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ETHNOBOTANY KNOWLEDGE OF PUBLIC SCHOOL STUDENTS IN THE CITY OF POMBAL-PB

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Abstract: In order to know the use and the plants used as medicine, a survey was conducted with students' from9 year of the Municipal School of Elementary Education "Decisão" in the municipality of Pombal PB, in August 2011, where were applied 27 questionnaires with 27 students. Interviews applied in form of questionnaires, they resulted in the identification of 27 species distributed in 19 families, being that the families *Lamiaceae*, followed by *Fabaceae* and *Anacardiaceae* were those that had a greater representation. The plant most often cited in interviews was mint (*Plectranthus amboinicus*) (Lour.) Spreng, followed by lemongrass (*Cymbopogon citratus*) (DC.) Stapf. and Malva (*Plectranthus barbatus*) (Andr.) Benth. The most used parts of the plant were root with more representation, followed by bark, fruits and flowers. The main form of preparation is tea followed by juice and syrup. With regard to the purpose of homemade preparations showed a greater use in cases of flu, inflammation, headache, kidney pain, fever, diarrhea and pain of urine.

Keywords: Medicinal use, ethnobotanic, used parts.

CONHECIMENTO ETNOBOTÂNICO DOS ALUNOS DE ESCOLA PÚBLICA NO MUNÍCIPIO DE POMBAL- PB

Resumo: Com o objetivo de conhecer o uso e as plantas utilizadas como medicação, foi realizado um levantamento com alunos do 9º ano da Escola Municipal de Ensino Fundamental "Decisão", no município de Pombal PB, no mês de Agosto de 2011, onde foram aplicados 27 questionários, com 27 alunos. As entrevistas aplicadas na forma de questionários, os mesmos resultaram na identificação de 27 espécies, distribuídas em 19 famílias, sendo que as famílias L*amiaceae*, seguidas de *Anacardiaceae* e *Fabaceae* foram as que tiveram uma maior representatividade. A planta mais citada nas entrevistas foi hortelã (*Plectranthus amboinicus)* (Lour.) Spreng, seguida de capim santo (*Cymbopogon citratus)* (DC.) Stapf. e Malva (*Plectranthus barbatus)* (Andr.) Benth . As partes da planta mais utilizadas foram raiz com maior representatividade, seguidas de casca, frutos e flores. A principal forma de preparo é o chá, seguidos de suco e xarope. Com relação à finalidade das preparações caseiras observou-se uma maior utilização nos casos de gripe, inflamações, dor de cabeça, dor nos rins, febre, diarréia e dor de urina.

Palavras chave: Uso medicinal, etnobotânico, partes utilizadas.

INTRODUCTION

The use of medicinal plants, which are often grown in the backyard, is a practice that is based on popular knowledge and, most of the time, handed down from generation to generation. Thus, knowing how people use these natural resources becomes of great importance in the construction of scientific knowledge. This relationship allows the combination between scientific and popular knowledge, generating this way, knowledge about the techniques of preparation, which will generate basis for future planning (ALBUQUERQUE and ANDRADE, 2002).

According to the World Health Organization (WHO), approximately 80% of the population uses some type of grass to relieve ailments, however, less than 30% of it under medical supervision.

Scheffer (1992) comments that this situation is more evident in developing countries, where medicinal plants are very important, mainly due to major deficiencies of the health system, as well as the low purchasing power, associated with the popular knowledge of medicine, plants eventually become sources of therapeutic resources.

According to Marques (2000), Brazil stands out for being the world's most biodiversity country having about 22% of all biological species of the world. Given this large amount of biological resources, Brazil is also notable in another respect as regards the forest wealth, forests in Brazil have a large number of species that have medicinal and therapeutic purposes. Brazil has a large genetic potential to be explored and it is estimated that this plant worth about 16,5 billion genes represents (RAMOS, 2000).

The use of medicinal plants in Brazil emerged as an alternative therapy, being considerably influenced by Indian culture, by African traditions and European culture brought by settlers (ALMEIDA, 2000). Given the above, this study aimed to conduct a survey about popular knowledge, in respect of medicinal herbs and their use with students from a public school in the municipality of Pombal PB.

