

The Approach on the Use of Medicinal Plants in the Horto Community in Juazeiro do Norte-CE

Uma Abordagem Sobre o Uso de Plantas Medicinais na Comunidade de Horto em Juazeiro do Norte-CE

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Abstract

Popular medical knowledge about the therapeutic uses of plant species results from a series of cultural influences passed on to subsequent generations through cultural groups that live closely with nature, observing it and exploring its potential to keep the heritage of knowledge alive. This study aimed to promote the mapping of the use of medicinal plants in the Horto neighborhood community, in the municipality of Juazeiro do Norte, Ceará, from March to July 2016. For this, semiannual visits were made, the data were organized based on the knowledge and selection of plants used for the population. After this phase, field visits, on-site workshops, and semi-structured interviews were carried out. The data showed that many of the plants used by the community have therapeutic indications scientifically validated with literature data. This study exposed that, in a way, the residents of that community are effectively consuming these plants; however, no observations such as inadequate dosage, possible drug interactions or toxicity were cited. For this reason, this work reveals the need for professionals linked to the Basic Health Units to be qualified to guide the preparation, dosages used, and information on therapeutic safety, conditions of use of these products.

Keywords: Peumus. Ethnobotany. Medicinal Plants. Health Promotion.

Resumo

O conhecimento medicinal popular em torno dos usos terapêuticos das espécies vegetais é resultante de uma série de influências culturais passado para gerações seguintes através de grupos culturais que convivem intimamente com a natureza, observando-a e explorando as suas potencialidades para manter vivo o patrimônio do conhecimento. Este estudo teve como objetivo promover o mapeamento do uso de plantas medicinais na comunidade do bairro do Horto, no município de Juazeiro do Norte, Ceará, nos períodos de março a julho de 2016. Para isso, foram realizadas visitas semestrais, os dados foram organizados com base no conhecimento e seleção das plantas utilizadas para a população. Após essa fase, foram realizadas visitas de campo, oficinas in loco e entrevistas semiestruturadas. Os dados mostraram que muitas das plantas utilizadas pela comunidade apresentam indicações terapêuticas validadas cientificamente com dados da literatura. Este estudo expôs que, de certa forma, os residentes dessa comunidade estão efetivamente consumindo essas plantas; no entanto, nenhuma observação como dosagem inadequada, possíveis interações medicamentosas ou toxicidade foi citada. Por este motivo, este trabalho revela a necessidade dos profissionais vinculados as Unidades Básicas de Saúde serem qualificados para promover uma orientação do preparo, dosagens utilizadas e informações sobre a segurança terapêutica condições de uso destes produtos.

Palavras-chave: Boldo. Etnobotânica. Plantas Medicinais. Promoção da Saúde.

1 Introduction

The sum of three planes can describe human health: the collective plane, the individual plane, represented by the physiological functionality, and the individual's psychological plane. The individual plane comprises health as the biological aspects that suffer social influences resulting from the general organic and physiological condition and the interrelation of individuals, groups, and social classes. Finally, the collective plane, which is expressed by the broader social process and is related to health determinants such as family, home, micro area, neighborhood, municipality and region. The imbalance in any of these aspects makes the individual susceptible to illness (VIANNA, 2011).

From this need for intervention, a milestone emerges in the consolidation of the Unified Health System (SUS), the

National Health Promotion Policy (PNPS), which reaffirms the importance of the debate on the individual and social determinants of health in the health-disease process. PNPS aims to promote quality of life with a focus on reducing vulnerabilities and health risks related to living conditions, working conditions, housing, the environment, education, leisure, culture, access to essential goods and essential services (MALTA *et al.*, 2014). PNPS also advocates health promotion as a cross-cutting method, which identifies possible factors that threaten the population health and, as a result, constitutes measures to prevent and promote health (CRUZ; LICIANE; SAMPAIO, 2012).

In this scenario, integrative and complementary health practices become a valid option for many health services users, as they are effective alternatives for disease prevention

and health recovery based on natural therapies and alternatives that facilitate the therapeutic bond and value popular knowledge. Integrative and complementary practices also value the subject's autonomy in the therapeutic process, thus motivating self-care. (JUNGES *et al.*, 2011).

