Medicinal plants indications from herbal healers for wound treatment

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ABSTRACT

The objective was to identify medicinal plants indicated by commercial herbal healers for wound treatment, in street markets. A descriptive study conducted in a capital city in the northeast of Brazil, through interviews. The results indicate that plant commerce by healers of both genders, aged between 37 to 52 years, from those 69.3% learned about their function with family members. Forty-eight plant species were cited for wound treatment, between those, all participants cited Barbatimão and Mastic. From the plants Sambacaitá, Open Nettle, Yellow Uchi, Corona, Xiquexique, Senna and Pindaíba no properties to prove their indication was found for wound treatment. The stem bark was the most indicated part (96.15%), 81.03% of participants informed that plants should be kept dry for conservation. Studies to clarify the biological activities and collateral effects of medicinal plants are needed, beyond training for healers about indications, prepare, storage/conservation, and expiration date.

Descriptors: Plants, Medicinal; Community Health Nursing; Wound Healing; Commerce.

INTRODUCTION

Since early times, human societies accumulate information and experience about their surrounding environment, how to interact with it and to obtain their survival needs[1]. Within so many practices widespread by popular culture, plants always had a fundamental importance due to many reasons, and their therapeutic potentialities are noted ad applied over generations[1].

The indiscriminate and informal use of medicinal plants makes the nurse a key-piece for treatment

improvements, once the type of professional activity and proximity with people they care has a rich bond with the community and it is capable to offer more accessibility to these health treatments[2]. In this sense, it is important that health professionals value popular culture, through searching for knowledge acquired by healers and the understanding of the reality in which the team is inserted.

With science and biotechnology development of medicinal plants, their therapeutic value has been scientifically proven and their use by health professionals has been growing, with creation of policies and programs to amplify therapeutic options to users. Those policies and programs also aim to guarantee access to medicinal plants, phytotherapeutic medicines and to services related to phytotherapy, with safety, efficacy and quality; from the health attention integrality perspective, to "promote and recognize popular and traditional practices in the use of medicinal plants, phytotherapic medicines and home-made remedies" [3].

In this context, the nursing role to guide and assist the population regarding the use of these plants is deficient even today. Such fact is caused specially because of the lacking scientific knowledge of professionals, due to academic system deficiencies or lack of interest in the field[2].

Healers, professionals who manipulate and commercialize medicine plants, assume a role in the preservation and advertisement of this knowledge. The community recognizes them, and they have guaranteed space in the streets. They prepare liquids, called *"garrafadas"* (potions), they sell them, guide people in how to use and prepare it to cure many diseases, presenting or not a specific knowledge about the true use of plants/roots that they sell, adverse events and medicine interactions.

Considering the importance to conduct searches to reaffirm benefits and efficacy of medicinal plants, the objective of this study was to conduct a survey and identification of medicinal plants indicated by commercial herbal healers, as well as their indication for wound treatment.

METHODS

A descriptive and quantitative study, conducted in street markers of a capital city at the Brazilian northeast region. We opted for street markets because it is the place where medicinal plants are sold, and because the healer is the person who indicates which plant should be used for a specific reason, as well as, dosage, how to use and storage it.

The adopted inclusion criteria considered healers who sold plants or roots used for treating wounds in street markets. Thus, a population of 35 commercial healers was assessed, from 19 street markets in the city of Maceió. From those, 26 accepted to participate in this study, constituting our sample.

A semi-structured script was used for interviews. The script had two parts, with identification data, as gender, age, profession, and residence; and 12 objective questions about the use of medicinal plants to treat wounds. Such questions addressed which plants or roots are indicated for wound treatment; how to use it, time of treatment, storage and expiration date; for which type of wound; how they obtained knowledge about such plants or roots; if there are consumers and if they returned for new purchases and/or if they informed about its use and efficacy.

The data collection was conducted during December of 2013 and May of 2014, recruitment was by invitation during visits to street markets by the principal investigator. The data collection occurred in the street, of the street markets or in commercial establishments of healers, also located in the street markets. We collected data through an interview of 30 minutes on average, and we registered information in structured forms developed by researchers.

