricoides</i> (Hochst)R.Br. & Vatke	Lamiaceae	Arthritis	Root	Decoction	1
<i>Mentha piperata</i> L.	Lamiaceae	Muscular ache	Leaves	Infusion	1
<i>Plectranthus barbatus</i> Andrews	Lamiaceae	Swollen leg	Leaves	Infusion	1
<i>Persea americana</i> Mill.	Lauraceae	Rheumatism, Headache, Rheumatism, and Pain	Seeds and leaves	Infusion or decoction	4
<i>Phragmanthera usuiensis</i> (Oliv.) M.G.Gilbert	Loranthaceae	Arthritis	Leaves	Infusion	1
<i>Ekebergia capensis</i> Sparrm.	Meliaceae	Arthritis	Root	Decoction	1
<i>Morus nigra</i> L.	Moraceae	Arthritis	leaves	Infusion	1
<i>Ensete ventricosum</i> (Welw.) Cheesman	Musaceae	Arthritis	Root and leaves	Decoction, Infusion	1
<i>Arachis hypogaea</i> L.	Papilionaceae	Dislocated joints	Seeds	Pressed and then mixed with gin	1
<i>Indigofera arrecta</i> A.Rich.	Papilionaceae	Arthritis	Leave and root	Decoction	1
<i>Tephrosia nana</i> Schweinf.	Papilionaceae	Rheumatic fever	Root and root bark	Decoction	2
<i>Clutia abyssinica</i> Jaub. & Spach	Peraceae	Arthritis	Root	Decoction	1
<i>Phyllanthus amarus</i> Schumach. & Thonn.	Phyllanthaceae	Arthritis	Root	Decoction	1
<i>Clematis brachiata</i> Thunb.	Ranunculaceae	Arthritis	Root	Decoction	1
<i>Rhamnus prinoides</i> L'Hér.	Rhamnaceae	Arthritis, Rheumatism	Root	Decoction	2
<i>Rhamnus staddo</i> A.Rich.	Rhamnaceae	Arthritis	Root	Decoction	1
<i>Fragaria vesca</i> L.	Rosaceae	Arthritis	Ripe fruits	Eaten	1
<i>Malus domestica</i> Borkh.	Rosaceae	Arthritis, Rheumatism	Fruits	Decoction	2
<i>Coffea arabica</i> L.	Rubiaceae	Edema	Dry peel	Decoction	1
<i>Rytigynia acuminatissima</i> (K.Schum.) Robyns	Rubiaceae	Arthritis	Stem bark	Decoction	1
<i>Vangueria apiculata</i> K.Schum.	Rubiaceae	Arthritis	Root	Decoction	1
<i>Vangueria madagascariensis</i> J.F.Gmel.	Rubiaceae	Arthritis	Root	Decoction	1
<i>Citrus aurantium</i> L.	Rutaceae	Edema	Dry peel	Decoction	1
<i>Toddalia asiatica</i> (L.) Lam.	Rutaceae	Arthritis	Root	Decoction	1
<i>Flacourtia indica</i> (Burm.f.) Merr.	Salicaceae	Arthritis	Stem bark	Decoction	1
<i>Trimeria grandifolia</i> (Hochst.) Warb.	Salicaceae	Arthritis	Root	Decoction	1
<i>Capsicum frutescens</i> L.	Solanaceae	Lumbago, stiff neck, Rheumatism, Muscular aches	Fruits	Powders made into a paste	4
<i>Datura stramonium</i> L.	Solanaceae	Rheumatic pain	Dry leaves	An infusion made into a paste	1
<i>Physalis peruviana</i> L.	Solanaceae	Arthritis	Root	Decoction	1
<i>Solanum incanum</i> L.	Solanaceae	Muscular cramps, arthritis	Root and Leaves	Decoction	3
<i>Solanum terminale</i> Forssk.	Solanaceae	Arthritis	Root	Decoction	1
<i>Withania somnifera</i> (L.) Dunal	Solanaceae	Arthritis	Root and Leaves	Decoction	1
<i>Urtica massaica</i> Mildbr.	Urticaceae	Rheumatism, Arthritis	Root, Fresh whole plant	Decoction	4

