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Use of medicinal plants by community from Fazenda Nova district, Brejo da Madre de Deus, PE, Brazil

Uso de plantas medicinais pela comunidade do distrito de Fazenda Nova, Brejo da Madre de Deus, PE, Brasil

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A B S T R A C T

The survey of medicinal plants used by people in the Fazenda Nova district, Brejo da Madre de Deus Municipality, Pernambuco State, Brazil was the main aim of this work. Data collection was conducted through semi-structured interviews. The botanical material was identified and incorporated at the Herbarium Professor Vasconcelos Sobrinho (PEUFR) of the Universidade Federal Rural de Pernambuco. 79 species were recorded, distributed in 40 families. The most representative families were: Fabaceae (14 ssp.), Lamiaceae (7 ssp.), Euphorbiaceae (6 ssp.), Asteraceae (3 ssp.), Bignoniaceae (3 ssp.) and Solanaceae (3 ssp.), the most cited therapeutic indications were for treating respiratory problems (24.54%), gastrointestinal disorders (17.47%) and inflammation in general (11.52%) . The tea was the main form of preparation and the leafs were the part of the plant most used in the production of natural remedies. The species of Angico (*Anadenanthera macrocarpa* (Benth.) Brenan., Aroeira (*Astronium urundeuva* (M.Allemão) Engl.), Babosa (*Aloe vera* L. Burm. f.), Colônia (*Alpinia zerumbet* (Pers.) Burtt. R. M. Sm), Hortelã-miúda (*Mentha crispa* L.) and Romã (*Punica granatum* L.) stood out because, besides being mentioned by all of the informants, there was complete consensus regarding the main use of the plants, reaching the ROP 100.

R E S U M O

O levantamento das plantas medicinais utilizadas pela população do distrito de Fazenda Nova, Município de Brejo da Madre de Deus, PE, Brasil foi o principal objetivo desse trabalho. A coleta de dados foi realizada através de entrevistas semi-estruturadas. O material botânico foi identificado e depositado no Herbário Professor Vasconcelos Sobrinho (PEUFR) da Universidade Federal Rural de Pernambuco. Verificaram-se 79 espécies distribuídas em 40 famílias. As famílias com maior número de espécies foram: Fabaceae (14 ssp.), Lamiaceae (7 ssp.), Euphorbiaceae (6 ssp.), Asteraceae (3 ssp.), Bignoniaceae (3 ssp.) and Solanaceae (3 ssp.). As indicações terapêuticas para problemas respiratórios (24,54%), desordens gastrointestinais (17,47%) e para inflamações em geral (11,52%) são as mais citadas. O chá foi a principal forma de preparo e as folhas foram a parte da planta mais utilizadas na produção dos remédios naturais. As espécies angico (*Anadenanthera macrocarpa* (Benth.) Brenan., aroeira (*Astronium urundeuva* (M.Allemão) Engl.), babosa (*Aloe vera* L. Burm. f.), colônia (*Alpinia zerumbet* (Pers.) Burtt. R. M. Sm), hortelã-miúda (*Mentha crispa* L.) e romã (*Punica granatum* L.) destacaram-se, pois, além de terem sido citadas por todos informantes houve total consenso quanto ao uso principal da planta, atingindo o ROP de 100.

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Introduction

The very history of botany is confused in its dawn with the search for plants with medicinal interest, and many of the first works that sought to name and categorize plants had as their primary purpose to offer a concise catalog of plants with medicinal importance (Lorenzi et al. Matos, 2002). Di Stasi (1996) says that medicinal plants are plant species that for a long time have been incorporated into the culture of all peoples thanks to their therapeutic potential and that, after careful studies, present an inexhaustible source of approved and commonly used medicines, as well as a rich source of new substances with potential biological activity.

It is estimated that there are approximately 500 thousand of plant species in the world, of which Brazil has about 55 thousand, however it is estimated that only 15% of these species have already had their medicinal uses studied (Conservation international, 2010; Zago 2018). According to Khan and Ahmad (2018), data from World Health Organization (WHO) show that approximately 80% of world population make use of plants for primary health care.

