ABSTRACT: The objective of this study was to identify the origin of the knowledge and practices regarding the therapeutic use of medicinal plants, by individuals living in a community in the central region of Rio Grande do Sul, Brazil. This is a qualitative study, in which the data collection was performed through semi-structured interviews and participant observation. The participants were selected through their own relationship network. A thematic analysis of the data was performed. It was found that the participants learn how to use and manage medicinal plants in their family context; it is highlighted that women have a strong influence on the transmission of this particular knowledge; they usually obtain the plants at their own homes; and most plants that are used also have their indication supported by scientific evidence. It is believed that the present study is important for nurses and the society as a whole, as it points to the need for an approximation between popular and scientific knowledge, as well as the need to invest in projects that address this particular topic.

INTRODUCTION

Since the ancient times, human societies accumulate information and experience about the environment around them, so they can interact with it and obtain their needs for survival. Among the many practices disseminated by popular culture, plants have always had a fundamental importance for many reasons, particularly because of their therapeutic use that is applied across generations.

In the beginning of civilizations, care and health were developed by women, who obtained their knowledge within the family, being exempt from any prestige or social power. Therefore, it became clear there was a close relationship between women and plants, because they were the main therapeutic resource used to treat the health of people and their families.

However, with the advancements in health sciences, new ways to treat and cure diseases emerged, such as the use of industrialized medications, gradually introduced in people’s everyday lives, not only through healthcare professionals but also through the advertisement of the laboratories that manufactured those drugs, with the promise to cure a variety of diseases.

In spite of the development of synthetic drugs, medicinal plants remained as an alternative form of treatment in several parts of the world, and over the last decades it has been observed there has been an increase in the use of plant-based solutions for therapeutic purposes.

Currently, several factors have contributed to the increase in the use of medicinal plants, such as the high cost of industrialized drugs, the difficult access of the population to medical care, and the tendency to use natural products. It is believed that care using medicinal plants is more beneficial to human health, provided the user knows about its purposes, risks and benefits. Furthermore, healthcare professionals, particularly nurses, should consider popular medicinal plants in their practice, thus promoting unique care, centered on the beliefs, values, and lifestyles of the people receiving the care.

The legitimization and institutionalization of healthcare approaches, focused on traditional medicine in Brazil, was initiated in the 1980’s, particularly after the Unified Health System (Sistema Único de Saúde - SUS) was established. Years later, the National Policy for Integrative and Complementary Practices (Política Nacional de Práticas Integrativas e Complementares - PNPIC) was created in the SUS, implemented by the Ministry of Health Ordinance 971, on May 3, 2006. The objective of the PNPIC was to broaden the therapeutic choices for SUS clients, including the use of medicinal plants, guaranteeing safe, effective and quality access to phytotherapeutics and related services, from the perspective of comprehensive healthcare. In addition, the National Program for Medicinal Plants and Phytotherapeutics, implemented in 2007, aims to “guarantee the Brazilian population a safe access to and rational use of medicinal plants and phytotherapeutics, promoting a sustainable use of biodiversity, and the development of the productive chain and the national industry”.

With a view to reach this goal, one of the main propositions of the referred program is to “promote and acknowledge the popular and traditional practices involving the use of medicinal plants, phytotherapeutics and home remedies”. Thus, in February 2009, the Ministry of Health announced the National List of Medicinal Plants of Interest to the SUS (Relação Nacional de Plantas Medicinais de Interesse ao SUS - Renisus), which includes 71 plant species used by popular wisdom and scientifically confirmed.

Considering the public policies, and in regards to the popular healthcare practices, the objective of the present study was to identify the origin of popular knowledge and practices regarding the therapeutic use of medicinal plants by a community located in the central region of the state of Rio Grande do Sul (RS). The main sociocultural relevance of the present study is to establish a connection between popular and scientific knowledge, thus allowing for an approximation between people and healthcare services, including the professionals working there, with special emphasis, herein, on nurses, with the perspective of comprehensive healthcare, presupposes respecting the differences and the sociocultural contexts of the people receiving the care.