	<i>Lantana camara</i> L.	Verbenaceae	Rubbed around kneck, head		Hot compressions of concentrated decoctions or infusions	1	
Oral and dental problems	<i>Rhoicissus tridentata</i> (L.f.) Wild & R.B.Drumm	Vitaceae	Arthritis	Root	Decoction	1	
	<i>Achyranthes aspera</i> L.	Amaranthaceae	Toothache	Stem, shoots, and twigs	Chewed with salt and used as a toothbrush	2	
	<i>Rhus natalensis</i> Meikle	Anacardiaceae	Cleaning teeth	Young stems	Chewed to brush like	1	
	<i>Dichrocephala integrifolia</i> (L.f.) Kuntze	Asteraceae	Oral cavity infections, Oral Thrush	Leaves	Decoction or Ash	4	
	<i>Gutenbergia cordifolia</i> var. <i>marginata</i> (O.Hoffm.) C.Jeffrey	Asteraceae	Oral cavity infections, Oral Thrush, sores	Leaves	Decoction	3	
	<i>Spilanthes mauritiana</i> (A.Rich. ex Pers.) D.C.	Asteraceae	Oral Thrush	Leaves	Infusion	1	
	<i>Warburgia ugandensis</i> Sprague	Canellaceae	Tooth infections, Toothache	Root, stem bark	Powder, Toothbrush, and ash	2	
	<i>Momordica foetida</i> Schumach.	Cucurbitaceae	Oral Thrush	Buds	Decoction	1	
	<i>Croton macrostachyus</i> Hochst. ex Delile	Euphorbiaceae	Oral cavity infections, Oral thrush	Stem bark, Aerial parts	Decoction or Infusion	2	
	<i>Euphorbia hirta</i> L.	Euphorbiaceae	Red oral thrush in children	Leaves	Decoction	1	
	<i>Euphorbia inaequilatera</i> Sond.	Euphorbiaceae	Oral Thrush	Aerial parts	Infusion	1	
	<i>Senna didymobotrya</i> (Fresen.) H.S.Irwin & Barneby	Fabaceae	Oral cavity infections	Leaves	Poultice	1	
	<i>Ajuga integrifolia</i> Buch.-Ham.	Lamiaceae	Oral cavity infections, Oral thrush	Leaves	Decoction for gargle	2	
	Metabolic disorders	<i>Orthosiphon hildebrandtii</i> Vatke	Lamiaceae	Oral cavity infections	Leaves	Poultice	1
		<i>Persea americana</i> Mill.	Lauraceae	Toothache	Seed	Mashed	1
<i>Triumfetta rhomboidea</i> Jacq.		Malvaceae	Toothache	Roots	Infusion	1	
<i>Eucalyptus globulus</i> Labill.		Myrtaceae	Bad breath (Halistosis), Fermentations	Wood	Finely ground charcoal infusion	2	
<i>Zea mays</i> L.		Poaceae	Oral thrush in children	Cob	Ash infusion	1	
<i>Rubia cordifolia</i> L.		Rubiaceae	Oral thrush	Leaves or aerial parts	Infusion	1	
<i>Solanum aculeastrum</i> Dunal		Solanaceae	Toothache	Root	Decoction	2	
<i>Solanum incanum</i> L.		Solanaceae	Toothache	Root	infusion	2	
<i>Rhoicissus tridentata</i> (L.f.) Wild & R.B.Drumm.		Vitaceae	Oral cavity infections	Leaves	Decoction	1	
<i>Amaranthus</i> spp.		Amaranthaceae	Immune booster	Leaves	Decoction	1	
<i>Allium cepa</i> L.		Amaryllidaceae	Gout	Bulb	Powder	1	
<i>Mangifera indica</i> L.		Anacardiaceae	Diabetes	Leaves	Decoction and ash	1	
<i>Carissa edulis</i> (Forssk.) Vahl		Apocynaceae	Diabetes	Roots	Decoction	1	
<i>Aloe secundiflora</i> Engl.		Asphodelaceae	Appetizer, Diabetes	Leaves	Juice	2	
<i>Bidens pilosa</i> L.		Asteraceae	Diabetes	Roots and Leaves	Decoction	1	
<i>Centaurea benedicta</i> (L.) L.	Asteraceae	Lack of appetite	Leaves	Decoction or infusion	1		
<i>Crassocephalum vitellinum</i> (Benth.) S.Moore	Asteraceae	Improve the quality of milk during lactation	Leaves	Decoction	1		
<i>Helianthus annuus</i> L.	Asteraceae	Diabetes	Oil from seeds	Decoction	1		