The use of medicinal plants for therapeutic purposes is as old as the emergence of the human species on earth, and this practice transcends from generation to generation (BADKE *et al.*, 2011). Due to its importance as a treatment option, in 2006, government public policies rescued plants use supported by the creation of the National Policy for Integrative and Complementary Practices (PNPIC). This policy validates the use of medicinal plants, contributing to the safe use of plant species and valuing traditional knowledge, humanized and holistic medicine (FEITOSA *et al.*, 2016). Popular knowledge surrounding the therapeutic uses of each plant species is resultant from a series of cultural influences, and developed through cultural groups, which still coexist intimately with nature, closely observing it and exploring its potentials to keep the heritage alive (FIRMO *et al.*, 2012).

This study aimed to promote the mapping of the use of medicinal plants in the Horto neighborhood community, in the municipality of Juazeiro do Norte, Ceará, from March to July 2016 and compare the data obtained with the scientific literature.

2 Material and Methods

This study has a qualitative character through the proposal of ethnographic research through workshops and semi-structured interviews. This methodology fosters a dense knowledge about the social context and the behaviors that define and influence the local culture (LENARDT; MICHEL; PEREIRA DE MELO, 2011).

The research was carried out in the city of Juazeiro do Norte, at Cariri region, Ceará, specifically at the Horto community. This micro-region is marked by the religiosity that comes from faith in Father Cícero and intense economic activity that accentuates social inequality and reveals an oasis in the middle of Sertão, attracting people from different regions with diverse knowledge and practices. (DA COSTA BRAGA, 2014).

Data collection was carried out from March to July 2016, using structured interviews in continuous or sporadic visits at random. These visits were divided into two stages: the first was to collect information about the plants used to compose the bibliographic survey, later carried out in the databases of the Virtual Health Library (VHL) databases and Latin American and Caribbean Literature of Health Sciences (LILACS). After this phase, the researchers made visits with a script previously prepared based on the previous stage. On-site workshops were used to allow a better understanding of the community's reality through oral expression. It is worth mentioning that the first workshop served as an instrument for

the preparation of subsequent activities.

To carry out the second research phase, an interview script was used, containing semi-structured questions that contemplated socio-demographic variables of the individual's characterization: sex, age, marital status, education, and guiding questions about the community used medicinal plants for prevention and health promotion. The research subjects were interviewed individually, in a reserved place, and at different times of their residence or work environment.

The research met the Guidelines and Norms requirements for Research with Human Beings - presented in Resolution 466/12 of the National Health Council (CNS), on the ethical issues of research involving human beings. The research project was forwarded to Centro Universitário Doutor Leão Sampaio ethics committee, being approved. The inclusion criteria were followed to participate in the research: adult subjects who lived in the community of Morro do Horto and who accepted to participate in the research and as exclusion criteria: people who did not live in the community of Morro do Horto or who did not agree to participate in the research.

3 Results and Discussion

After applying the inclusion and exclusion criteria, 15 people were selected who used or had knowledge of medicinal plants. Knowledge of the socio-demographic profile is relevant to provide information on the economic and gender determinants found in the population studied and, thus, to understand their influence in searching for medicinal plants. Table 1 shows the variables related to the socio-demographic and socio-economic data.

Table 1 - Sociodemographic and economic profile of research subjects

Variables	%
SEX	
Male	13
Female e	87
Total	100
Marital Status	%
Single	47
Married	40
Divorced	13
Total	100
Education	%
Elementary School completed (USA equivalent: High School Freshman; UK equivalent: Secondary School Year 10)	20
Elementary School incomplete (USA equivalent: less than High School Freshman; UK equivalent: less than Secondary School Year 10)	33
High School completed (USA equivalent: High School Senior; UK equivalent: College Year 13)	33
High School incomplete (USA equivalent: less than High School Senior; UK equivalent: less than College Year 13)	13
Total	100

Family Income	%
Up to 1 minimum salary	73
From 1 to 4 minimum salaries	27
Total	100
Utilizes Medicinal Plants	%
Yes	93
No	7
Total	100

Source: Research data.