According to Khan and Ahmad (2018), research with medicinal plants has been continuous and play a vital role in the search for new drugs. For Amorozo (1996), the study of medicinal plants based on their use by autochthonous societies of oral tradition allows us to plan the research based on an already existing empirical knowledge, often consecrated by continuous use, which should then be tested on a scientific basis. According to Albuquerque (2005), the accumulation of knowledge from ethnobotanical investigations makes possible, among other things, the discovery of substances of plant origin with medical and industrial applications, and the recognition and preservation of potentially important plants in their respective ecosystems.

The vegetational types found in the municipality of Brejo da Madre de Deus (Pernambuco, Brazil) are the highland forests, known as “Brejos de Altitudes”, and Caatinga. The mountainous forests of the “Brejos de Altitudes” that occur in the interior of the Northeast constitute unique floristic assemblages with high diversity (Andrade-Lima, 1982). The biodiversity of these ecosystems constitutes a genetic heritage of inestimable value (Sales et al., 1998). This biome is rich in traditional folk knowledge, both about phytotherapeutic approach and food culture (Pôrto et al., 2004). It is estimated that at least 932 plant species have been recorded in the Caatinga, 318 of which are endemic (Giulietti, 2003). Among the diverse species of the Caatinga, several plants are notoriously regarded as medicinal for popular use, with their leafs, barks and roots being sold on sidewalks and streets of major cities, as well as in markets and open fairs (Drumond, 2000).

In addition, in the municipality of Brejo da Madre de Deus, the Phytotherapy Laboratory Alípio Magalhães Porto (LAFIAMP) was founded in 1997, with the advice of the “Centro Nordestino de Medicina Popular” (CNMP) supported by the Municipal Government,

the Federal University of Pernambuco (UFPE) and the Japan International Cooperation Agency (JAICA), where 26 types of medicines with 22 medicinal plants are produced annually by LAFIAMP and distributed through the Family Health Units and basic pharmacy. Approximately 13,210 herbal medicines are distributed to the municipality's population upon presentation of medical prescription (Silva, MEB da [Pharmacist from the Unit], personal comments).

Therefore, this work aimed to conduct an ethnobotanical survey of the medicinal plants used in the Fazenda Nova district, located in the municipality of Brejo da Madre de Deus, Pernambuco, Brazil, as well as to record the indication for use, the preparation method, the parts of the plants used, the source of obtaining and the origin of the medicinal flora, and to evaluate the importance of these plants in the community.

Methodological procedures

Study area

The municipality of Brejo da Madre de Deus (Latitude 8°8'45 "S, Longitude 36°22'16 "W) is located in the state of Pernambuco, in the mesoregion Agreste and in the micro-region Vale do Ipojuca, bordered to the north by Santa Cruz do Capibaribe and Taquaritinga do Norte, to the south by Belo Jardim, Tacaimbó and São Caetano, to the east by Caruaru and Toritama, and to the west by Jataúba. The municipal area covers 779.3 km2 and represents 0.79 % of the State of Pernambuco. The municipality is formed by Districts: Headquarters, Fazenda Nova, Barra do Farias, Mandaçaia and São Domingos. The Headquarters has an approximate altitude of 627 meters, 202.2 km from the capital, which can be reached by BR-232/l04, and PE-145 (CPRM, 2005). A hot semi-arid climate predominates in the municipality, attenuated by the altitude. The average annual temperature is 25º Celsius. The rainfall is concentrated between the months of January and July, with greater incidence in March and April. Rainfall in normal years is around 1,000mm. The soil is rocky, and there is also a combination of litholic soils and latosols. The hydrography of the municipality has the Capibaribe basin, into which flow all existing rivers and streams (Correia, 2010).

Metodology

This research was based on the first author's monograph (Messerschmidt, 2013), where all data were recently reviewed and updated. For data application, there was a first contact with the informants and the community. The investigation was conducted with the residents who agreed to participate in the research. The purpose of the study was explained to each informant, and the Informed Consent Form (ICF) was presented, discussed, approved and signed by the interviewees, according to the instructions of Resolution 466/12 of the National Health Council for research with human beings.

Subsequently, the interviewees were selected by indication, using the criterion of traditional knowledge about medicinal plants for the choice of informants through the snowball sampling technique (Albuquerque et al. 2008), where the first expert is recognized, who then indicates another expert and so on. Following this technique, 14 female and 7 male informants were interviewed, making a total of 21 informants.