	<i>Vernonia auriculifera</i> Hiern	Asteraceae	Diabetes	Roots and leaves	Decoction and ash	1
	<i>Lobelia gibberoa</i> Hemst.	Campanulaceae	Diaphoretic, Gout	Leaves	Decoction	2
	<i>Warburgia ugandensis</i> Sprague	Canellaceae	Diabetes	Stem bark and root	Powder and ash	1
	<i>Gynandropis gynandra</i> (L.) Briq.	Capparidaceae	Improve milk production	Leaves	Decoction	2
	<i>Gloriosa superba</i> L.	Colchicaceae	Gout	Roots	Infusion	1
	<i>Croton macrostachyus</i> Hochst. ex Delile	Euphorbiaceae	Diabetes	Roots and leaves	Decoction	1
	<i>Erythrina abyssinica</i> DC.	Fabaceae	Diabetes, Allergy	Roots and stem bark	Decoction and ash	2
	<i>Phaseolus vulgaris</i> L.	Fabaceae	Gout	Green pods	Decoction	1
	<i>Senna didymobotrya</i> (Fresen.) H.S.Irwin & Barneby	Fabaceae	Appetizer for children	Leaves, stems, and roots	Decoction	2
	<i>Senna septemtrionalis</i> (Viv.) H.S.Irwin & Barneby	Fabaceae	Appetizer for children	Leaves	Decoction	1
	<i>Rothea myricoides</i> (Hochst)R.Br. & Vatke	Lamiaceae	Diabetes	Roots and leaves	Decoction	1
	<i>Rosmarinus officinalis</i> L.	Lamiaceae	Diaphoretic	Leaves	Decoction	1
	<i>Corchorus olitorius</i> L.	Malvaceae	Increase milk production in lactating mothers	Leaves	Decoction	1
	<i>Tephrosia nana</i> Schweinf.	Papilionaceae	Excessive thirst	Root and root bark	Decoction	2
	<i>Fragaria vesca</i> L.	Rosaceae	Gout	Fruits	Eaten	1
	<i>Malus domestica</i> Borkh.	Rosaceae	Gout	Fruits	Eaten	1
	<i>Citrus aurantium</i> L.	Rutaceae	Appetizer	Dry fruit peel	Decoction	1
	<i>Toddalia asiatica</i> (L.) Lam.	Rutaceae	Diabetes	Roots	Decoction and Ash	1
	<i>Capsicum frutescens</i> L.	Solanaceae	Appetizer	Fruits	Decoction	1
	<i>Solanum indicum</i> L.	Solanaceae	Diabetes	Root and leaves	Decoction	1
	<i>Solanum mauense</i> Bitter.	Solanaceae	Diabetes	Whole plant	Decoction	1
	<i>Urtica massaica</i> Mildbr.	Urticaceae	Diabetes, Gout	Whole plant	Decoction	2
Circulatory system disorders	<i>Tabernaemontana stapfiana</i> Britten	Apocynaceae	Anaemia	Leaves	Decoction	1
	<i>Centaurea benedicta</i> (L.) L.	Asteraceae	Hemorrhoids	Leaves, stem, and flowers	Infusion	1
	<i>Brassica oleracea</i> L.	Brassicaceae	Varicose veins	Leaves	Decoction	1
	<i>Warburgia ugandensis</i> Sprague	Canellaceae	Anaemia	Stem bark and root	Powder and ash	1
	<i>Gynandropis gynandra</i> (L.) Briq.	Capparidaceae	Anaemia	Leaves	Decoction	2
	<i>Parinari curatellifolia</i> Planch. ex Benth.	Chrysobalanaceae	Epistasis	Leaves	Decoction	1
	<i>Cupressus sempervirens</i> L.	Cupressaceae	Varicose veins, Hemorrhoids	Ground fruits and wood	Decoction	3
	<i>Croton macrostachyus</i> Hochst. ex Delile	Euphorbiaceae	Anemia	Leaves	Infusion	1
	<i>Citrus aurantium</i> L.	Rutaceae	Varicose vein, Haemorrhages	Dry fruit peel	Decoction	1
	<i>Solanum indicum</i> L.	Solanaceae	Anaemia	Roots and leaves	Decoction	1
	<i>Urtica massaica</i> Mildbr.	Urticaceae	Nasal haemorrhage, Anaemia	Whole plant	Infusion	2
Cardiovascular disorders	<i>Allium sativum</i> L.	Amaryllidaceae	Hypertension	Bulb	Infusion	1
	<i>Galinsoga parviflora</i> Cav.	Asteraceae	Hypertension	Leaves	Infusion	1
	<i>Carica papaya</i> L.	Caricaceae	High blood pressure	Ripe or unripe fruit	Decoction	1
	<i>Persea americana</i> Mill.	Lauraceae	Hypertension	Leaves	Decoction	1
	<i>Malus domestica</i> Borkh.	Rosaceae	Arterial hypertension	Fruits	Decoction	1

