

IS THE USE OF MEDICINAL PLANTS RELATED TO SOCIAL, ECONOMIC AND CULTURAL CONDITIONS OF THE POPULATION FROM PARIGOT DE SOUZA DISTRICT (APUCARANA, PARANÁ, BRAZIL)?

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ABSTRACT

The use of medicinal plants regards to mankind history. In their association with nature, even when medicine did not exist as science, some monks were devoted to research the healing properties of plants and spread their use. But one major problem is that many people use phytotherapy without the knowledge of toxicity or corroboration of action of some plants. The goal of this study was to investigate the use of some medicinal plants by the population of Parigot de Souza district in the city of Apucarana and verify if the use of these plants are related to social-economic or cultural conditions of that population. In general it was noticed that social-economic and cultural aspects affect the multiple uses of phytotherapy. The population of the district recognizes the need for scientific knowledge about phytotherapy, but due to their average instruction level, it becomes difficult to acquire this knowledge. Thus, the choice of plants for cultivation and consumption occurs via family knowledge, either to cure or prevent diseases.

Palavras-chave: *Popular medicine, ethnobotany, phytotherapy.*

O USO DE PLANTAS MEDICINAIS ESTÁ RELACIONADO ÀS CONDIÇÕES SOCIAIS, ECONÔMICAS E CULTURAIS DOS HABITANTES DO BAIRRO PARIGOT DE SOUZA (APUCARANA, PARANÁ, BRASIL)?

RESUMO

A utilização das plantas medicinais é tão antiga quanto a própria história do ser humano. Em sua associação com a natureza, mesmo quando a medicina não existia como ciência, alguns monges devotaram-se a pesquisa das propriedades curativas das plantas e propagaram seu uso. Porém, um grande problema é que muitas pessoas utilizam a fitoterapia sem o conhecimento da toxicidade ou comprovação da ação de algumas plantas. O objetivo do presente trabalho foi investigar o uso de algumas plantas medicinais pela população do bairro Parigot de Souza da cidade de Apucarana, e verificar se o uso dessas plantas está relacionado a condições sócio-econômicas ou culturais dessa população. Em geral notou-se que questões sócio-econômicas e culturais afetam os usos múltiplos de fitoterápicos. A população do bairro reconhece a necessidade do conhecimento científico a respeito de fitoterápicos, mas devido ao baixo nível de escolaridade torna-se difícil a aquisição desse conhecimento. Assim a escolha das plantas para o cultivo e consumo ocorre via conhecimento familiar, seja para cura ou prevenção de alguma doença.

Key words: *Medicina popular, etnobotânica, fitoterápicos.*

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Ethnobotany, science that studies the interactions between human populations and plants and investigates new plant resources(1), has been a focus at present, due to the growing interest in natural products. However, the breakdown of traditional life systems that accompanies the devastation of the environment and the intrusion of new cultural elements, threats, very closely, a body of empirical knowledge and an invaluable genetic heritage for future generations(2).

The use of medicinal plants regards to mankind history. This practice, integrant part of popular culture, has been taught for several generations, as result of past experiences, were primitive men, watching animals in nature, instinctively searched for herbs that could heal their wounds and diseases(3).

Through their association with nature, when medicine still did not exist as a science, some monks were dedicated to the research of the healing properties of plants, and spread their use. After industrial revolution, methods and concepts related to health were changed, the use of plants vanished and was gradually abandoned and replaced by the use of chemical drugs(4). Today, millions of people, disappointed with chemical-druggist medicine, are returning their attention to the natural resources, especially plants. The Brazilian flora offers a variety of plants that present scientifically proved effectiveness, so each plant has different properties and therapeutic virtues, which can be applied more efficiently(5).

Ethnobotany and Ethnopharmacology demonstrate to be powerful tools in the search for natural therapeutic substances. Nevertheless, some limiting factors to such applications can be mentioned: the difficulty in getting reliable information; the fact that the use of plants in different cultures is associated, somehow, to magical or religious components; the existence of ethical issues that evolve access to traditional knowledge associated to the use of biodiversity(6).