We conducted the data analysis using descriptive statistics (frequencies and confidence intervals).

The study was assessed and approved by the Ethics and Research Committee – CEP from the Universidade Federal de Alagoas, under the registry nº 16809313.5.0000.5013, protocol nº 460.762. We presented the study objectives to participants, and we asked them to sign the Free and Informed Consent Term, guaranteeing secrecy rights, the free access to data and freedom to withdraw from the study at any moment.

RESULTS

From the 26 herbal healers participating in the study, 50% were male. About their profession, most (76.9%) mentioned to be salesman while other professions were mentioned as exercised along with the commerce activity (housekeeper, topographic assistant, security guard, artisan, farmer, and pedagogue) being 3.85% each. Regarding their age, there was predominance between 37 to 52 years (46.2%), followed by age between 21 to 36 years (30.8%).

When asked about with who they learned about the use of these medicinal plants, 69.3% (18/26) affirmed to have learned with family members, within them, father, mother, uncle, sister, cousin and, grandparents. Still, 19.2% (5/26) learned with friends and, 11.5% (3/26) learned when studying it.

When they were asked about which medicinal plants are indicated for wound treatment, 48 plants were mentioned, from those, five deserve attention: Barbatimão and Mastic were mentioned by all interviewed, Cashew Tree, Sambacaitá and Angico were most outstanding in the frequency by indication (Table 1).

Table 1: Characteristics and frequency of indication by herbal healers of medicinal plants for patients with wounds. Maceió, AL, Brazil, 2014.

Medicinal plant and indication reference for healing effect	Specie scientific name	Healing property	Part of the plant used	Frequency n (%)	Confidence Interval (CI)
Barbatimão[4-5]	*Stryphnodendron adstringens*	Yes	Stem bark / root	26 (100.00)	0,86 -1
Mastic[5-14]	*Myracrodruon urundeuva*	Yes	Stem bark / Leaf/root	26 (100.00)	0,86 -1
Cashew tree[5]	*Anacardium occidentale L*	Yes	Stem bark	19 (73.15)	0,53-0,86
Sambacaitá	*Hyptis pectinata*	-	Stem bark / Leaf	20 (77.00)	0,57-0,89
Angico[5]	*Anadenanthera colubrina*	Yes	Stem bark	10 (38.50)	0,22-0,57
Quixaba[5]	*Bumelia sartorum*	Yes	Stem bark	04 (15.40)	0,05-0,34
Garrida[6]	*Turner aulmifolia*	Yes	Root	03 (11.55)	0,03-0,29
Jatobá[7]	*Hymenaea courbaril L.*	Other properties	Stem bark	03 (11.55)	0,03-0,29
Urtiga aberta	*Urtica urens L.*	-	Root	01 (03.85)	0,00-0,20
Copaíba[8]	*Copaífera langsdorffii*	Yes	Stem	01 (03.85)	0,00-0,20
Yellow uchi	*Endopleura uchi*	-	Stem bark	02 (07.70)	0,01-0,25
Quebra pedra[9]	*Phyllanthus niruri L.*	Yes	Leaf/ root	02 (07.70)	0,01-0,25
Unha de gato[10]	*Dolichandra unguis-cat*	Other properties	Leaf/ root	02 (07.70)	0,01-0,25
Sleepy morning[11]	*Waltheria americana*	Yes	Stem bark / leaf/root	01 (03.85)	0.00-0.20
Consolida da Amazônia	*	-	Leaf	01 (03.85)	0.00-0.20
Alfavaca[10]	*Ocimumbasilicum L*	Yes	Stem bark /leaf/root	02 (07.70)	0.01-0.25
Catuaba[5]	*Anemopaegma arvense*	No	Root	01 (03.85)	0.00-0.20
Sesame[10]	*Sesamum indicum*	Other properties	Seed	01 (03.85)	0.00-0.20
Corona	*Mascagnia pubiflora*	-	Leaf	01 (03.85)	0.00-0.20
Brazilian ironwood[5-11]	*Caesalpinia ferrea*	Yes	Stem bark	02 (07.70)	0.01-0.25
White nettle[5]	*Copaífera langsdorffii*	Other properties	Root	02 (07.70)	0.01-0.25
Jurema preta[10]	*Mimosa tenuiflora*	Yes	Stem bark	01 (03.85)	0.00-0.20
Xiquexique	*Pilosocereus polygonus*	-	Root	01 (06.70)	0.00-0.20
Black mulberry[12]	*Morus nigra L*	Yes	Leaf/Stem bark	01 (03.85)	0.00-0.20
Teiú[5]	*Casearia sylvestris*	Yes	Stem bark/leaf	01 (03.85)	0.00-0.20
Arroz chocho	*	-	Stem	01 (03.85)	0.00-0.20
Gapé	*	-	Stem	01 (03.85)	0.00-0.20
Pindaíba	*Xylopia emarginata*	-	Seed	01 (03.85)	0.00-0.20
Espinheira Santa[13]	*Maytenus officinalis*	No	Leaf	04 (15.40)	0.05-0.34
Rosemary[14]	*Rosmarinus officinalis L.*	No	Leaf	01 (03.85)	0.00-0.20
American aloe[12]	*Agave americana*	Yes	Stem bark	02 (07.70)	0.01-0.25
Boldo[9]	*Plectranthus barbatus*	No	Leaf	01 (03.85)	0.00-0.20
Star anise[6]	*Illicium verum*	No	Seed	01 (03.85)	0.00-0.20