Ear, Nose, Throat (ENT) problems	<i>Citrus aurantium</i> L.	Rutaceae	Heart palpitations	Dry peel	Decoction	1
	<i>Toddalia asiatica</i> (L.) Lam.	Rutaceae	Heart disease	Roots	Decoction	1
	<i>Capsicum frutescens</i> L.	Solanaceae	Palpitations	Fruits	Decoction	1
	<i>Allium sativum</i> L.	Amaryllidaceae	Earache	Bulb	Boiled in coconut oil	1
Eye problems	<i>Bidens pilosa</i> L.	Asteraceae	Earache	Leaves	Infusion	2
	<i>Ocimum gratissimum</i> L.	Lamiaceae	Earache	Leaves	Infusion	1
	<i>Ocimum lamiiifolium</i> Hochst. ex Benth.	Lamiaceae	Earache	Leaves	Infusion	1
	<i>Gossypium barbadense</i> L.	Malvaceae	Earache	Warmed Buds	Juice	1
	<i>Daucus carota</i> L.	Apiaceae	Improve Vision	Root tuber	Shredded and eaten raw	2
	<i>Ageratum conzyoides</i> L.	Asteraceae	Sore eyes	Fresh leaves	Infusion	1
	<i>Crassocephalum vitellinum</i> (Benth.) S.Moore	Asteraceae	Diseased eyes	Leaves	Decoction	1
	<i>Galinsoga parviflora</i> Cav.	Asteraceae	Eye problems	Leaves	Infusion	1
	<i>Parinari curatellifolia</i> Planch. ex Benth.	Chrysobalanaceae	Sore eyes	Leaves	Infusion	1
	<i>Erythrina abyssinica</i> DC.	Fabaceae	Trachoma	Stem Bark and root	Decoction	1
	<i>Ocimum gratissimum</i> L.	Lamiaceae	Sore eyes		Infusion	1
	<i>Ocimum lamiiifolium</i> Hochst. ex Benth.	Lamiaceae	Sore eyes	Leaves	Infusion	1
	<i>Oxalis corniculata</i> L.	Oxalidaceae	Inflamed eyelid	Leaves	Infusion	1
	<i>Oxygonum sinuatum</i> (Hochst. & Steud ex Meisn.) Dammer	Polygonaceae	Sore eyes	Leaves	Infusion	1
Respiratory disorders	<i>Camellia sinensis</i> (L.) Kuntze	Theaceae	Conjunctivitis	Dry leaves	Decoction	1
	<i>Carissa edulis</i> (Forssk.) Vahl	Apocynaceae	Asthma	Root and leaves	Decoction	1
	<i>Aloe secundiflora</i> Engl.	Asphodelaceae	Asthma	Leaves	Decoction	1
	<i>Ageratum conzyoides</i> L.	Asteraceae	Coughs	Leaves	Infusion	1
	<i>Galinsoga parviflora</i> Cav.	Asteraceae	Cold	Leaves	Infusion	1
	<i>Helianthus annuus</i> L.	Asteraceae	Bronchial catarrh, Respiratory afflictions	Flowers and Young stems	Infusion	2
	<i>Microglossa pyrifolia</i> (Lam.) Kuntze	Asteraceae	Asthma	Leaves	Infusion	1
	<i>Vernonia auriculifera</i> Hiern	Asteraceae	Pneumonia, Coughs	Roots and leaves	Decoction and ash	2
	<i>Opuntia ficus-indica</i> (L.) Mill.	Cactaceae	Cough	Fruits	Slice the fruit and cover with brown sugar/syrup	1
	<i>Warburgia ugandensis</i> Sprague	Canellaceae	Pneumonia, Chest pain, Asthma	Root, stem bark	Decoction, ash, and powder	4
	<i>Carica papaya</i> L.	Caricaceae	Flu	Leaves	Infusion	1
	<i>Parinari curatellifolia</i> Planch. ex Benth.	Chrysobalanaceae	Coughs	Leaves	Decoction	1
	<i>Combretum molle</i> R.Br. ex G.Don	Combretaceae	Coughs	Leaves	Decoction	1
	<i>Manihot esculenta</i> Crantz (Euphorbiaceae)	Euphorbiaceae	Flu	Leaves	Infusion for bath	1
<i>Acacia abyssinica</i> Benth. Spp. calophylla Brenan	Fabaceae	Sore throat	Gum	Powder	1	
<i>Acacia nilotica</i> (L.) Delile	Fabaceae	Sore throat	Gum	Powder	1	
<i>Acacia seyal</i> Delile	Fabaceae	Sore throat	Gum	Powder	1	
<i>Acacia sieberiana</i> D.C.	Fabaceae	Sore throat	Gum	Powder	1	