The semi-structured interviews conducted with the selected residents addressed socioeconomic aspects such as: name, age, gender, profession, level of education, time of living in the city, as well as information about medicinal plants such as: common name, scientific name, botanical family, indication, how they are obtained, growth habit, parts used, modes of use, and how they are prepared.

The mentioned plants were collected by walking through the backyards of the houses with the informants through a guided tour (Albuquerque et al., 2008), and with the help of a woodsman the specimens were collected following the usual techniques for collecting botanical material (Fidalgo & Bononi 1989). The collected material was processed, herborized and identified by specialists to be deposited in the Herbarium Professor Vasconcelos Sobrinho (PEUFR) of the Federal Rural University of Pernambuco (UFRPE).

The quantitative analysis was performed with the data collected to obtain the level of consensus on the use of the plants, and to point out the most important plants for the community studied. The "Fidelity Level" (FL) proposed by Friedman et al. (1986) was used to evaluate the level of consensus on the use of the plants mentioned by the informants, where FL = (Ip/Iu) x 100%, where: FL = fidelity level; Ip = number of informants who mentioned the main use of the species; Iu = total number of informants who mentioned the species for any purpose.

For each species besides the FL, the "Rank Order Priority" (ROP) was estimated, combining the FL with the RP, where ROP= FL x RP, where: ROP=rank order priority; RP=relative popularity, calculated by the ratio of the number of informants that mentioned a given species, by the number of informants that mentioned the most mentioned species.

Results and Discussion

Twenty-one informants were interviewed, 14 are female (66.6%) and seven male (33.3%), aged between 40 and 85 years. As to their professions, 13 are farmers, two seamstresses, two housewives, two mourners, one bricklayer, and one root maker. As for the level of schooling, it was found that 57.2% have incomplete elementary school education, 33.3% are illiterate, and 9.5% have high school education. These results corroborate to Carmo et al. (2022) where the authors found that the popular knowledge about medicinal plants is independent of the level of education.

However, 79 ethnospecies of medicinal uses were listed in the District of Fazenda Nova, with 75 species identified scientifically at the species level, six at the genus level

(*Bauhinia* sp., *Euphorbia* sp., *Mimosa* sp., *Ruta* sp., *Senna* sp. and *Tabebuia* sp. (Table 1). The species belong to 40 botanical families (Table 1), in detail, and the families with the highest representation in number of species (Figure 1), were Fabaceae (14 ssp.), Lamiaceae (7 ssp.), Euphorbiaceae (6 ssp.), Asteraceae (3 ssp.), Bignoniaceae (3 ssp.) and Solanaceae (3 ssp.), a result that differs from ethnobotanical studies from different regions of the country (Marodin & Baptista 2002; Gazzaneo et al. 2005; Pasa et al. 2005; Flor, A.S.S.O.; Barbosa, W.L.R 2015), which respectively are from Goiás, Rio Grande do Sul, Igarassu-PE and Marabá-PA, all of which present Asteraceae and Lamiaceae as the most representative families. In the study by Silva (2002) conducted in the Quilombola community of Curiaú, Macapá-AP, the most representative families were Lamiaceae and Asteraceae.

Out of the 75 species identified in the ethnobotanical survey, 52% are native and 48% are exotic.

The percentage of use of each part of the plant was calculated (Figure 2), resulting in the following data: leafs (36.84%), bark (22.80%), roots (12.28%), flowers (7.89%), fruits (7.01%), seeds (4.39%), whole plant (3.50%), latex (1.75%), stems (1.75%), and pods (0.88%) were mentioned most frequently. The same can be observed in the survey of medicinal plants used in the municipality of Jupi-PE, conducted by Teixeira & Melo (2006). These findings make us emphasize that it is important to note that the leafs, besides concentrating a large part of the active principles of the plants, can be collected without causing great damage to the plants, ensuring their preservation.

Twelve ways of preparing medicinal plants were found, Figure 3, with the most used being tea (33.10%), followed by decoction (15.83%), bath (12.95%) lick (8.64%), poultice (7.92%), juice (7.20%), gargle (5.04%), tincture (3.60%), mouthwash (2.16%), compress (1.44%), chew (0.72%) and suppository (0.72%). Among the therapeutic indications, table 1, the indications for respiratory problems (24.54%), gastrointestinal disorders (17.47%) and for inflammation in general (11.52%) stand out. This is in agreement with another study conducted in Pernambuco, in the Zona de Mata, by Gazzaneo et al. (2005), as well as studies conducted in other regions, such as Amorozo and Gély (1988) in Pará, Medeiros et al. (2004) in Rio de Janeiro and Silva and Proenza (2008) in Goiás.