METHODOLOGY

This exploratory-descriptive study was performed in the geographical area covered by a Family Health Unit (FHU) located in the central region of Rio Grande do Sul, Brazil. The total population of clients of the referred FHU is 710 people, and this is the main source of public health services in the studied region.
The participants were ten individuals - eight women and two men - who lived in the area covered by the referred FHU. The inclusion criteria were: be a resident of the area covered by the Family Health Unit, have 18 years of age or more, and use medicinal plants for healthcare. The subjects were selected considering their indication of people from their relationship network, which consists of a process in which “each participant refers other members from their network for subsequent investigations”.

The aforementioned network was initiated when the community health agent from the FHU, who lived in the neighborhood and knew a large part of the local population, contacted one individual who used medicinal plants and scheduled the first interview. After being interviewed, the participant indicated two people who he believed also used medicinal plants for healthcare, and, successively, each interview helped form the relationship network was formed.

![Figure 1 – Relationship network comprised of the study participants](image)

In order to know the origin of the participants’ knowledge and practice regarding the therapeutic use medicinal plants for healthcare, data collection was performed through semi-structured interviews and participant observation conducted at their homes, performed in the period from March to June of 2008, always in the morning, between 8 and 12 o’clock. This type of observation is used to complement the data from the interview, and it does not require a longer period of interaction as do traditional participant observations. The interviews were recorded using a digital device (MP4) and later transcribed.

With the purposed to organize the data collection, an interview and observation script was created, consisting of six items: origin of the plant (purchased, own garden, or donation); harvest, cleansing, storage and conservation of the plants; mode of preparation; part of the plant that is used (leaves, stem, flower, fruit, seed and root); condit-
tions of the plants (state of conservation, cleanliness, color, smell, taste); storage and conservation after the preparation (if the tea, for instance, was prepared at the time of drinking, kept warm or cold in a thermal bottle, in the refrigerator or at room temperature); and the place it was planted (garden, accessible to domestic animals, close to septic tanks, open sewers, close to breeding areas). The referred items were observed and noted on the field diary.

The data from the interviews and the observations made on the field diary were submitted to thematic content analysis, which consists of identifying the meaning units comprising a communication. Three stages are involved: pre-analysis, which consists in choosing and organizing the material; the exploration of the material, a classificatory operation used with the purpose of reaching the meaning unit of the text; results were treated according to the inference and interpretation. Hence, the analysis was performed after reading the material and identifying the reality, thus revealing the categories according to their relevance for the study.

It is emphasized that the present study is in agreement with the ethical premises of the National Health Council/Ministry of Health Resolution 196, of October 10 1996, which defines the principles of bioethics regarding human research. The research proposal was approved by the Research Ethics Committee at Universidade Federal de Santa Maria, under number 23081.020270/2007-64 and CAE 0207.0.243.000-07.

All the participants signed the Free and Informed Consent Form, after being individually informed about the study objectives, as well as of the benefits it would provide, and, yet, that they would be assured privacy and confidentiality in terms of their identification, and only the information they provided would be used in this and further studies. Therefore, the participants were assigned codenames, using the names of plants, as presented in Figure 1. Finally, it was also explained that the study did not involve any risks, nor were they obligated to participate, as they could withdraw from the study at any time. Each participant agreed on a time when they could be observed handling the plants and when the conversations would be recorded for study purposes.

RESULTS AND DISCUSSION

In order to discuss about the origin of the participants’ knowledge and practices regarding the therapeutic use of the medicinal plants, the following categories were used: “I grew up with this”, which reports how they learned to use the medicinal plants; “I plant to have them at home”, a description of how they the plant is obtained; and “Approximation between popular knowledge and scientific knowledge”.