Participants presented with ages ranging from 18 to 66 years, with the majority in the age range from 47 to 64 years. As for gender, a more significant number of women were obtained (87%), and a minority of 47% were single women. Women remember the medicinal plants more efficiently, as they have more facilities to permeate sociability spaces among neighbors and exchange knowledge similar result was observed in other studies such as Pinto *et al.* (2018).

The results showed that the majority of participants had not completed primary schooling. These data corroborate with other ethnobotanical studies, such as Ramos *et al.* (2016), who demonstrated that the most inferior society classes practiced more often the search for therapeutic alternatives, however, it was evident that there were no people with higher education training in the majority of the working-age population. Therefore, it is not possible to infer that schooling also influences the use of medicinal plants in health care.

As for family income, it was notorious that most of the interviewees had a monthly income of up to one minimum wage. This was also found in the study by Ferreira *et al.* (2020), portraying that the population low purchase power causes them to seek more health care at SUS.

Almost all the respondents reported using medicinal plants, showing that the use of herbs is still widespread to take care of health. The use of the plants under study was justified when the individuals were in a state of social and economic vulnerability and when the problem was considered to be less serious. However, in the study by Castro e Figueiredo (2019), they point out that plants were used to prevent diseases. The greater acceptance of the population can explain this fact by phytotherapy to minimize the risks to which the population is subject, as they understand that these actions to prevent diseases and injuries represent less risk of unwanted effects.

When asked about care for various health problems using medicinal plants, it can be seen in the following reports:

Thematic category one:

Use of medicinal plants in health care.

[...] I use in my own care eucalyptus, mint, chamomile, lemon grass [...] mallow of the kingdom, bold, macela, nutmeg [...] lemon balm, rue, rosemary. [...] barbatimão peel [...] knife breaker, torem leaf, [...] umburana, [...] pomegranate seed, mallow colony [...] dill, cinnamon bark [...] plum bark [...] 25 seed tea and lavender leaf. UPCS.

The results show that the most frequently used plant is “boldo” (*Peumus boldus*), prepared in the form of tea. The other plants mentioned had a small value when compared to bold. In the study of Bispo *et al.* (2019), it showed that “boldo” (*Peumus boldus*) was the most used medicinal plant, followed by “Quixaba” (*Sideroxylon obtusifolium* (Humb. ex Roem. & Schult.) T.D. Penn.), “Camomila” (*Matricaria recutita* L.), “Erva-doce” (*Pimpinella anisum* L.) and “Macela” (*Achyrocline satureioides* (Lam.).

Regarding the indication of the use of plants, it was observed that 80% of the people used the herbs as a family indication for therapeutic purposes, corroborating with similar studies by Cavalcanti *et al.* (2014).

Thematic category two: Reasons for the use of medicinal plants in health care.

[...] I use the plants because they taste good and are good for my health [...] it is good for inflammation [...] the effect is faster [...] I use for because of my blood pressure [...] I use plants as teas to soothe [...] I see results in the use of plants [...] I use for discomfort [...] I use it because it is good for inflammation [...] I believe in it and I'm good [...] I feel good [...] because it works, it works [...] I like to use [...] I like to use because of stroke. N.UP.M

It was possible to perceive in most of the speeches above the representation of the interviewees' belief as to the treatment power and the symptoms remission, as in inflammation and malaise. This study emphasizes the credibility of plants' therapeutic properties with indications of inflammatory process treatment. Many compounds present in the medicinal plants have antioxidant activity or reduces the inflammatory process caused by prostaglandins or other inflammatory mediators, as the cytokines (RIBEIRO *et al.* 2018). Other people use medicinal plants because it has a lower purchase cost and it is easy to prepare (BEZERRA *et al.*, 2013).

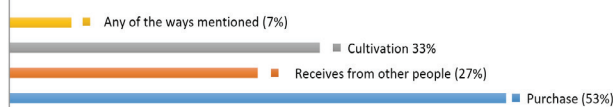
Thematic category three: Use of medicinal plants in the practice of caring.

