Popular use of medicinal plants in the Southeast region of Para, Brazil

Uso popular de plantas medicinais no Sudeste do Pará, Brasil

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RESUMO

O objetivo deste estudo foi identificar o uso popular de plantas medicinais no Sudeste do Pará. Realizou-se um estudo semiestruturado onde foi aplicado um questionário composto por questões relacionadas ao perfil socioeconômico, ao uso, forma e frequência da utilização de plantas medicinais, durante visitas às residências de moradores da região. A pesquisa foi aprovada pelo Comitê de Ética em Pesquisa da Universidade Federal do Pará. Dentre os 153 entrevistados, eles tinham entre 18 e 80 anos, sendo a maioria do sexo feminino (71,8%). 62% dois indivíduos declararam-se pardos, seguidos de brancos (29,4%) e pretos (8,4%). A maioria das pessoas possuía como escolaridade o ensino fundamental, eram casadas, e sua renda per capita era de aproximadamente um salário-mínimo. 98% relataram usar plantas medicinais sem cuidar da saúde. A indicação de uso ocorre, em sua maioria, por parentes e as plantas mais recomendadas são Mastruz, Gengibre, Camomila, Erva-cidreira, Lesma, Boldo-do-chile. Os dados mostram um considerável uso de produtos derivados de plantas medicinais e por isso torna-se necessário estratégias de educação em saúde para populações mais vulneráveis e regiões menos desenvolvidas do País.

Palavras-chave: Plantas medicinais; Etnobotânica; Uso terapêutico.

ABSTRACT

The aim of this study was to identify the popular use of medicinal plants in Southeast Pará. A semi-structured study was carried out where a questionnaire composed of questions related to the socioeconomic profile, use, form, and frequency of use of medicinal plants was applied during visits to the homes of residents of the region. The research was approved by the Research Ethics Committee of the Federal University of Pará. Among the 153 respondents, they were between 18 and 80 years old, most of them female (71.8%), 62% two individuals declared themselves brown, followed by white (29.4%) and black (8.4%). Most people had completed elementary school, were married, and their per capita income was approximately one minimum wage. 98% reported using medicinal plants without taking care of their health. The indication for use is mostly by relatives and the most recommended plants are Mastruz, Ginger, Chamomile, Lemon balm, Slug, Chile Boldo. The data show a considerable use of products derived from medicinal plants and, therefore, health education strategies are necessary for more vulnerable populations and less developed regions of the country.

Keywords: Medicinal Plants; Ethnobotany; Therapeutic use.
INTRODUCTION

Medicinal plants have been used for a long time by our ancestors and are known to have an important role in the cure and treatment of some pathologies (BARBOSA et al., 2020). In various communities, these plants symbolize the only form of treatment for certain diseases. It is estimated that approximately 80% of the population of the planet has already used some vegetable to alleviate symptoms of some diseases (LIMA et al., 2017).

The use of these products becomes more frequent because the costs will be lower than industrialized medicines (MACIEL et al., 2018). Furthermore, many people use these substances under the false idea that they present little or no risk, this fact being exacerbated due to the indication, in its majority, being by people without technical or scientific knowledge such as friends and family (CAMPOS et al., 2016).

In the northern region of Brazil, the plants and their use are associated with medical-therapeutic knowledge, transmitted orally, which has its founding framework in the conquest and non-trafficking of black people from Africa to Brazil (MESSIAS et al., 2015). Based on two established legal frameworks, it is important that the medicinal plants have for the Brazilian and Amazonian communities, that the pharmaceutical assistance and/or collective health can dialogue (PASSOS et al., 2018). She describes actions that aim to provide, protect, or restore health, food or medicine as a central input and its rational use. Likewise, if the medicinal plants are assumed as this input, it is possible to select those that are consistent with the nosologically data described by the users, proceeding to a technical selection, based on agronomic and pharmaceutical knowledge, thus seeking an interface between popular uses and collective health (PINHEIRO et al., 2020).

Some works describe the ethnomedical knowledge and the uses of medicinal plants in their various contexts (AZEVEDO et al., 2006; GOMES et al., 2008; PIRES et al., 2009; CARVALHO et al., 2016). However, there is still a gap in the relationship between the uses of these spaces and the pharmaceutical and community sciences, which would promote a dynamization in the efficiency and safety of these applications, collaborating with the popular knowledge from a transdisciplinary perspective, favoring the rationalization of forms of use (DANTAS, 2019). In this context, this study aims to
analyze the popular use of medicinal plants in Southeast Para, Brazil.

METHODS

The city of Maraba is a Brazilian municipality located in the southeast of the state of Para, North Region of the country. It is located 543 km from Belem-PA, at a latitude of -5.36997 and longitude of -49.1169, with an estimated population of 283,542 inhabitants (IBGE, 2022).