Regarding to the ways of acquisition of plants, it was found that the community residents acquire the plants mainly through cultivation in the backyards of their homes (46.91%); in forests (35.80%) which often takes a long walk to collect such plants; in other anthropogenic areas such as abandoned lands and roadsides (12.35%) and through trade (4.94%). Regarding to these forms of acquisition, Flor & Barbosa (2015) mention that the culture of use and cultivation of medicinal plants in rural communities represents an important local resource for health and sustainability of the rural environment. However, it is important to provide guidance on the cultivation and correct management of medicinal

plants, because the complementation of popular and scientific knowledge on the production and use of medicinal plants is essential for their safety and effectiveness.

Friedman et al. (1986) suggest that a good criterion to justify the use of a plant is to verify the concordance of its use in the community. The greater this concordance, the bigger is the possibility that the cited plant contains some chemical compound that validates its use. In the present study, a high concordance of use was observed, 48% of the citations presented FL (level of fidelity) of 100%, and no FL lower than 60% was observed.

The ROP value is generally lower, because it combines concordance of use with the number of informants that mentioned a certain plant. Table 1 shows five plants that obtained an ROP of 100, which, in addition to having 100% agreement of use, were also mentioned by all of informants: Angico (*Anadenanthera macrocarpa*), Aroeira (*Astronium urundeuva*), Cologne (*Alpinia zerumbet*), Mint (*Mentha crispa*) and Pomegranate (*Punica granatum*). These plants, besides being the most used species by the community, as well as, with a higher degree of consensus on the therapeutic indications as we can see in Table 1 with the ROP, are also used by the phytotherapy laboratory Alípio Magalhães Porto for the production and distribution of natural medicines in the municipality.

Table 1. Medicinal plants cited in the District of Fazenda Nova, Municipality of Brejo da Madre de Deus, PE, Brazil, with the respective vernacular names, parts of plants used, indication and Fidelity Level (FL); Relative Popularity (PR) and Rank Order Priority (ROP)

Family/scientific name	Vernacular name	Plant part	Indications of use	FL %	PR	ROP
AMARANTHACEAE						
Amaranthus viridis L.	Caruru	Leaf	Liver, worm	100	0,09	9
Dysphania ambrosioides (L.) Mosyakin & Clemants	Mastruz	Leaf	Worm, cough, expectorant, flu, bronchitis.	92	0,66	60,72
ANACARDIACEAE						
Astronium urundeuva (M.Allemão) Engl.	Aroeira	Bark	Anti-inflammatory, healing, gastritis, hemorrhoid.	100	1	100
Anacardium occidentale L.	Cajueiro-roxo	Bark	Diarrhea, flu, tonsillitis, aphtha, anti-inflammatory, bronchitis, expectorant.	83	0,28	23,24
ASPARAGACEAE						
Aloe vera (L.) Burm.f.	Babosa	Leaf	Cicatrizant, bruises, hemorrhoids, cancer, depurative, strengthen the	85	1	85

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			hair.			
APIACEAE						
Pimpinella anisum L.	Erva-doce	fruit, seed	Digestive, flatulence, colic.	60	0,23	13,8
APOCYNACEAE						
Catharanthus roseus (L.) Don	Boa-noite	flower, leaf	Tiredness, fever.	100	0,09	9
ASTERACEAE						
Gymnanthemum amygdalinum (Delile) Sch.Bip. ex Walp	Alcachofra	Leaf	Liver, stomach, diarrhea, give appetite.	66	0,14	9,24
Artemisia vulgaris L.	Anador	leaf	Menstrual cramps, pain, fever.	100	0,23	23
Matricaria chamomilla L.	Camomila	flower	Calmative, headache, fever.	100	0,52	52
BIGNONIACEAE						
Crescentia cujete L.	Coité	fruit	Expectorant, anemia, respiratory problems.	66	0,14	9,24
Handroanthus impetiginosus (Mart. ex DC.) Mattos	Pau-d'arco- roxo	bark, leaf	Anti-inflammatory, sedative, cancer, fever, tendinitis, sedative, gingivitis,	100	0,14	14