Medicinal plant and indication reference for healing effect	Specie scientific name	Healing property	Part of the plant used	Frequency n (%)	Confidence Interval (CI)
Saffron[10]	*Curcuma longa*	No	Seed	01 (03.85)	0.00-0.20
Cinnamon[9]	*Cinnamomum zeylanicum*	No	Stem bark	01 (03.85)	0.00-0.20
Senna	*Senna occidentalis L.*	-	Leaf	01 (03.85)	0.00-0.20
Fennel[9]	*Pimpinella anisumn L.*	No	Seed	01 (03.85)	0.00-0.20
Aloe vera[15]	*Alo ebarbadensis*	Yes	Leaf	01 (03.85)	0.00-0.20
Indian head ginger[10]	*Costus spicatus*	No	Leaf	01 (03.85)	0.00-0.20
Cedar[15]	*Luehea grandiflora*	No	Stem bark	01 (03.85)	0.00-0.20
Wild plum[15]	*Ximenia americana L*	No	Stem bark	01 (03.85)	0.00-0.20
Pau D'arco[15]	*Tabebuia empetiginosa*	Other properties	Stem bark	01 (03.85)	0.00-0.20
Bom-nome[14]	*Maytenusrigida Mart*	Yes	Stem bark	01 (03.85)	0.00-0.20
Pega Pinto[15]	*Boerhavia hirsuta Wiild.*	Other properties	Root	01 (03.85)	0.00-0.20

Note: * Not found.

Regarding the part of the plant used, it was cited: stem bark, leaf, stem, root, seed, stem oil, sap, and the most used part were the stem bark, in 96.15% of interviews, the leaf was mentioned in 61.5%, root was mentioned in 23.07%, seed was mentioned in 15.4%, and the stem oil and sap were mentioned in 3.85% of interviews.

The plants mentioned by healers that are listed in the National List of Medicinal Plants of Interest to SUS (RENISUS) were: Barbatimão, White Nettle, Aloe Vera, Saffron, Indian head ginger, Chamomile and Teiú.

Regarding the type of wounds that cited plants should be used, 53.85% (14/26) affirmed that plants/roots serve for all types of wounds, being those internal or external. For 42.3% (11/26) study participants, the plants are needed only for skin wounds (external). Only one interviewed (3.85%) affirmed the use of medicinal plants being only for internal wounds.