[...] I use cinnamon because it is very good for stomach pain [...] I usually use eucalyptus [...] when I feel pain in the spine I use wormseed [...] I use knife breaker because it relieves pain [...] nutmeg because the pain fades away [...] Coleus forskohlii, because it fades away fast and I do not like pharmacy medicine [...] tea of the 25 seeds because I feel good [...] eucalyptus, because it solves [...] nutmeg because it was indicated to me and I liked it, it solves [...] plum bark because it solves the pain [...] bold, because it solves (...) cinnamon because it is very good for pain in the stomach [...] anador leaf, because the pains fades away [...]. UPMC

In this comment, it can be seen that the use of medicinal plants in health care is a prevalent practice, especially in vulnerable populations, as an alternative treatment for allopathy. Faith in healing through plants' use is a reality proven by the correct use of medicinal plants, not only in the empirical belief of their efficacy but also on scientific evidence supporting improving the users' quality of life. As a way of obtaining the plants for the use of care, purchasing was identified with a higher percentage than cultivating (Figure 1).

In the study by Bezerra *et al.* (2013), the highest percentage of plants were obtained from the crop itself or in the neighbor's yard, diverging from the results of this study. The medicinal plants cultivation in backyards is considerably varied in the regions of Brazil, however, home cultivation represents for low-income families, a source of income that helps in family expenses with the sale of the same. However, in the urban community the practice of purchasing in spaces such as open markets and traditional markets is common, partly explained by the convenience and variability of offers (CRUZ *et al.* 2017). However, in the urban community the practice of purchasing in the public market is common, partly explained by the convenience and variability of offers.

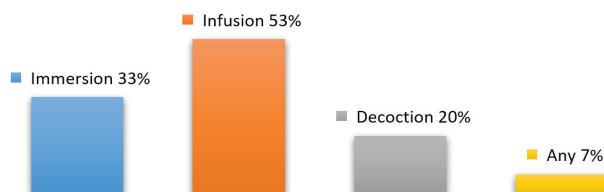
Figure 1 - Obtaining of medicinal plants by population



Source: Research data.

When asked how to prepare the herbs, 53% responded by infusion, in second place (33%) by immersion, and only 7% of the participants use another way. This result can be justified by the low cost and ease of preparation. Several ethnobotanical studies also point to this direction (BITU *et al.*, 2015; MACEDO *et al.*, 2015).

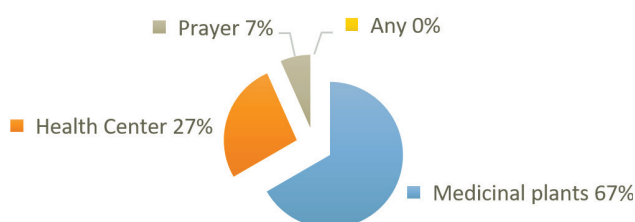
Figure 2 - How the interviewees prepared the medicinal plants for use



Source: Research data

Figure 3 presents the health practice options that respondents usually adopt when they feel bad. Most responded that they drink herbal teas for the quick symptoms relief. In a lower percentage, the interviewees said that when they are more fragile or with more severe symptoms, they seek the nearest Health Center, and 7% seek the healer because they believe that the symptoms are related to the spiritual part.

Figure 3 - Care practices adopted by the population studied in the face of a disease



Source: Research data

4 Conclusion

The study allowed a more relevant knowledge about health practices and general knowledge about the use of medicinal plants by the Geosite Morro do Horto residents, in the municipality of Juazeiro do Norte. It was possible to verify that this population's knowledge and health practices are based on beliefs, experiences, and information that span generations. This characteristic becomes relevant to the community since Brazil has a great wealth in biodiversity and medicinal plants. Many of the plants mentioned in the study have already had their therapeutic indications validated in the scientific literature. However, the safety in the use of these plants has not been established, a fact that leads us to reflect on the existence of a gap in the training of Primary Care health professionals with a technical-scientific basis to offer guidelines that guarantee the effectiveness and safety of this therapy for therapeutic purposes.

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