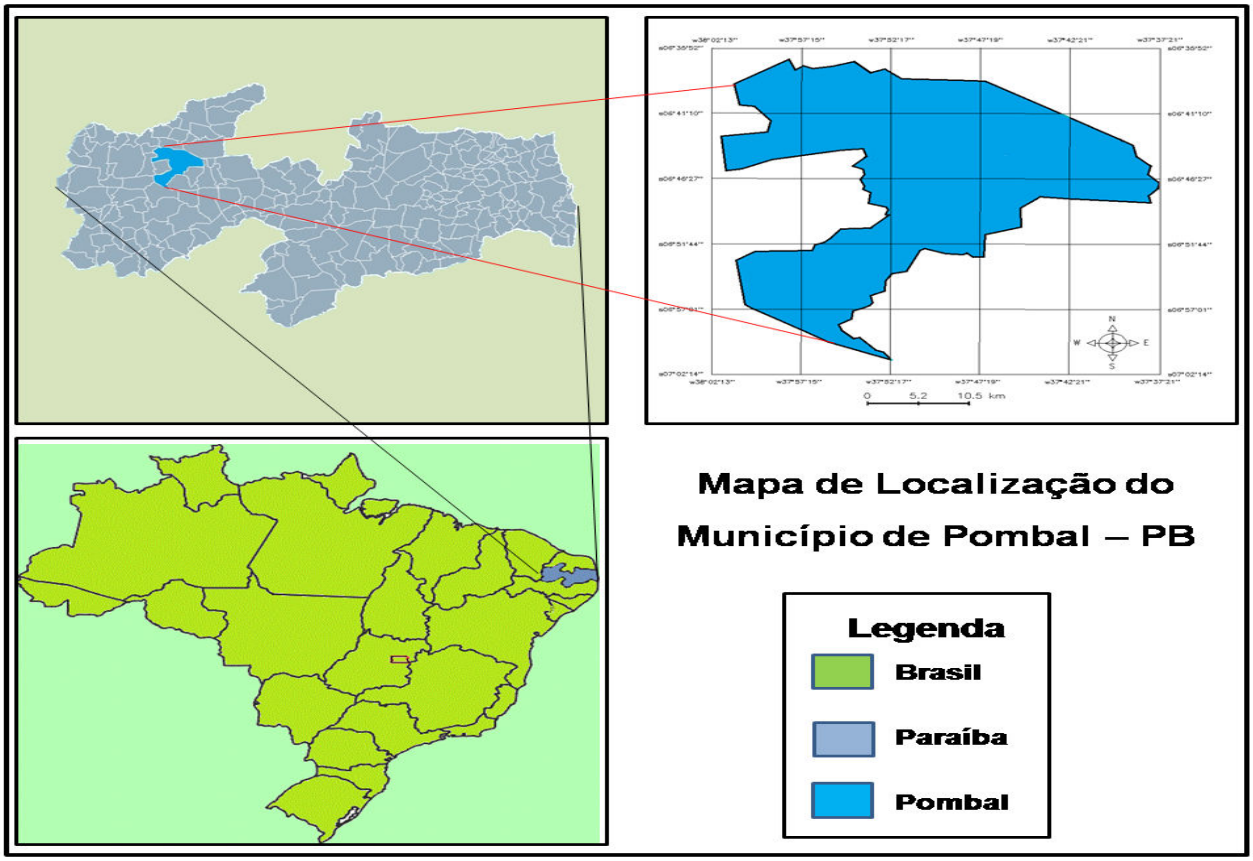
MATERIALS AND METHODS

Characterization and location of study area

The municipality of Pombal is located in Brazilian northeast with an altitude of 184 meters is one of the oldest cities in the state of Paraiba, is the second largest in the state of Paraiba in territorial issue having 889 km ², representing 1.58% of the total surface state. It has an annual growth rate of 1.86%, has the 15th highest HDI of Paraiba and the largest of the municipalities that compose the middle region that is included Paraibano widerness, has an average life expectancy of 66.2 years. The local economy is based on subsistence agriculture, commerce trade and in some factories. This included the largest dairy region in the state of Paraiba.

According to the IBGE (Brazilian Institute of Geography and Statistics), in 2010 its population was estimated at 32,443 inhabitants.

Figure 1 - Location of the municipality of Pombal - PB.



To obtain the data was used a questionnaire, where respondents answered open questions related to herbal use. The questionnaire had questions related to knowledge and use of medicinal plants, it is willing to follow: 1) What are the plants used as home medication? 2) Is used for what disease? 3) Does the plants used for therapeutic purposes is collected or cultivated? 4) What part of the plant is used? and 5) How is made the herbal preparation?

The identification of the plants mentioned in the interviews was performed using common names and comparing them with pictures to confirm it was the same plant was used as reference appropriate material books and scientific papers on medicinal plants. The popular names of plants, as well as the reported indications are listed as was described by the interviewees, without corrections. 27 questionnaires were applied, with the students of the 9th year of the Municipal School of Elementary Education "Decisão".

Of medicinal plants mentioned in the interviews were identified 27 plant species distributed in 19 botanical families. The families *Lamiaceae* (21.05%), followed by *Anacardiaceae* (15.8%) and *Fabaceae* (15.8%) were those that contributed more, followed by (10.5%) of the *Myrtaceae*.