“I grew up with this”

In this category, it is described how the participants learned to use the medicinal plants. When asked, seven participants mentioned that their first contact with the medicinal plants occurred in their childhood, when they saw this practice being performed by their mothers and grandmothers. The other three participants reported they learned this practice as adults, motivated by their need because of the difficult access to healthcare services, especially at night and/or due to a personal interest, because it is a natural therapy.

In general, the knowledge was transmitted verbally from one person to the other, which agrees with studies that mention that the first manifestations of this particular knowledge being during childhood, and pass from one generation to the other. One example can be observed in the statement by Ms. Sene, who, when asked about how she learned to use the plants, mentioned: since childhood, since we were children. I grew up with this [tea]. My mother [taught me]. Mother was very helpful with these things for tea... (Sene).

This manifestation reinforces the mode of knowledge transmission about medicinal plants, supported on the affective relationship between the woman-mother and her children, in an attempt to pass on her knowledge to the next generations. Nearly all participants mentioned having learned to use medicinal plants with women; eight mentioned the mother, grandmother, or older sister as the main transmitter of this knowledge.

The female importance, above all, of the mother figure in transmitting this type of knowledge, is expressed in the following reports:

[...] I learned with my mother, who taught it. She prepared it when we were little. Then she had us prepare it. She would put it in a little cup, and then she would come and put boiling water on top. (Chamomile).

[...] it was my mother. She taught me when I was little [...]. She had this thing about making tea (Artemisia).

It is observed that, in the family context, women are still a reference, from a cultural point
of view, of health care to those living under her roof. Depending on the contexts in which she lives, the female figure is often overwhelmed, because of the cultural values assigned to her, forcing them to assume responsibilities that could be shared with other members of the family.\textsuperscript{17}

On participant said she learned on her own, by testing the properties of the plant on herself. Another participant mentioned learning about the curative property of the plants through an older women, a stranger, who casually passed in front of his house, talked to him, learned about his backache and recommended he use sarsaparilla, in the form of a home-made tea.

The answers as to how the participants learned to use the medicinal plants agree with the studies on this particular topic, highlighting that most use them to take care of their own health or of the health of family members, and that this knowledge is usually transmitted in the socio-familiar context. It is, therefore, confirmed that the therapeutic use of plans is a millenary practice, historically constructed on common sense knowledge, which combines culture and health, considering that these aspects do not occur alone, but, rather, are inserted within a historically determined context.\textsuperscript{15-18}

Throughout the interviews, it was notices how fulfilling it was for the participants to remember of the family relationships, the affection and tenderness they received from the person who taught them this complementary healthcare practice. These memories suggest that learning and maintaining this practice persisted through time, in part, because of these socio-affective bonds.

In addition to the fact that the access to this type of knowledge is disseminated by family and neighborhood relationships, scientific studies on these plants have also provided the population with information through several types of media, such as newspapers, magazines, radio and television. It was observed that five participants were interested in studying and improving their knowledge about the therapeutic properties of plants. They had books, magazines, and notebooks with information about the use of medicinal plants, which they obtained in the media and other sources. Two of these participants mentioned they have delivered lectures about herbs to the community, in the FHU health groups, as a way to disseminate and increase their knowledge.

Although the knowledge and practices are kept in their original places, something transits among them, because some individuals have access to the production of science and vice-versa. In this sense, they maintain their beliefs rooted to their family culture, and some seek, in scientific knowledge, as in the case of these five participants, to understand and complement their popular knowledge.

