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Original Article

Representations and uses of medicinal plants in elderly men

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The aim of this study was to know and understand the representations and use of medicinal plants by elderly men assisted in the Family Health Strategies of Dourados, MS. Participated in this study, 18 elderly men aged over 60 years, using four or more medications. The research was conducted with qualitative approach. The results showed that there is still the consumption of medicinal plants among the elderly, especially in the treatment of minor harm. The representations about the plants seem anchored in the concept of safety; they are natural and few side effects. Its use is made concurrently with the manufactured medicines without regard to risk of interactions. Older men use medicinal plants, without however reporting to health professionals. Therefore, it is necessary continuing education focused on phytotherapy health team and nursing, contributing to safe and effective use of medicinal plants.

Descriptors: Medicinal Plants; Men's Health; Health of the Elderly.

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Representações e usos de plantas medicinais por homens idosos

Objetivou-se, neste estudo, conhecer e compreender as representações sobre o uso de plantas medicinais por homens idosos, assistidos em Estratégias de Saúde da Família de Dourados, MS. Participaram deste estudo 18 homens idosos com idade igual ou superior a 60 anos, fazendo uso de quatro ou mais medicamentos. Trata-se de pesquisa qualitativa, descritiva e exploratória. Os resultados apontaram que ainda existe o consumo de plantas medicinais entre os idosos, principalmente no tratamento de morbidades menores. As representações sobre as plantas medicinais parecem ancoradas na concepção de segurança, ou seja, são naturais e apresentam poucos efeitos colaterais. Seu uso é feito concomitantemente com os medicamentos industrializados, sem atentar para os riscos das interações. Os homens idosos utilizam as plantas medicinais sem, no entanto, relatar aos profissionais de saúde. Logo, faz-se necessária a educação permanente da equipe de saúde e da enfermagem, voltada para a fitoterapia, visando contribuir para o uso seguro e eficaz das plantas medicinais.

Descritores: Plantas Medicinais; Saúde do Homem; Saúde do Idoso.

Representaciones y usos de las plantas medicinales en mayores

El objetivo de este estudio fue conocer y comprender las representaciones y el uso de plantas medicinales por los mayores asistidos en Estrategias de Salud de la Familia de Dourados/MS. Participaron de ese estudio 18 hombres de edad con edad igual o superior a 60 años, haciendo uso de cuatro o más medicamentos. Se trató de investigación cualitativa, descriptiva y exploratoria. Los resultados apuntaron que aun existe el consumo de plantas medicinales entre los mayores, principalmente en el tratamiento de mortalidades menores. Las representaciones sobre las plantas medicinales parecen ancladas en la concepción de seguridad, o sea, son naturales y pocos efectos colaterales. Su uso es hecho concomitantemente con los medicamentos industrializados, sin atentar los riesgos de las interacciones. Los mayores utilizan las plantas medicinales sin, sin embargo, relatar a los profesionales de salud. Luego, se hace necesario la educación permanente del equipo de salud y de la enfermería vuelta para la fitoterapia, aportando al uso seguro y eficaz de las plantas medicinales.

Descriptores: Plantas Medicinales; Salud del Hombre; Salud del Anciano.

Introduction

The use of medicinal plants as a therapeutic resource is widespread throughout the world, and 67% of medicinal plant species come from developing countries[1]. They are considered as a complementary form of therapy or a health alternative, and the use thereof has grown[2]. The use of plants is normally based on popular wisdom and often the patients do not mention the use thereof to their health professionals.[3].

The knowledge of the therapeutic recommendations regarding medicinal plants is normally a trait present in the more chronologically advantaged population, that is also responsible for making up the formulae based on plants[4]. Therapeutics using medicinal plants between the more chronologically advantaged seems to stand out, especially as a practice of self-medication, even when industrialised medication is accessible and readily available[4-5].

The study of medicinal plants in Brazilian senior citizens participating in the Family Health Strategy has shown the use of native species of plants obtained from close to their places of residence, including common mint, lemon grass and lemon balm[6]. In another research study with Brazilian senior citizens assisted by health centres, the use of 14 different medicinal

plants for the control or prevention of hypertension was confirmed: the most common being: shellflower, lemon balm, christophene, lemon grass and orange[7].

Research conducted on the border of the United States and Mexico confirmed the use of two or more medicinal plants in 16.2% of the senior citizens interviewed, that was known as polyherbs. Chamomile tea was the most commonly used medicinal plant, followed by garlic, linseed and wormwood tea [2]. The use of medicinal plants has also been observed among the chronologically advantaged in Canada, with 17% of subjects making use thereof on a routine basis, with the identification of eleven different interactions between medication in nine senior citizens[8].