			circulation.			
Tabebuia sp.	Pau-d'arco-branco	bark	Cicatrizant, anti-inflammatory, diarrhea.	100	0,09	9
BOMBACACEAE						
Pseudobombax simplicifolium A. Robyns	Ibiratanha	bark	Inflammation of the urinary tract, inflammation of the spine.	85	0,33	28,05
BROMELIACEAE						
Tillandsia recurvata L.	Salambaia	whole plant	Mycosis, hemorrhoids	100	0,09	9
BURSERACEAE						
Commiphora leptophloeos (Mart.) J.B.Gillett	Emburana	bark	Dandruff, hair loss.	66	0,14	9,24
CACTACEAE						
Melocactus zehntneri (Britton & Rose) Luetzelb.	Coroa de frade	stem	Cough, bronchitis, malaise.	75	0,19	14,25
Cereus jamacaru DC.	Mandacaru	branches, root	Cough, ulcer, kidney problems, skin infections.	80	0,23	18,4
CAPPARACEAE						
Cynophalla flexuosa (L.) J. Presl	Feijão-de-boi	root, leaf,	Venereal	100	0,09	9

		bark	diseases, toothache, worms, cough, bronchitis, fever.			
CLEOMACEAE						
Tarenaya spinosa (Jacq.) Raf.	Mussambê	flower, root	Influenza, bronchitis, expectorant, cough.	100	0,8	80
CELASTRACEAE						
Monteverdia rigida (Mart.) Biral	Bom nome	bark	Inflammation of the kidneys and ovaries.	75	0,19	14,25
CONVOLVULACEAE						
Operculina hamiltonii (G.Don) D.F.Austin & Staples	Batata-de-purga	root	Depurative, asthma.	100	0,09	9
COSTACEAE						
Costus spicatus (Jacq.) Sw.	Cana-de-macaco	leaf, Root	Diuretic, syphilis, gonorrhea, colic, diarrhea, diabetes, fever.	75	0,19	14,25
CUCURBITACEAE						
Momordica charantia L.	Melão-de-São-Caetano	leaf, fruit	Skin infections, hemorrhoids, stomach pain.	100	0,14	14

EUPHORBIACEAE						
Croton cajucara Benth.	Marmeleiro	bark	Diarrhea.	100	0,19	19
Croton campestris A.St.-Hil.	Velame-branco	root, leaf	Syphilis, rheumatism, herpes.	75	0,19	14,25
Euphorbia sp.	Zezinho	leaf	stroke.	100	0,04	4
Euphorbia tirucalli L.	Aveloz	latex	Cancer, wart.	88	0,42	36,96
Jatropha mollissima (Pohl) Baill.	Pinhão-branco	latex	Circulation of the legs, healing.	75	0,19	14,25
Manihot glaziovii Müll.Arg.	Maniçoba	leaf, bark	Hemorrhoid, healing.	100	0,09	9
FABACEAE						
Amburana cearensis (Allemão) A.C. Sm.	Cumaru	bark, root	Respiratory problems, colic, flu, cough, expectorant, sinusitis, rheumatism.	87	0,38	33,06
Anadenanthera colubrina (Vell.) Brenan	Angico- branco	bark	Cough, flu.	66	0,14	9,24
Anadenanthera colubrina var. *cebil* (Griseb.) Alschul	Angico	bark	Cough, bronchitis, flu, respiratory problems.	100	1	100
Bauhinia sp.	Mororó	leaf, bark	Cholesterol, diabetes,	75	0,38	28,5