A semi-structured questionnaire was used, made up of 35 questions related to the use of medicinal plants in visits to the residences of residents, in accordance with the standards established by the Research Ethics Committee of the Institute of Health Sciences of the Federal University do Pará (authorization number: 6,134,082). The method used to establish how many people needed to be interviewed was to select a sample of 0.05% of the adult urban population at the municipal headquarters, or which resulted in 153 households. Already to institute which as the people who should be interviewed, they are made randomly, by means of the lottery of the streets in two different neighborhoods of the city of Maraba-PA (CEBRIÁN et al., 2000).

The interviews are from August 2022 to January 2023 from the second to the sixth fair, our hours are from 08:00 a.m. to 06:00 p.m. During the interviews, the people will report on their sociodemographic data, the use of medicinal plants, for what reasons these plants were used, the indicated burning, if the products present toxicological risks, if the problem was solved or not so that it could be justified or use, form, and frequency of use.

Statistical analysis

The data obtained were organized in a database in Microsoft Excel® software for descriptive statistics and the results were categorized and presented in percentage tables.

RESULTS

A total of 153 interviews were carried out, the users were between 18 and 80 years old, the majority being female (71.8%). 62% two individuals declared themselves brown, followed by whites (29.4%) and blacks (8.4%). Most of the people possessed, such as
schooling, or essential education, they were married, and their per capita income was approximately a minimum wage.

Regarding the use of medicinal plants, 150 people (98%) reported using medicinal plants for their health care. The indication of use occurred, in its majority, by relatives (73.8%), followed by friends (18.9%), internet (5.2%) and neighbors (1.9%). 100% of the two interviewees said that medicinal plants do not cause ill health and only 39.8% affirmed that they prefer to use medicines prescribed by a professional prescriber. After use, 68.6% revealed that the use of vegetal products solved the health problem with which they were affected. The medicinal plants used by the interviewees are described in Table 1, well as indication and time of use (Table 1).

**Table 1 - Main medicinal plants used, mentioned indication, form of use and frequency of use.**

<table>
<thead>
<tr>
<th>Medicinal plant (n=260)</th>
<th>Referred uses</th>
<th>Way of use</th>
<th>Frequency of use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mastroz (40)</td>
<td>“Sor”, “Flu-like symptoms”, “Foolishness”, “Failure”, “slimming”, “Nausea”</td>
<td>Cha</td>
<td>Daily (2)</td>
</tr>
<tr>
<td>(Dysphania ambrosioides)</td>
<td></td>
<td></td>
<td>Sporadically, in case of symptoms (38)</td>
</tr>
<tr>
<td>Ginger (36)</td>
<td>“Flu-like symptoms”, “Sore throat”, “Weakness”</td>
<td>Cha</td>
<td>Daily (33)</td>
</tr>
<tr>
<td>(Zingiber officinale)</td>
<td></td>
<td></td>
<td>Sporadically, in case of symptoms (3)</td>
</tr>
<tr>
<td>Camomile (35)</td>
<td>”Pain relieving”</td>
<td>Cha</td>
<td>Daily (30)</td>
</tr>
<tr>
<td>(Matricaria recutita)</td>
<td></td>
<td></td>
<td>Sporadically, in case of symptoms (5)</td>
</tr>
<tr>
<td>(Melissa officinalis)</td>
<td></td>
<td></td>
<td>Sporadically, in case of symptoms (5)</td>
</tr>
<tr>
<td>Slug (28)</td>
<td>“slimming”, “Clean skin”, “Calming”, “Cerebral vascular accident”, “wounds”, “Pain” “Nausea”</td>
<td>Cha</td>
<td>Daily (20)</td>
</tr>
<tr>
<td>(Aloe vera)</td>
<td></td>
<td></td>
<td>Sporadically, in case of symptoms (8)</td>
</tr>
<tr>
<td>Boldo-do-chili (26)</td>
<td>“Flu-like symptoms”</td>
<td>Cha</td>
<td>Daily (1)</td>
</tr>
<tr>
<td>(Peumus boldus)</td>
<td>“Soreness in the belly”, “Stupidity”, “Nausea”</td>
<td></td>
<td>Sporadically, in case of symptoms (26)</td>
</tr>
<tr>
<td>Plant</td>
<td>Common Name</td>
<td>Actions</td>
<td>Use</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------------------------</td>
<td>----------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Copaiba (19)</td>
<td><em>Copaifera langsdorffii</em></td>
<td>“Pain in the body”, “Inflammation”</td>
<td>Daily (0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Topical use”</td>
<td>Sporadically, in case of symptoms (19)</td>
</tr>
<tr>
<td>Andiroba (17)</td>
<td><em>Carapa guianensis Aubl.</em></td>
<td>“Pain in the body”, “Inflammation”</td>
<td>Daily (0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Topical use”</td>
<td>Sporadically, in case of symptoms (17)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Cha, Smoked”</td>
<td>Sporadically, in case of symptoms (0)</td>
</tr>
<tr>
<td>Stone break (10)</td>
<td><em>Phyllanthus niruri L.</em></td>
<td>“Inflammation”, “Pain”</td>
<td>Daily (0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Cha”</td>
<td>Sporadically, in case of symptoms (10)</td>
</tr>
<tr>
<td>Açafraão-da-terra (1)</td>
<td><em>Curcuma longa</em></td>
<td>“Inflammation”, “Trembling”, “infection”</td>
<td>Daily (0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Cha”</td>
<td>Sporadically, in case of symptoms (1)</td>
</tr>
<tr>
<td>Cotton (1)</td>
<td><em>Gossypium hirsutum L.</em></td>
<td>“Sore not stomach”</td>
<td>Daily (0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Cha”</td>
<td>Sporadically, in case of symptoms (1)</td>
</tr>
<tr>
<td>Foil of graviola (1)</td>
<td><em>Annona muricata</em></td>
<td>“Diarrhea”</td>
<td>Daily (0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Cha”</td>
<td>Sporadically, in case of symptoms (1)</td>
</tr>
<tr>
<td>Guaco (1)</td>
<td><em>Mikania glomerata</em></td>
<td>”Stroke”</td>
<td>Daily (1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Cha”</td>
<td>Sporadically, in case of symptoms (0)</td>
</tr>
</tbody>
</table>