However, the medicinal plants commonly used by the population can show side effects, even though there is a serious shortage of clinical studies that would enable the safe use of these plants[9]. In relation to the interaction between plant and medication, the investigations have focused on the plants of European or Asian origin, such as Echinacea, Ginkgo, St John's Wort and Korean ginseng. In this case, ginseng could reduce the diuretic effects of medications such as furosemide. When administered together with warfarin, this plant could reduce the effects of the anticoagulant[10].

The few publications that address the issue of Brazilian native plants of wide popular use have reinforced the risk of association with medication, leading to pharmacological and toxicological alterations, such as changes to the blood sugar index and blood pressure [2-3].

More recently, we have seen a rise in the growing number of research studies about the relation between man and health care[11], these including some studies on the use of medication by men, addressing issues related to the treatment of erectile dysfunction[12]. However, some qualitative approaches to the use of plants has focused on the perception of women[13], which reinforces the need to conduct research about this issue within the male population.

The present study is part of a research which sought to investigate the use of medication in chronologically advantaged gentlemen, as also their practices and representations, within the scope of primary health care in the city of Dourados, State of Mato Grosso do Sul, Brazil. In this excerpt, the main aim of the investigation was to know and also to understand the representations of the use of medicinal plants by male senior citizens, as also to check the link between the use of industrialised medication with the use of medicinal plants by these same subjects. In addition, we seek to know the means of preparation of medicinal plants and also where these therapeutical objects can be acquired.

Methodology

This is a qualitative, descriptive and exploratory research. The location researched was the city of Dourados, in the Southern part of the Brazilian State of Mato Grosso do Sul, in the Brazilian Midwest, which is the second largest city of the state in terms of population. At the moment of the survey, the municipality of Dourados, in its primary health care network, a total of 26 Family Health Strategies (*Estratégias de Saúde da Família* – ESF) teams in the urban area and nine in rural parts, as well as four health centres [14].

The subjects of this study were males aged 60 and over who had Family Health Strategies assistance in Dourados. The ESFs were selected by the Municipal Secretariat for Health, based on a greater number of registered senior citizens, and were located in the following neighbourhoods: Parque do Lago II, Cuiabazinho, Vila Hilda, Ouro Verde and Parque das Nações I.

The criterion for inclusion was: use of four or more types of medication; males aged 60 years or over; able to communicate; and granting consent to participate in the research. The sample was qualitative, and 32 male senior citizens were considered eligible to participate in the study. However, due to factors of impossibility of interview, including cases of absence at home and incorrect addresses, a total of 18 men were interviewed between June and October 2010.

The research technique used was that of the narrative interview, the stages of which are characterised by the phases of preparation, start, central narration, questioning phase and conclusive conversation[15]. The guiding questions were: tell us about your experiences with the use of medicinal plants as part of your daily life; report on how you prepare and use these plants. The purpose of this strategy is to gain access to the assigned senses and also to the experience of the individuals concerned, focusing on the phenomenon of the use of medicinal plants[16].

Apart from the medicinal plants that are used and self-related therapeutical suggestions, the following variables have also been collected to characterise the people interviewed: age, marital status, level of education, previous occupation, origin and medication. The medication used was obtained from the medical

records held in the Family Health Strategy or from the medical prescriptions which the chronologically advantaged gentlemen had in their own places of abode.

After signing a document granting free and clarified consent on the part of participants, the interviews were held and recorded, and then transcribed. Each of the senior citizen subjects was given a unique code such as E1 and E2, in order to guarantee anonymity and confidentiality. For the analysis of narratives, the theoretical background were the conceptions of medication practices and representations, where categories of analysis emerged.

The concept of medication practices shows a perspective centred on the human being, and has the main proposal of knowing how the male senior citizens handle their medication, paying attention to meanings and uses. From this standpoint, the medication practices allow the exploitation of the types of actions that the patients create, which means their tactics and strategies, and thus perceive in these human beings their autonomy and active posture when faced with these therapeutic objects. However, for this research, instead of focusing on the medication, our focus has moved over to the usage practices related to medicinal plants [17].

In the concept of representations, language is a shared cultural space where meanings are produced, which means that cultural meanings have real effects and also regulate social practices. The acknowledgement of these meanings plays a part in the establishment of identifies and also lead us to occupy built positions in discourse practices [18].