On the other hand, science is interested in this popular knowledge, including in its expropriation. Scientific evidence of the use of some medicinal plants is one of the ways of showing the motivators of this rescue.\textsuperscript{19} For this reason, the Ministry of Health announced the National List of Medicinal Plants of Interest to the SUS (Relação Nacional de Plantas Medicinais de Interesse ao SUS - Renisus), which includes 71 plant species used by popular wisdom and with scientific evidence, with the objective to guide studies that could support the creation of a list of the available safe and effective phytotherapeutics for the population for the treatment of several diseases.\textsuperscript{8} Therefore, it is highlighted that it is necessary to approximate family – popular – knowledge and scientific – professional – knowledge, valuing the previous experiences of the community, because there are intimately imbribated with their cultural context. Hence, it is evinced that the knowledge and practices of care must be shared. In this view, the present study emphasized the importance of forming an alliance between popular and academic knowledge, thus allowing for the reconstruction of the knowledge about complementary health practices.\textsuperscript{4-17}

Furthermore, five participants mentioned they kept all the knowledge they obtained about plants over the years only in their minds (memory). Therefore, it was observed that human memory serves as one of the ways of recording popular knowledge. On the other hand, scientific knowledge requires systematic observation and detailed records of events and facts.

“I plant to have them at home”

During the interview, the participants were asked about how they obtained the plants, and all of them mentioned they planted some of them at home, such as Boldo, Lemon balm, Guaco and Rosemary; while others were bought at the popular street markets or, yet, obtained from rural areas (Macela and Chamomile) or forests (Guabiroba and Horsetail).

According to the participants, they prefer to cultivate their own plants, because they empha-
size on the importance of planting them in a clean environment and without the use of pesticides. In other words, cultivating them at home is a way of controlling the quality of these aspects. Eight participants made this same statement, mentioning the need to know the origin of the herbs, because, as they say, the conditions in which they were planted, harvested, and stored interfere in their medicinal properties. Their preference for plants of which they know the origin is justified because, some of them, when purchased, have a different color, smell moldy and look dirty, making them doubt not only about whether they can be used, but also about their therapeutic properties. This concern is observed in the following statements:

[...] today we see that there are only a few people selling herbs. And they don’t work like they should, because the remedies after being harvested, should be stored in a plastic bag with little holes so there is no air inside or else the remedy gets moldy. And they don’t do this. One time I noticed an Indian, who now has already died, I saw him put the herb remedy to sell downtown, he used to pick Macela and other stuff, and people used to lay on it, even dogs. What a rude Indian, he had no hygiene. And the remedy, no matter which one, you must have hygiene, because hygiene is part of health (Lilly).

[...] I never bought [medicinal plants], because I don’t know how what they do [with the plant], how those plants are prepared (Hydrangea).

In general, the interviews and field observations revealed that the participants’ taste for the plants and the desire to plant the herbs at their own homes are common feelings among all the participants. It was observed that the medicinal plants are usually cultivated in a garden, which consist of areas of usually three to four meters long by two to three meters wide, located around the house, always away from the septic tank or any other possible source of contamination. Only one participant did not take this specific care. At his house, it was observed there were animals, such as a dog, cat, and hens around the yard, and inside his house as well. In this case, as we observed him preparing the tea, he was very carful to wash the plant well, and stated that animals might be around, but there must be hygiene when making the tea (Lilly).

At the homes with gardens, it was observed that there was some kind of protection around them to keep out any animals that could harm or contaminate the plants. This protection usually consisted of a screen fence. One participant used two-liter plastic bottles filled with water to make them heavy, so that when they were placed opposite each other, in a vertical position, they could protect the garden from creeping animals. This way, the animals were unable to trespass the bottles. The bottles were also positioned this way to hold in the fertilizers during the rainy seasons. Regarding fertilizers, it was observed they only used organic fertilizers, made from the rest of fruits, greens, and vegetables.

It was also observed that other cultivation locations, such as flowerpots and plastic pots, were always located around the house or even inside it. This form of cultivation is common at the homes of participants who did not have a garden, either because their property was too small or because they did not want a garden, as well as for those who once had a garden but no longer do. Examples of this are Ms. Sene and Ms. Chamomile, which had to remove their gardens because of some construction that was taking place in their homes. At the time of the interview, both of them emphasized how they were sorry they did not have a good place to cultivate their plants, and that they were anxious for the construction to end so they could rebuild their gardens. Both of them, knowing they would spend some time without their medicinal plants, improvised the cultivation of a few herbs in small pots, as a way to assure they could continue making their teas.