	<i>Albizia gummifera</i> (J.F.Gmel.) C.A.Sm.	Fabaceae	Sore throat	Gum	Powder	2
	<i>Erythrina abyssinica</i> DC.	Fabaceae	Coughs	Root and stem bark	Decoction	1
	<i>Senna didymobotrya</i> (Fresen.) H.S.Irwin & Barneby	Fabaceae	Pneumonia	Leaves	Decoction and ash	1
	<i>Ocimum gratissimum</i> L.	Lamiaceae	Coughs, Nasal and bronchial catarrh	Leaves and stems	Infusion and decoction	2
	<i>Ocimum kilimandscharicum</i> Gürke	Lamiaceae	Colds, Coughs	Leaves	Steam to inhale	2
	<i>Ocimum lamiifolium</i> Hochst. ex Benth.	Lamiaceae	Blocked nostril, Coughs	Leaves	Infusion to inhale	2
	<i>Abutilon abutiloides</i> (Jacq.) Gareke ex Hochr.	Malvaceae	Bronchitis	Roots	Decoction	1
	<i>Gossypium barbadense</i> L.	Malvaceae	Coughs	Leaves	Infusion	1
	<i>Gossypium herbaceum</i> L.	Malvaceae	Bronchial catarrh	Leaves and flowers	Infusion	1
	<i>Hibiscus fuscus</i> Gareke	Malvaceae	Tuberculosis, Whooping cough	Leaves, Flower	Decoction	2
	<i>Sida tenuicarpa</i> Vollesen	Malvaceae	Sore throat	Leaves	Powder infusion	1
	<i>Eucalyptus camaldulensis</i> Dehnh.	Myrtaceae	Bronchial catarrh, Asthma, bronchitis	Fresh leaves	Infusion	5
	<i>Eucalyptus globulus</i> Labill.	Myrtaceae	Bronchial catarrh, Asthma, bronchitis	Leaves	Infusion	4
	<i>Oxalis corniculata</i> L.	Oxalidaceae	Coughs	Leaves	Infusion	1
	<i>Oxalis latifolia</i> Kunth	Oxalidaceae	Coughs	Leaves	Infusion	1
	<i>Flueggea virosa</i> (Roxb. ex Willd.) Royle	Phyllanthaceae	Chest pain	Root	Decoction	1
	<i>Piper capense</i> L.f.	Piperaceae	Sore throat	Root	Decoction	1
	<i>Cymbopogon citratus</i> (DC.) Stapf	Poaceae	Flu	Leaves	Decoction	1
	<i>Oxygonum sinuatum</i> (Hochst. & Steud ex Meisn.) Dammer	Polygonaceae	Tonsillitis	Stem	Decoction for gargle	1
	<i>Rumex usambarensis</i> (Dammer) Dammer	Polygonaceae	Tuberculosis	Whole plant	Ash	1
	<i>Clematis brachiata</i> Thunb.	Ranunculaceae	Coughs	Leaves	Powder	1
	<i>Coffea arabica</i> L.	Rubiaceae	Head congestion due to influenza	Fruits	Infusion of powder roasted of fruits	1
	<i>Citrus aurantium</i> L.	Rutaceae	Fainting	Dry peel	Decoction	1
	<i>Clausena anisata</i> (Willd.) Hook.f. ex Benth.	Rutaceae	Coughs	Root	Decoction	1
	<i>Toddalia asiatica</i> (L.) Lam.	Rutaceae	Congested chest, Cold, Coughs, Pneumonia, Asthma	Leaves	Decoction	7
	<i>Capsicum frutescens</i> L.	Solanaceae	Cold, Coughs, Sore throat	Fruits	Cooked	3
	<i>Datura stramonium</i> L.	Solanaceae	Asthma	Leaves	Powder	1
	<i>Solanum incanum</i> L.	Solanaceae	Tonsillitis	Root	Infusion or decoction, ash	2
	<i>Solanum mauense</i> Bitter.	Solanaceae	Chest pain	Root	Decoction	1
	<i>Urtica massaica</i> Mildbr.	Urticaceae	Asthma, Chest ache	Leaves	Decoction	2
	<i>Lantana camara</i> L.	Verbenaceae	Coughs, Sore throat, Sinusitis	Leaves	Decoction	2
Birth related disorders	<i>Aloe secundiflora</i> Engl.	Asphodelaceae	Uterotonic	Leaves	Juice	1
	<i>Carica papaya</i> L.	Caricaceae	Sterility in women	Ripe fruit	Decoction	1
	<i>Gloriosa superba</i> L.	Colchicaceae	Abortion	Root	Decoction	1