			cystitis, cough, anti-inflammatory, asthma, nervous disorders.			
Cajanus cajan (L.) Huth	Feijão-guando	leaf, flower	Cough, bronchitis, fever.	100	0,09	9
Libidibia ferrea (Mart. Ex. Tul.) L.P.Queiroz	Jucá	bark, fruit, seed	Cough, diarrhea, bronchitis.	80	0,47	37,6
Cenostigma pyramidale (Tul.) Gagnon & G.P.Lewis	Catingueira	flower,bark	Cough, diarrhea, bronchitis.	88	0,8	70,4
Erythrina velutina Willd.	Mulungu	bark	Calmative, cough, hemorrhoid.	100	0,52	52
Mimosa tenuiflora (Willd.) Poir.	Jurema-preta	bark	Cough, bronchitis, throat inflammation.	80	0,23	18,4
Mimosa sp.	Jurema-branca	bark	Anti-inflammatory.	100	0,14	14
Parkinsonia aculeata L.	Turco	seed	Stroke, anemia, weakness.	66	0,14	9,24
Senna sp.	Sena	whole plant	Febre.	100	0,04	4
Senna occidentalis (L.) Link	Mangiroba	seed, leaf, root	Healing, fever, liver.	66	0,14	9,24

Stryphnodendron coriaceum Benth.	Barbatenom	bark	Cicatrizante, antiinflamatório, diarréia.	83	0,28	23,24
GERANEACEAE						
Pelargonium graveolens L'Hér.	Malva-rosa	leaf	Pain	66	0,14	9,24
LAMIACEAE						
Leonotis nepetifolia (L.) R.Br.	Cordão-de-são-francisco	leaf	Asthma, cough, bronchitis, expectorant.	66	0,14	9,24
Mentha crispa L.	Hortelã-miuda	leaf	Worm, soothing.	100	1	100
Ocimum basilicum L.	Manjericão	leaf	Fever, diarrhea, cough, digestive, headache, tonsillitis.	100	0,09	9
Ocimum gratissimum L.	Alfavaca	leaf	Cough, expectorant, flu.	100	0,19	19
Plectranthus amboinicus (Lour.) Spreng.	Hortelã-grauda	leaf	Expectorant, cough, bronchitis, sore throat.	90	0,52	46,8
Plectranthus barbatus Andr.	Boldo	leaf	Digestive, soothing, liver, headache.	100	0,66	66
Rosmarinus officinalis L.	Alecrim	leaf	Asthma, cough, flu, memory, flatulence, stroke.	66	0,14	9,24

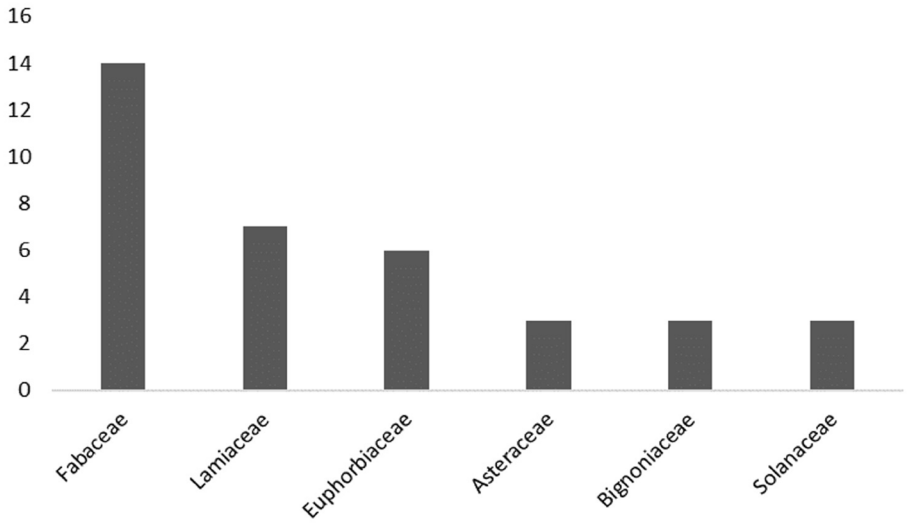
LYTHRACEAE						
Punica granatum L.	Romã	bark	Tonsillitis, hoarseness, sore throat, pharyngitis.	100	1	100
MALVACEAE						
Gossypium hirsutum L.	Algodoeiro	leaf, flower, root	Mycoses, healing, diarrhea, menopause.	100	0,09	9
MELIACEAE						
Azadirachta indica A. Juss.	Nim	bark	Eliminate lice.	100	0,19	19
MYRTACEAE						
Psidium guajava L.	Goiaba	leaf	Diarrhea .	100	0,23	23
Eugenia pitanga (O.Berg) Nied.	Pitanga	leaf	Diarrhea, abdominal colics.	100	0,28	28
NYCTAGINACEAE						
Boerhavia diffusa L.	Pega-pinto	root	Liver, diuretic, depurative.	85	0,33	28,05
OXALIDACEAE						
Averrhoa carambola L.	Carambola	leaf, fruit	Depurative, insect bites, fever, diuretic.	75	0,19	14,25
PAPAVERACEAE						