**Source:** Souza et al., 2023.

**DISCUSSION**

The use of medicinal plants is very common in urban and rural populations, and the species count in Brazil, especially in the Amazon region, is quite high (SILVA et al., 2019). In the study, it was possible to verify that adults, mostly female, brown, with low education and income, were the main consumers of this therapeutic device. Women are
traditionally seen as protectors of biodiversity and are regularly present in the cultivation of medicinal plants and folk medicine practices (SOUZA et al., 2013). Furthermore, the underprivileged classes of the population have always had impediments to obtaining industrialized medicines, due to high commercialization prices (CARVALHO et al., 2016). On the other hand, access difficulties favored the maintenance and dissemination of popular knowledge about the treatment of illnesses with plant products.

The knowledge obtained in several studies shows that due to financial adversities, families seek medicinal plants to improve diseases (ELISABETSKY, 2003; FIGUEREDO et al., 2014; MACIEL et al., 2018). Therefore, in a survey carried out in the state of Espirito Santo, it was able to identify that 71% of respondents were female and low-income, thus validating the findings of our research (GREGORY, 2019). However, it is noteworthy that educational campaigns, which intend the rational use of medicinal plants, need to be attributed to all audiences in our society, regardless of whether they have some level of education (SILVA et al., 2019).

The use of medicinal plants is a classic secular custom, transferred from generation to generation in the Amazon. Usually, they are applied after informing friends and family, since few doctors designate the use of these products. Therefore, this study strengthens what has been addressed for many years by scholars in the area. Through it, we were able to emphasize that most of the interviewees use medicinal plants for therapeutic purposes (PIRES et al., 2009; HEINRICH, 2015).

However, this information contrasts with the research by Souza et al. (2013), where the authors state that only 29 people used medicinal plants out of the 150 interviewees. However, it corroborates the study by Silva et al. (2019) on the use of medicinal plants by residents of the state of Parana.

In our study, the most mentioned plants were Mastruz, Ginger, Chamomile, Lemon Balm, Aloe Vera, Chile Boldo, thus reaffirming, with the research produced by Gomes et al. (2008). In addition, the application of these plant products has predefined purposes in the literature, such as: pain, stomach pain, inflammation, soothing, infection and others (AMOROZO et al., 1988; MACIEL et al., 2018). Likewise, popular knowledge, dialoguing with scientific knowledge, even if it is not precisely known when this practice had its origin, shows that the clarity of indication and use was possibly transferred orally from generation to generation due to their antecedents (LIMA et al.,
2017). For this reason, the use of medicinal plants is still seen as a choice in the search for therapeutic solutions, especially by traditional low-income populations and peoples, as it is an efficient, cheap, and culturally propagated option (BARBOSA et al., 2020).

According to the form of use, it was noticed that tea was the most prevalent, a general designation given to preparations containing infusion and decoction techniques. This result coincides with what was announced in the study by Campos et al. (2016) and Barbosa et al. (2020), this method being pointed out by 36.5% and 67% of the participants, respectively. Most respondents reported that they use teas occasionally and for the treatment of self-limited illnesses. However, citation was also made about daily use. This is relevant information, as there must be incentives for the continued education of these people for the rational and conscious use of these products.

**CONCLUSION**

The data from this work show a considerable use of products from medicinal plants by the population of Marabá, located in southeastern Para. Medicinal plants in the form of tea, was the most common way of curing or preventing diseases, with women as the main users of this therapeutic form. Therefore, the lack of information about the use of these products demonstrates the imminent risks, especially in the continuous use of medicinal plants by users in the region.
REFERENCES