	<i>Tragia benthamii</i> Baker	Euphorbiaceae	Healing the navel of the newborn baby	Leaves	Decoction	2
	<i>Vigna subterranea</i> (L.) Verdc.	Fabaceae	Removal of placenta	Roots	Infusion	1
	<i>Salvia nilotica</i> Juss. ex Jacq.	Lamiaceae	Women infertility	Root	Decoction	1
	<i>Sida cordifolia</i> (L.)	Malvaceae	Abortion			1
	<i>Sida tenuicarpa</i> Vollesen	Malvaceae	Calm foetus movement in the womb	Root	Decoction	1
	<i>Bersama abyssinica</i> Fresen.	Meliantaceae	Expulsion of placenta	Root	Decoction	1
	<i>Phyllanthus ovalifolius</i> Forssk.	Phyllanthaceae	Healing the navel of the newborn baby	Leaves	Decoction	2
	<i>Zea mays</i> L.	Poaceae	Reduce swelling of feet in pregnant women	Corn silk	Infusion	1
	<i>Citrus aurantium</i> L. Burn.	Rutaceae	Menstrual pain	Dry peel	Decoction	1
	<i>Urtica massaica</i> Mildbr.	Urticaceae	Promote conception, Labour pains, and Uterine haemorrhage	Fresh whole plant	Infusion	2
Animal bites	<i>Carica papaya</i> L.	Caricaceae	Scorpion stings	Leaves	Infusion	1
	<i>Manihot esculenta</i> Crantz	Euphorbiaceae	Snakebite	Fresh tubers	Powdered into paste	1
	<i>Erythrina abyssinica</i> DC.	Fabaceae	Snakebite	Roots and stem bark	Decoction and ash	2
	<i>Senna occidentalis</i> (L.) Link	Fabaceae	Snakebite	Seeds	Powder from roasted seeds	1
	<i>Clausena anisata</i> (Willd.) Hook.f. ex Benth.	Rutaceae	Paralysis caused by snakebite	Root	Infusion	1
Evil eyes	<i>Solanum incanum</i> L.	Solanaceae	Snakebite	Root	Infusion	2
	<i>Bryophyllum pinnatum</i> (Lam.) Oken	Crassulaceae	Evil eyes	Leaves	Infusion or chewed	1
	<i>Cucurbita maxima</i> Duchesne	Cucurbitaceae	Evil eyes	Leaves	Paste for Poultice	1
	<i>Nicotiana tabacum</i> L.	Solanaceae	Evil eyes	Leaves	Infusion	1
Cancer	<i>Carissa edulis</i> (Forssk.) Vahl	Apocynaceae	Cancer	Root and Leaves	Decoction and ash	1
	<i>Aloe secundiflora</i> Engl.	Asphodelaceae	Cancer	Leaves	Decoction	1
	<i>Bidens pilosa</i> L.	Asteraceae	Cancer	Roots and Leaves	Decoction	1
	<i>Croton macrostachyus</i> Hochst. ex Delile	Euphorbiaceae	Cancer	Roots and Leaves	Decoction	1
	<i>Erythrina abyssinica</i> DC.	Fabaceae	Cancer	Root and stem bark	Decoction and ash	1
	<i>Toddalia asiatica</i> (L.) Lam.	Rutaceae	Cancer	Roots	Decoction and ash	1
	<i>Solanum mauense</i> Bitter.	Solanaceae	Cancer	Whole plant	Decoction	1
	<i>Urtica massaica</i> Mildbr.	Urticaceae	Cancer	Leaves	Decoction	1
Fevers	<i>Tabernaemontana stapfiana</i> Britten	Apocynaceae	Fevers	Leaves	Decoction	1
	<i>Vernonia auriculifera</i> Hiern	Asteraceae	Fever	Leaves	Infusion	2
	<i>Commelina benghalensis</i> L.	Commelinaceae	Fever	Leaves	Decoction	2
	<i>Cyperus rotundus</i> L.	Cyperaceae	Fever	Bulb	Decoction	1
	<i>Erythrina abyssinica</i> DC.	Fabaceae	Fever	Root and stem bark	Ash and decoction	1
	<i>Senna didymobotrya</i> (Fresen.) H.S.Irwin & Barneby	Fabaceae	Fever	Roots and leaves	Ash and decoction	2
	<i>Senna occidentalis</i> (L.) Link	Fabaceae	Fever	Seeds	Powder of roasted seeds	1
	<i>Persea americana</i> Mill.	Lauraceae	Fever	Leaves	Infusion	1
	<i>Tephrosia nana</i> Schweinf	Papilionaceae	Fever	Root and root bark	Decoction	2