Argemone mexicana L.	Cardo-santo	seeds, leaf, root	Toothache, soothing, bladder inflammation.	80	0,23	18,4
PASSIFLORACEAE						
Passiflora foetida L.	Maracujá-de-estalo	flower, leaf	Toothache, hemorrhoids.	100	0,14	14
PHYLANTHACEAE						
Phyllanthus niruri L.	Quebra-pedra	whole plant	Renal calculi.	100	0,14	14
PHYTOLACCACEAE						
Petiveria alliacea L.	Tipim	root, leaf	Toothache, abortifacient.	66	0,14	9,24
PLANTAGINACEAE						
Plantago major L.	Transagem	leaf, seed	Sore throat, laxative, insect bites, tonsillitis, burns.	66	0,14	9,24
Scoparia dulcis L.	Vassourinha-de-botão	root, leaf	Hemorrhoids, varicose veins.	50	0,09	4,5
POACEAE						
Cymbopogon citratus (DC.) Stapf	Capim-santo	leaf	Digestive, cough, fever, calming, diarrhea.	81	0,76	61,56
RHAMNACEAE						

Sarcomphalus joazeiro (Mart.) Hauenschild	Juá	bark, leaf	Strengthens hair, healing, intestinal problems, malaise.	100	0,38	38
RUBIACEAE						
Morinda citrifolia L.	Noni	fruit	Cancer, diabetes, depression, energy.	83	0,28	23,24
RUTACEAE						
Ruta sp.	Arruda	leaf	Earache, colic, conjunctivitis, arthritis, pain.	66	0,14	9,24
Citrus limon (L.) Osbeck	Limão	fruit	Flu, sore throat	100	0,14	14
SAPOTACEAE						
Sideroxylon obtusifolium (Roem. & Schult.) T.D. Penn.	Quixaba	bark	Diabetes, anti-inflammatory, inflammation of the ovary.	100	0,52	52
SOLANACEAE						
Nicotiana glauca Graham	Apara-raio	leaf	Headache.	100	0,09	9
Solanum paniculatum L.	Jurubeba	fruit, leaf, root	Hepatitis, hangover, anemia.	83	0,28	23,24

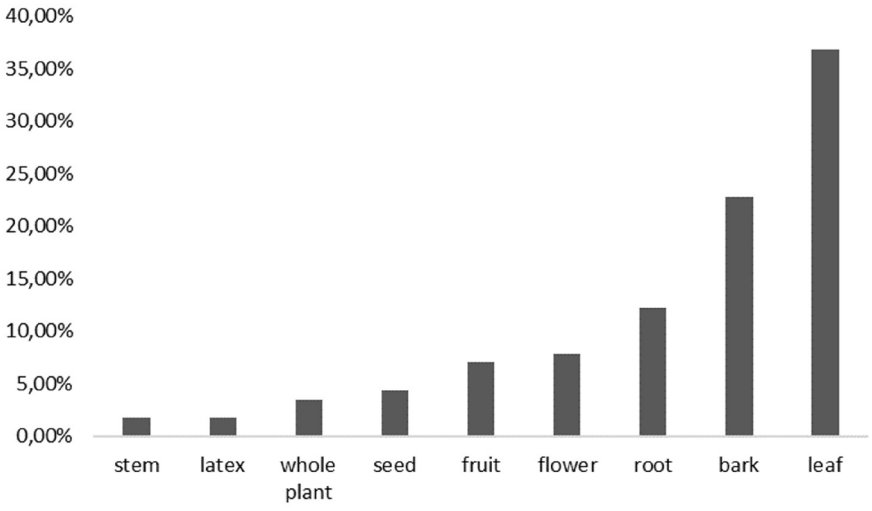
Solanum lycopersicum L.	Tomateiro	leaf, fruit	Furuncle, hemorrhoid.	66	0,14	9,24
TURNERACEAE						
Turnera subulata Sm.	Chanana	flower	Cough, expectorant.	100	0,33	33
VERBENACEAE						
Lippia alba (Mill.) N.E.Br. ex Britton & P.Wilson	Erva-cidreira	leaf	Flu, digestive, calming, diarrhea.	85	0,66	56,1
VITACEAE						
Cissus verticillata (L.) Nicolson & C. E. Jarvis	Insulina	leaf	Diabetes.	100	0,23	23
XIMENIACEAE						
Ximenia americana L.	Ameixa	bark	Back pain, depurative, diarrhea, anti-inflammatory, bronchitis, diarrhea, healing, ulcers.	83	0,57	47,31
ZINGIBERACEAE						
Alpinia zerumbet (Pers.) B.L.Burtt. R. M. Sm	Colônia	Leaf, flower	Calmative, fever, hypertension.	100	1	100