In 1978, through a resolution, the World Health Organization – WHO – launched a world program to evaluate and apply the methods of popular phytotherapy that could decrease costs of public health programs. However, the use of phytotherapy may become a problem without the knowledge about the toxicity or proved effectiveness of some plants(7,8).

In the present study we intended to survey the use of vegetal resources with medicinal ends by the population of the Parigot de Souza district from the city of Apucarana, Paraná, Brazil, and investigate the main medicinal plants that are cultivated and used, as well as verify if this use is related to any social-economic or cultural conditions of the population.

Data was obtained between april and june of 2006, through visits and interviews with the inhabitants of the district. Three houses were visited in each block, in the entire neighborhood, being the houses chosen by lot. Due to the descriptive character of the study, statistical analyses were not applied. Information about each interviewed person were collected (e.g. age, instruction level, approximated family income), and when the presence of medicinal plants was confirmed, an specific questionnaire was filled up, with the popular name of the plant, and with what purpose and frequency it was used. Samples of plants found in the visited houses were collected and fixed, identified and placed in the Apucaranaense Herbarium (HFAP).

The main species used by the studied population were selected, and some considerations were made about their use and its relation with social-economic and cultural conditions.

Among the registered species, the most frequently found were: rosemary (*Rosmarinus officinalis* L.), true aloe (*Aloe vera* (L.) Burm. f.), coleus *forskohlii* (*Plectranthus barbatus* Andrews), lemon grass (*Cymbopogon citratus* (DC) Stapf.), rue (*Ruta graveolens* L.), pomegranate (*Punica granatum* L.), carqueja (*Baccharis trimera* (Less.) DC.), basil (*Ocimum basilicum* L.), anise (*Pimpinella anisum* L.), mint (*Menta x villosa* Huds), broadleaf plantain (*Plantago major* L.) and comfrey (*Symphytum officinale* L.). The species found are listed in appendix.

Considering data of the interviewed population (100 interviewed), we verified that 63% are over 50 years old, 17% between 40 and 50, and 20% under 40 years old. About instruction level, 76% had fundamental instruction, 17% with high school and 7% with college degrees.

We believe that old age of most of the interviewed, over 50 years old, favors the cumulative knowledge about these plants, transmitted by family tradition, and that the

cultivation in their own houses is made because it facilitates the access to the medicine(9). Toxic effects of medicinal plants are widely published in medicinal literature, and despite the low level of instruction, the interviewed people are aware that the wrong use may generate undesirable side effects, and that some plants are toxic if not used properly(10).

In general, the consumption form of plants in this location is tea (70%), followed by syrup (23%) and topic application (7%). The frequency of use is sporadic (80%), and a minority is daily (20%) which occurs mainly in cases of illness (56%). However, plants may be used as precaution, when there are suspects or symptoms of diseases (44%).

Each species of plant requires a correct way of preparation and use, being it internal or external, and this is why is preoccupying how the population uses these plants(11). The frequency of use is also preoccupying, even though few interviewed make daily use, because excessive use also constitutes a risk to the user, like any other medicine(12). The excessive use of *Aconitum*, for example, can lead to death by suffocation in few hours(13).

Most of who indicate or prescribe phytotherapeutic medicines are relatives (50%) and certainly this knowledge is passed from one generation to another, being incorporated to popular culture. Few people appeal to specialists (15%), what corroborates data from other studies(5, 11, 14).

There is no doubt that popular culture is fundamental, not only to the user of plants themselves, but also to science, which many times begins with common sense information to elaborate improved and commercialized medicines(4). However, it is necessary to appeal to specialists, once that correct use is not only about knowing the plant, but knowing which portion and proportion to be used, as well as how to prepare the medicine(11).

If we take account of the data obtained with the present study, we can notice that interviewed population have plenty information about the plants they cultivate, and know in what situation they should be used, although a great number of plants are used to the same ends, because they have the same popular names. Scientific knowledge is important to the correct identification of the species to be used, and to prevent this ambiguity(11). Thus, it is

possible to use the plant as a medicine with certainty about its therapeutic properties. The fact that most of the population interviewed in this study has only basic instruction may be an impediment to the acquisition of this scientific information.