Approximation between popular knowledge and scientific knowledge

During the data collection, the participants were asked to describe the last time they used the medicinal plants to take care of their own health or of a relative. Therefore, regarding the curative properties of the plants in the form of tea, the most common report among the participants was their use as analgesics for stomachaches (Boldo, Cancorosa - *Maytenus ilicifolia*), headache (Macela), backache (Sarsaparilla), and generalized pain (Horsetail, Chapéu de couro - *Echinodorus grandiflorus*).

In second place, with four indications, appear the teas used as a tranquilizer and for flus and/or colds (Rosemary, Horsetail, Lemon-balm, Orange-tree flower, Guaco). The third place, with three reports, belongs to the teas indicated for gastrointestinal problems (Sene, Macela, Boldo, Cancorosa). In addition, the participants also report using some plant parts to control cholesterol levels (Garlic, Guabiroba), rhinitis (Mentruz - *Che-
nopathium ambrosioides, Arnica - Arnica chamissonis),
to treat heart problems (Boldo), liver problems
(Artichoke), and problems (Horsetail), to increase
sclerosis (Sene), and improve sleep (Guaco).

Among the referred plants, fifteen have simi-
lar popular and scientific therapeutic indications.
In this context, the following are highlighted: Arti-
choke (Cynara scolymus L.), Rosemary (Rosmarinus
officinalis L.), Garlic (Allium sativum L.), Boldo (Plec-
tranthus barbatus Andrews), Cancorosa (Maytenus
ilicifolia Mart.), Horsetail (Equisetum giganteum L.),
Chapéu de couro (Grandiflorus (C&S)), Lemon-
balm (Cymbopogon citratus (DC) Staph), Orange-tree
flower (Citrus sinensis (L.) Osbeck), Guabirova
(Campomanesia xanthocarpa Berg.), Guaco (Micania
glomerata Spreng.), Mentrux (Coronopus didymus
(L.) Sm), Sarsaparilla (Smilax sp.), and Sene (Senna
occidentalis (L.) link).

Five plants stated by the participants are in-
cluded in the National List of Medicinal Plants
of Interest to the SUS, published in February 2009,
by the Ministry of Health. They are: Artichoke
(Cynara scolymus (L.)), Garlic (Allium sativum (L.)),
Boldo (Plectranthus barbatus Andrews), Cancorosa
(Maytenus ilicifolia Mart.), and Guaco (Micania
glomerata Spreng.). This evinces the importance
of studies in the field of medicinal plants, with
the purpose to approximate popular knowledge
to scientific knowledge, offering the population
more safety and efficacy.

FINAL CONSIDERATIONS

This study provided greater information
regarding the origin of the knowledge and prac-
tices of the therapeutic use of medicinal plants by
individuals living in a community in Central Rio
Grande do Sul, Brazil. It is concluded that the use
of medicinal plants, usually learnt in the family
context, and their curative power assume great
value in the lives of the participants, who transmit
their knowledge from generation to generation.

The influence of the woman figure is high-
lighted in the transmission of this particular
knowledge and in encouraging the cultivation of
medicinal plants, as well as the feeling of want-
ing to continue this complementary healthcare
practice. Comparing the popular and scientific
knowledge regarding the pharmacological efficacy
of the medicinal plants, it was observed that there
is an approximation between them, because most
of the plants reported by the participants have
indications confirmed by scientific studies.

Therefore, it is believed that its curative
power should not be considered exclusively as
a tradition that parents pass on to their children,
but, rather, as a field in science, which should be
studied and improved to be applied safely and
effectively by healthcare professionals. Special
emphasis should be given to nursing care, because
this is an area of popular knowledge that can be
used as an instrument for proximity, autonomy
and for valuing the culture of each citizen that
these professionals take care of.

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