Regarding consumers return, 38.45% (10/26) of interviewed affirmed that consumers searched for the same plants, while 15.35% (4/26) of herbal healers affirmed that consumers returned to buy other plants. Some consumers still return to buy another plant and the previous one, according to 46.2% (12/26) of participants.

About satisfaction regarding treatment success with those plants, 92.3% of interviewed (24/26), affirmed that their clients informed about the use and satisfaction with the plants bought, while 7.7% (2/26) informed that clients had partial success.

Regarding expiration, 69.3% (18/26) pointed undetermined expiration date, and 19.25% (5/26) informed that the period extends while the plants are dry, 7.7% (2/26) of healers affirmed that plants last for one to two years and, 3.85% (1/26) affirmed that plants last for six months on average.

About the storage of plants, 42.35% (11/26) of interviewed affirmed that plants should be kept in dry packages, 26.85% (7/26) referred to exposed storage with no humidity, 15.4% (4/26) described only the storage in a dry place, 7.7% (2/26) affirmed that plants should be kept protected from the sun and others and, 7.7% (2/26) affirmed that plants should be kept while dry independent of the storage place.

About the time of use after preparing it, 38.5% (10/26) of participants mentioned immediate consumption. However, 34.6% (9/10) answered that this period should not pass 24 hours, therefore, it needs to be prepared daily. Other 19.2% (5/26) believed that the period to use after preparation was two to four days. Undetermined time of use was referred by 3.85% (1/26) and others 3.85% (1/26) did not know what to inform.

Regarding the therapy time for wound healing using the prepared medicinal plants, 38.5% (10/26) of healers affirmed that the therapy should last as long as necessary. For 26.9% (7/26) of interviewed, the therapy last from three to 10 days on average. Other 19.2% of interviewed affirmed that 15 days would be the necessary time to use preparations on wounds. One to two months was the period to use the preparations for 7.7% (2/26) of interviewed. Still, 3.85% (1/26) referred that this period depends on eating habits that a person adopts during the use of preparations.

At last, it is observed that when asked about interactions with another plant during therapy, 50%

(13/26) of interviewed affirmed that no other plant would interfere in the treatment. While 34.6% (9/26) affirmed yes, and for this reason, they recommend one treatment per time. While 7.7% (2/26) refers to no existing interaction, but other medicinal plants can complement the treatment. Still, another 7.7% (2/26) referred to not know about possible interactions between medicinal plants.

From the 48 cited plants in this study, 35.4% (17/48) plants have their healing properties proven in the literature (Table 1), according to their respective references. Nine plants (9/48) have other properties that can contribute with wound healing, for example, anti-inflammatory, anti-bacterial, anti-fungal properties and others (Table 1).

Only seven of the cited plants are in the RENISUS with their respective scientific name. It is important to note that four cited plants (Consolida da Amazônia, Gaicó, Arroz chocho and Gapé) did not have their scientific names found, neither properties designated to them.

DISCUSSION

Regarding attention to tuberculosis patients, the Health Ministry[7] recommends the NP to be conducted in nursing consultations with TB patients, which in our study, it presented a fragmentation considering that only few elements of this method was executed in the nursing practice at PHC.

About the data collection elements (Table 1), nurses affirmed they conducted anamnesis (or interview), but this anamnesis was directed to the survey of physical complaints of patients. Other aspects as the investigation of patient's suffering related to disease and its stigma and other sociocultural aspects were less approached.

Thus, Nursing Consultation should be an instrument capable of addressing not only specific needs, but it should be a space to face other daily demands, as in the case of stigmas and cultural barriers permeating some diseases, for example, TB, hanseniasis, which within the Control Program in the PHC, it demands care fragmentation[17].

Overvaluation of physical and biological aspects comes from the roots of a traditional model that permeates attention to human health, where the priority is given from the patient's biological and physical aspects[18].

It should be highlighted that to posteriorly identify patient's problems to formulate NDs and to make decisions, recognition of a whole group of necessary data that exists surrounding the patient should exist, that is, all existing evidence should be identified from the data collection about the patient's health problem[19].