Nunes et al (2003) studying which plants were sold by people who sells roots in the center of the city Campo Grande in Mato Grosso do Sul, found four species being marketed which were also identified and used as a medicine in the survey conducted in Pombal PB, species are: Rosemary (*Rosmarinus officinalis*), Cumaru (*Amburana cearensis*) Marcela (*Anthemis Cotula*) and Barbatimão (*Stryphnodendron barbatiman*). This shows that the knowledge of medicinal plants occur in several parts of Brazil.

Souza Brito and Souza Brito (1993), reports that 11 of the most representative families in the community quilombola of Curiaú-AP, 6 of them are among the most studied in the whole national territory, where *Asteraceae, Lamiaceae* and *Poaceae,* representing nearly 25% of total species surveyed.

RESULTS AND DISCUSSION

From the total of respondents 16 were female and 11 male, as shown below. The total of the respondents, when asked about what plants are used as home medication, 48% answered five or more options, since 52% of respondents answered less than five options. However, the most used plants as home medications cited by respondents are listed below:

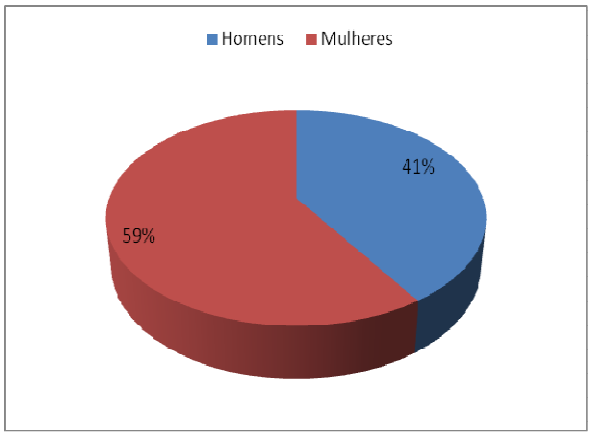


Figure 2. Total of respondents by gender and their respective percentage.

Table 1. Classification of species in common name, scientific name and the botanical family.

Common name	Botanic name	Family
Eucalipto	*Eucalyptus globulus* (Labill)	*Myrtaceae*
Hortelã-da folha-grande	*Plectranthus amboinicus* (Lour.) Spreng	*Lamiaceae*
Malva santa	*Plectranthus barbatus* (Andr.) Benth	*Lamiaceae*
Erva cidreira	*Lippia alba* (Mill.) N.E. Br.	*Verbenaceae*
Quebra pedra	*Phyllanthus tenellus* Roxb	*Euphorbiaceae*
Macela	*Anthemis cotula* L.	*Asteraceae*
Capim santo	*Cymbopogon citratus* (DC.) Stapf.	*Poaceae*
Coentro	*Coriandrum sativum* L.	*Apiaceae*
Mastruz	*Chenopodium ambrosioides* L.	*Chenopodiaceae*
Cajueiro	*Anacardium occidentale* L.	*Anacardiaceae*
Romã	*Punica granatum* L.	*Punicaceae*
Goiabeira	*Psidium guajava* L.	*Myrtaceae*
Seriguela	*Spondia purpúrea* L.	*Anacardiaceae*
Alfazema brava	*Lavandula angustifolia* Chaix & Kitt.	*Lamiaceae*
Aroeira	*Astronium urundeuva* (Fr. All.) Engl.).	*Anacardiaceae*
Barbatimão	*Stryphnodendron barbatiman* (Mart.)	*Fabaceae*
Ameixa	*Ximenia americana* L.	*Olacaceae*
Babosa	*Aloe Vera* (L.) Burm. f.	*Liliaceae*
Alecrim	*Rosmarinus officinalis* L.	*Lamiaceae*
Erva-doce	*Pimpinela anisum* L.	*Apiaceae*
Pequi	*Caryocar brasilienses L.*	Caryocaraceae
Catingueira	*Poincianella pyramidales*	*Fabaceae*
Laranjeira	*Ctrus sinensis* (L.) Osbeck	*Rutaceae*
Batata de purga	*Ipomea purga* (Wender.)	*Convovulaceae*
Chá- preto	*Camellia sinensis* (L.) Kuntze	*Theaceae*
Mamoeiro	*Carica papaya L.*	*Caricaeae*
Cumaru	*Amburana cearensis* (Fr. All; Smith.),	*fabaceae*

According to Cronquist, (1981) the *Lamiaceae* family is characterized chemically by presenting essential oils, iridoids and triterpenoidas.

When asked to what diseases these plants were used, 37% responded more than four options, 63% answered less than four options, as shown below.