	<i>Cymbopogon citratus</i> (D.C.) Stapf	Poaceae	Fevers	Leaves	Decoction	1
	<i>Coffea arabica</i> L.	Rubiaceae	Fever	Green fruit	Infusion of ground powder	1
Nervous system disorder	<i>Aloe secundiflora</i> Engl.	Asphodelaceae	Headaches	Leaves	Juice	1
	<i>Lobelia gibberoa</i> Hemst.	Campanulaceae	Stimulant	The whole plant (Powder)	Infusion	5
	<i>Warburgia ugandensis</i> Sprague	Canellaceae	Headache	Stem bark and root	Powder and ash	1
	<i>Senna didymobotrya</i> (Fresen.) H.S.Irwin & Barneby	Fabaceae	Headache	Leaves and roots	Decoction	1
	<i>Senna septemtrionalis</i> (Viv.) H.S.Irwin & Barneby	Fabaceae	Headaches	Root	Decoction	1
	<i>Mentha piperata</i> L.	Lamiaceae	Headache, migraine, physical exhaustion	Leaves	Infusion	3
	<i>Rosmarinus officinalis</i> L.	Lamiaceae	Stimulant and flavouring	Leaves	Decoction mixed with respective food recipes	2
	<i>Persea americana</i> Mill.)	Lauraceae	Headache	Seed	Decoction	2
	<i>Passiflora subulata</i> Mast.	Passifloraceae	Insomnia, Anxiety, Nervousness, Alcoholism, Drug withdrawal syndrome	Flowers and Leaves	Infusion	5
	<i>Clematis brachiata</i> Thunb.	Ranunculaceae	Epilepsy	Root	Decoction	1
	<i>Coffea arabica</i> L.	Rubiaceae	Fainting, Tiredness, Headaches, Migraines, and Central nervous stimulant	Green fruits	Green or roasted infusion	5
	<i>Citrus aurantium</i> L.	Rutaceae	Insomnia, Fatigue, migraines, and sedative	Leaves and flowers and Dry peel	Infusion or Decoction	4
	<i>Camellia sinensis</i> (L.) Kuntze	Theaceae	Stimulant	Leaves	Infusion	1
	<i>Lantana camara</i> L.	Verbenaceae	Headaches	Leaves	Decoction	1
	<i>Zingiber officinale</i> Roscoe	Zingiberaceae	Exhaustion	Rhizome	Infusion	1
Anthrax	<i>Erythrina abyssinica</i> DC.	Fabaceae	Anthrax	Stem bark and root	Decoction	1
Nutritional disorders	<i>Rhus natalensis</i> Meikle	Anacardiaceae	Scurvy	Fruits and root	Eaten fresh or decoction	2
	<i>Aloe secundiflora</i> Engl.	Asphodelaceae	Scurvy	Leaves	Juice and paste	2
	<i>Gynandropis gynandra</i> (L.) Briq.	Capparidaceae	Scurvy	Leaves	Decoction	1
	<i>Fuerstia africana</i> T.C.E.Fr.	Lamiaceae	Scurvy	Leaves	Ground into paste	1
	<i>Manihot esculenta</i> Crantz	Euphorbiaceae	Marasmus	Leaves	Infusion	1
	<i>Hordeum vulgare</i> L.	Poaceae	Malnutrition	Seeds	Flour	1
	<i>Rytigynia acuminatissima</i> (K.Schum.) Robyns	Rubiaceae	Scurvy	Fruits	Eaten	1
	<i>Vangueria apiculata</i> K.Schum.	Rubiaceae	Scurvy	Fruits	Eaten	1

3.6 Informant Consensus Factor (ICF) (Homogeneity of use)

Nervous disorders were recorded with the highest ICF value of 0.59. followed by infections and disorders of the skin, intestines, and urinogenital with records of ICF values of 0.55, 0.54, and 0.5, respectively. Zero ICF values were recorded for anthrax, cardiovascular disorders, and evil eyes (Table 3).