Other preconized programs in the PHC, as women and children's health, also points that nurses have difficulties in their consultations, recognizing the need of greater training and that health education is understood as health information[3].

Regarding the physical exam, it was observed that some methods were left on the side by nurses, overall the auscultation and the thoracic percussion. This can be related to some difficulty in promoting a

broaden clinic by nurses. Some actions, as a more detailed physical exam is linked to the medical exam, which culminates in a reproduction of a hegemonic model[20].

The TB patient, pulmonary in special, should have attention concentrated in their lower respiratory system. The thoracic auscultation constitutes an important assessment tool for the patient's health status, including the identification of possible aggravations.

The elements related to NDs identification, planning of actions, implementation and assessment, are presented with greater fragmentation in the NP during nursing consultations.

The NDs for example, were pointed as a minority as being identified according with the Nursing specialized classification. Another part of subjects affirmed to identify them, without a basis in a proper taxonomy.

Nursing diagnoses should be identified in a way to start the process of clinical judgment of TB patients and, according to the Health Ministry, they should be identified based on the NANDA taxonomy, due to its recognized clinical utility in nursing practice[7].

It is important to note that although the NANDA taxonomy arise as preconized by the HM and it is the classification that most appear in the literature to identify NDs[21], the International Classification of Clinical Practices in Collective Health (CIPESC) [22] represents an important tool in the PHC.

In this sense, there is a need to identify nursing practices in the PHC and to deepen this practice with methodological tools of nursing work, as nursing classifications, aimed to allow a standardized language for nursing care[20].

Beyond the non-identification of nursing diagnoses, NDs registry was not done on patient's records, constituting a flaw in the systematization of consultations, because it harm guidelines proposed by the Nursing Federal Council, which determined that registries of all steps should be done in the records.

In the presented study, according to the Graphs 01 and 02, because nurses did not did the survey of NDs for TB patients, they did not always conducted the planning of actions based on NDs. They performed nursing prescriptions directed to the patient's disease, but they did not invest in prescriptions aimed at the community where this patient was inserted, neither the health education.

In this sense, it is necessary to remember that health education as well as instituting home care promotion can be factors for access and continuity for determined treatment, because they increase the bond with the professional[5].

The implementation of the conjunct therapeutic plan, as well as the assessment of results, are also presented in a fragmented way, what compromises the attention to this patient, because it inhibits a reassessment of conducts directed to it, and, having in sight the insertion in contexts that allow an inconsistency in its treatment, it can culminate in treatment abandonment[10].

In a sense of not using the NP in the nursing practice, it is noted that some factors contributes to it, within them, the deficit in NP knowledge, and large demands in services[23].

It is also highlighted the need of compromise from managements and supervisions with the

professional action so that NP is incorporated to nursing practice. The permanent education is a facilitator strategy for NP development by nurses, because it broadens the theoretical knowledge about its elements, especially because as seen in a study, most nurses have a long period since their graduation, and this is a factor that reflects in the theoretical and practical lack of prepare for NP development[23].

CONCLUSION

A fragmentation in the process for Nursing Consultation with tuberculosis patients was seen in the study, where some NP elements were emphasized during consultations, as anamnesis and physical exams aspects, in detriment of the nursing diagnoses survey, planning, implementation and, assessment.

Regarding nursing diagnoses, they were pointed as being brought up in few moments without using the specialized classification. However, it is not known how this diagnosis occurred, once it was not explored the way of how it was done and if it was scientifically founded. This could configure a study limitation. Besides, the fact that nurses emitted answers to questions cannot translate the reality of some points registered in the record.

Results found also allow a reflection of a practice fragmented in nursing consultations that can contribute with deficiency in the operationalization of the Tuberculosis Control Plan. The Nursing Consultation, if scientifically and technologically amplified, can favor the development of health programs and the minimization of barriers permeating Tuberculosis control.

Other studies should be conducted to verify the Nursing Consultation in other populations, considering that the nursing process is secured as a right and obligation in the nursing practice.

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