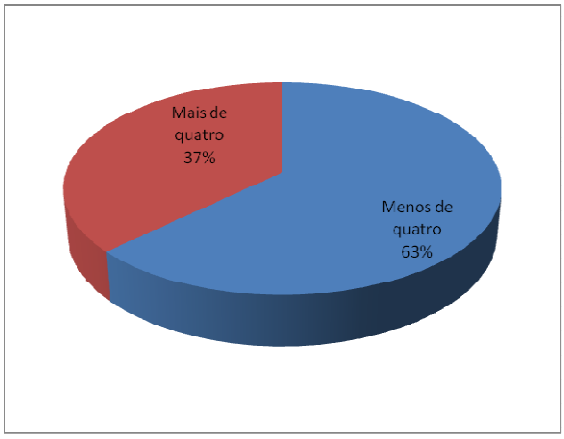


Figure 3. Respondents who use more than four and less than four plants to cure diseases

According to the responders plants are used for the following diseases: Headache, flu, inflammation, kidney pain, fever, stomach pain, soothing, sore throat, headache, urine and vomit.

According to Medeiros et al (2004) were related plants for 28 medicinal uses. The greatest number of species was cited for the treatment of influenza, which agrees with the observations of Amorozo and Gely (1988) and Rossato (1996), and the cure of bronchitis the second largest group, followed by the calming effect against high pressure, worms, diarrhea, headache, inflammation, and kidneys. These results agree in part with this work, where they were cited, flu, soothing, headache, inflammation, and kidneys.

When asked about the plants used are grown or if they only collected 78% said the two options, since only 22% one of the options.

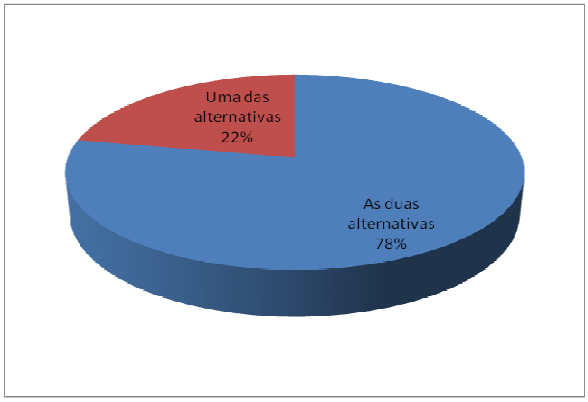
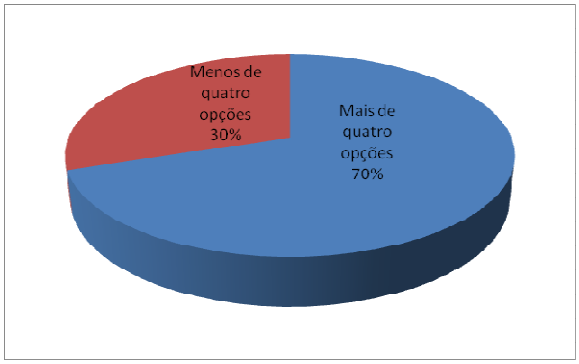


Figure 4. Plants used by the respondents cultivated and not cultivated

Victor and Andrade (1991) comment that the plants most frequently cited in surveys in municipalities that have made the Coastal Zone of Pernambuco-Mata, it was not typical of species of vegetation occurring in the region, a mean they are cultivated. In another study, Voeks (1996) conducted a survey of the pharmacopoeia used in southern Bahia, also reports that 58% of the species for therapeutic use are grown in the region. In Sepetiba Bay (RJ), Figueiredo et al. (1997) also reported a similar situation with regard to medicinal plants.

When asked which part of the plant was used,



70% responded more than four options, as 30% answered less than four options.

Figure 5. The plant parts used as medicine home

The sheet generally has been the most used part of the plant in Mato Grosso MT (PASA et al., 2005). The use of this vegetal part carries less risk to the plant explored, once that does not destroy its regenerative capacity.

Medeiros, et al (2004) studying medicinal plants and their uses by small farmers of River of Pedras Reserve, Mangalore in Rio de Janeiro found the following results for the preparation of 83% of home medicine use the leaves, then the 8% fruit, 3% and the roots, flowers and stems. In this study when asked how it is prepared herbal, all respondents (27 people) responded that they use as tea, 15 people responded that they use as juice, has 14 uses in syrup form, use 13 use for gargle and 11 use to bath.

Regarding the preparation, tea is the most widespread form, as well as the syrup and bath. In studies by Coe and Anderson (1999) in Nicaragua, Ribeiro (1996) and Stalcup (2000) in Brazilian southeastern, there is also this same focus on the use of the tea of the leaves and in the preparation of medicines. These results have some similarity with those found in this study.

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