Figure 1.



Botanical families with the highest representation in number of species in the district of Fazenda Nova, Municipality of Brejo da Madre de Deus, PE, Brazil.

Figure 2.



Parts of medicinal plants used in the preparation of home remedies in the district of Fazenda Nova, Municipality of Brejo da Madre de Deus, PE, Brazil.

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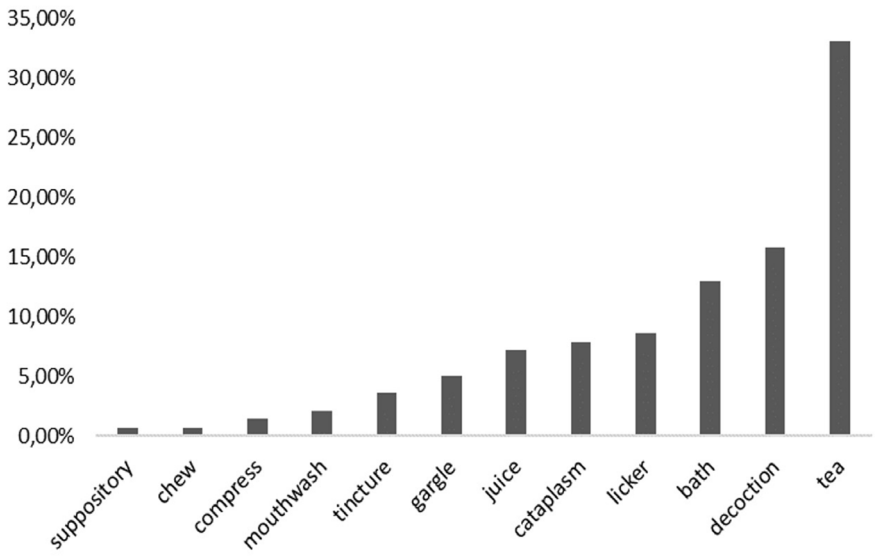
Figure 3.



Use of medicinal plants in the district of Fazenda Nova, Municipality of Brejo da Madre de Deus, PE, Brazil.

Conclusion

Most of the population living in the municipality are simple people, with low economic power, who have lived there for decades, without much access to technological facilities. We can relate the great familiarity with the use of medicinal plants to the search for alternative ways to treat diseases that do not involve the purchase of expensive drugs, and to the fact that phytotherapies have been incorporated into the public health network of the municipality. Furthermore, we emphasize that the high price of industrialized drugs as well as the side effects often observed in those who make constant use of such drugs are factors that influence the residents to choose the use of phytotherapics.

Despite the initiative of the implementation of phytotherapies in the public health network of the municipality, there is a lack of greater investment by the public authorities for the project, such as expansion of the plant cultivation area, including the planting of native trees used as medicines. Currently, an employee of the pharmacy Viva needs to make long walks to collect the bark through pruning, and this technique often makes the pharmacy Viva unable to meet the high demand of the health care units and hospital, because it has no way to expand the production of medicines for lack of investment.

We can verify with the data obtained in this ethnobotanical survey that the population of the Fazenda Nova district in Pernambuco, Brazil, has knowledge and access to a wide variety of plants (79 spp., 40 families) responsible for relieving symptoms and curing various diseases, thus demonstrating the exuberance of medicinal flora for this region that is located on the highest peak of the state on the Borborema Plateau. Therefore, this cultural heritage of the use of medicinal plants must be stimulated and shared so that it is not lost with the renewal of the next generations.

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