In summary, use of phytotherapy possibly is being affected by social, economic and cultural issues in the surveyed district. Most of the information about the use and cultivation of medicinal plants is passed on from generation to generation, what explain the differences in the selection of plants for cultivation among families. Despite the low level of instruction of the inhabitants of the district, they recognize the importance of scientific knowledge so that the use of medicinal plants is done correctly. However, due to the traditional cultivation of some these plants for a long time, most of the interviewed people rely more on common sense than on scientific knowledge.

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Appendix: Species list found in work.

Scientific name	Popular name	Scientific name	Popular name
<i>Achillea millefolium</i> L.	Thousand-leaf	<i>Ocotea odorifera</i> (Vell.) Rohwer	Brazilian sassafras
<i>Aloe vera</i> (L.) Burm. F.	True Aloe	<i>Origanum vulgare</i> L.	Oregano leaves
<i>Alternanthera dentata</i> (Moench) Scheygrong	Joyweed	<i>Petiveria alliacea</i> L.	Guinea henweed
<i>Aristolochia esperanzae</i> Kuntze	Birthwort	<i>Petroselinum crispum</i> (Mill.) A. W. Hill.	Parsley
<i>Artemisia absinthium</i> L.	Absinth Wormwood	<i>Pimpinella anisum</i> L.	Anise
<i>Artemisia camphorata</i> Vill.	Camphor bush	<i>Plantago australis</i> Lam.	Mexican plantain
<i>Baccharis trimera</i> (Less.) DC	Carqueja	<i>Plantago major</i> L.	Broadleaf plantain
<i>Canna indica</i> L.	Indian shot	<i>Plectranthus amboinicus</i> (Lour.) Spreng.	Mexican mint
<i>Cissus verticillata</i> (L.) Nicholson & C.E. Jarvis	Princess vine	<i>Plectranthus barbatus</i> Andrews	Coleus forskohlii
<i>Coix lacryma-jobi</i> L.	Job's tears	<i>Plectranthus neochilus</i> Schlechter	Blue coleus
<i>Costus cuspidatus</i> (Nees & Mart.) Maas	Firey costus	<i>Punica granatum</i> L.	Pomegranate
<i>Costus spiralis</i> (Jacq.) Roscoe	Spiral costus	<i>Rosmarinus officinalis</i> L.	Rosemary
<i>Cymbopogon citratus</i> (DC) Stapf.	Lemon grass	<i>Rubus brasiliensis</i> Mart.	Brazilian raspberry
<i>Eugenia uniflora</i> L.	Surinam cherry	<i>Ruta graveolens</i> L.	Rue
<i>Euphorbia tirucalli</i> L.	Finger tree	<i>Salvia officinalis</i> L.	Common sage
<i>Foeniculum vulgare</i> Mill.	Sweet fennel	<i>Sansevieria trifasciata</i> var. <i>laurentii</i> (Del Wild.) N. E. Br.	Variegated snake plant
<i>Hyptis suaveolens</i> (L.) Poit.	Pignut	<i>Sedum dendroideum</i> Moc. & Sessé ex DC	Tree stonecrop
<i>Lippia alba</i> (Mill.) N. E. Br.	Bushy matgrass	<i>Symphytum officinale</i> L.	Comfrey
<i>Malpighia glabra</i> L.	Antilles cherry	<i>Tanacetum vulgare</i> L.	Common tansy
<i>Melissa officinalis</i> L.	Common balm	<i>Tradescantia zebrina</i> Heynh.	Inchplant
<i>Mentha x piperita</i> L.	Peppermint	<i>Tropaeolum majus</i> L.	Nasturtium
<i>Mentha x villosa</i> Huds	Mint	<i>Vernonia condensata</i> Baker	Ironweed
<i>Mikania glomerata</i> Spreng.	Guaco	<i>Vernonia ferruginea</i> Less.	Ironweed
<i>Myrciaria cauliflora</i> (Mart.) O. Berg	Brazilian grape tree		
<i>Ocimum basilicum</i> L.	Basil		
<i>Ocimum gratissimum</i> L.	African basil		
<i>Ocimum selloi</i> Benth.	Green pepper basil		