Table 3: Disease category and the Informant Consensus Factor (ICF) (Homogeneity of use) of medicinal plants by the Abagusii people

Category	No. of Use reports	Number of species	ICF
Nervous disorders	35	15	0.59
Skin infections and disorders	131	60	0.55
Intestinal disorders	228	105	0.54
Urinogenital infections and disorders	92	47	0.5
Oral and dental problems	33	21	0.38
Respiratory disorder	76	48	0.37
Animal bites	8	6	0.29
Circulatory system disorder	15	11	0.29
Musculoskeletal disorders and swelling	97	74	0.24
Malaria	40	31	0.23
Ear, nose and Throat (ENT) problems	6	5	0.2
Fevers	14	11	0.2
Nutritional disorders	10	8	0.2
Metabolic disorder	38	31	0.19
Birth related disorders	15	13	0.14
Eye problems	12	11	0.09
Anthrax	1	1	0
Cancer	8	8	0
Cardiovascular system disorder	8	8	0
Evil eyes	3	3	0

The revelation that intestinal disorders were most commonly treated by the Abagusii people ethnomedicinally is consistent with other previous findings in different Kenyan cultural communities, as demonstrated by Mbuni *et al.* [45] and Nankaya *et al.* [46]. In addition, intestinal disorders have also been reported to be predominantly treated by people of various ethnic groups of other African countries (6) and other continents (50,61,62).

The high ICF values indicated that there was sharing of plant species information used to treat nervous disorders, skin infections and disorders, intestinal disorders, and urinogenital infections and disorders by the Abagusii people of various parts of Nyamira and Kisii Counties. The high ICF values indicate the efficacy of the used plant species (63,64). However, the low levels of information shared for oral and dental problems, respiratory disorders, Animal bites, Circulatory system disorders, Musculoskeletal disorders, and swelling/oedema, malaria, ear, nose, and throat (ENT) problems, fevers, metabolic disorders, birth-related disorders, and eye problems were possibly due to the lack knowledge/information sharing across geographical locations or within groups (47).

Besides, our study revealed not homogeneity of use of medicinal plants against anthrax, cancer, cardiovascular disorders, and evil eyes. Our findings indicated that there is limited information sharing about plant species used to treat these conditions among the Abagusii people of Nyamira and Kisii County. However, other communities

have demonstrated high levels of information sharing over the plant species used to treat anthrax, cancer, cardiovascular system disorders, and evil eyes (65–71).

4 Conclusions

Our study reveals the integral role of medicinal plants in promoting health among the Abagusii community of Kenya, with 870 documented use reports in managing various diseases. Based on the study findings, we concluded that the Abagusii people mostly utilize medicinal plants to treat gastric/intestinal disorders, followed by skin infections and disorders, musculoskeletal disorders and swelling/oedema, urinogenital infections, and respiratory diseases. Moreover, there is substantial ethnomedicinal knowledge sharing among the Abagusii people on various disease categories, as revealed by the ICF values in this study. However, limited homogeneity of medicinal plant use against anthrax, cancer, cardiovascular disorders, and evil eyes among the Abagusii people was noted and attributed to lack of information or knowledge sharing within and across different geographic locations of Kisii and Nyamira Counties. Generally, our study lays a framework for empirical studies towards the validation of medical plants of the Abagusii people in the management of various ailments and the possible development of alternative, efficacious, affordable, accessible, and safe therapeutic remedies.

Data availability

All the research data and sources are included in the manuscript. Any additional information is available from authors, upon request.

Conflict of Interest

The authors declare that they have no competing interests in this work.

Author Contributions

Onyancha Jared Misonge and Moriasi Apiri Gervason conceived the research idea, analysed and interpreted the data, and wrote the manuscript. Nyandoro Vincent Obaga, Onsinyo James Meroka and Onyancha Brenda Monchari provided analysis tools, and literature search. All the authors, reviewed and approved the final version of the manuscript before publication.

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