The knowledge produced by the discourse has an effect on conduct, formation or construction of identities at different times in history. The representation can only be adequately analysed in relation to the true concrete forms taken on by the meaning, within the concrete exercising of reading and interpretation; and this requires analysis of signs, symbols, figures, pictures, narrative, words and sounds – the material forms – where there is circulation of the symbolic meaning [18].

The present project was sent to the Research Ethics Committee of the Federal University of Mato Grosso do Sul and was approved according to protocol No. 1,625/2009.

Results and Discussion

Characterisation of the Interviewees

A total of 18 male senior citizens that met the criteria as established were interviewed. The mean age of the participants was 66 years. Most of the people interviewed lived with their wives and were retired, but even after retirement decided to try to dedicate their free time to some paid work activity to increase the family income. Figure 1 shows the most important characteristics of the senior citizens who were interviewed.

Interviewees	Age (years)	Marital Status	Educational Level	Previous Occupation	Origin
E1	66	Married	*EFI	Security Guard	RS
E2	79	Married	*EFI	Farm Worker	MS
E3	68	Widowed	Illiterate	Driver	RS
E4	73	Separated	*EFI	Agriculture	BA
E5	72	Married	*EFI	Hair Stylist	CE
E6	60	Widowed	Illiterate	Farm Worker	MS
E7	66	Separated	*EFI	Baker	CE
E8	69	Married	*EFI	Mechanic	SP
E9	91	Married	*EFI	Farm Worker	PE
E10	62	Married	*EFI	Field Worker	MS
E11	80	Widowed	*EFI	Mechanic	MG
E12	72	Married	*EFI	Driver	PE
E13	72	Separated	*EFI	Driver	MS
E14	72	Widowed	*EFI	Driver	MS
E15	80	Married	*EFI	Cobbler	MG
E16	60	Married	*EFI	Field Worker	CE
E17	83	Married	Illiterate	Cattle Rancher	PE
E18	71	Married	*EFI	Confectioner	PB

*E. F.I. Incomplete Primary Education

Figure 1 - Social and demographic characteristics of male senior citizens. Dourados, State of Mato Grosso do Sul, Brazil, 2010

The presence of male senior citizens aged more than 70 makes up 50% of the sample considered in this research, with only three subjects being illiterate. The main morbidities found were the cardiovascular system, the metabolic system and the lungs. Most of the medication used by the chronologically advantaged males is related to the treatment of hypertension and diabetes; in decreasing order they are: captopril (14), hydrochlorothiazide (8), glibenclamide (8), propranolol (6), metformin (6), enalapril (6) and losartan (4). The greatest occurrence of hypertension and diabetes was also reported in a research study involving senior citizens on the border between Mexico and the United States of America who made use of medicinal plants[2].

In Figure 2, we see the plants most commonly used by male senior citizens and the recommended uses reported by them. However, the collection, and later botanical identification of the species concerned, was not the aim of this study; the purpose of this study was to get to know the meaning of these plants for the male senior citizens.

Interviewees	Most Used Plants	Therapeutical Indications
E1	Guaco *Jateicaá* (*Achyrocline alata*) Blue snakeweed *Carquejinha* (*Baccharis articulata*) Sweet Basil *Laranja Lima* (*Citrus sinensis*) flowers	Influenza Stomachache, Wounds Wounds Stomachache Wounds Cough
E2	Pitanga (*Eugenia uniflora*) leaves Boldo Coconut leaves Guava flowers	Stomachache Stomachache Stomachache Stomachache
E3	Dandelion Epazote	Stomachache Worms
E4	*Flor do Amazonas*	Diabetes
E5	Blue snakeweed *Carqueja (Baccharis trimera)* Lion's tail	Influenza Poor digestion High Cholesterol
E6	Sweet Basil *Mama do reino*	Influenza Cough
E7	*Pau azul*	Diabetes
E8	Guaco	Influenza
E9	*Cancorosa (Maytenus ilicifolia)* *Barbatimão (Stryphnodendron adstringens)*	Antibiotic Healing agent
E10	*Sene (Cassia angustifolia)*	Cleansing the intestines
E11	*Flor do Amazonas* *Ipê roxo (Tabebuia serratifolia)*	Cancer Cancer
E12	*Gota do Zeca*	Stomachache
E13	Elderberry Macela Lemongrass Guaco Puejo Herb Leaves Marjoram *Caraguatá (Bromelia argentina)*	Measles Stomachache Calming Agent Influenza Stomachache Asthma Bronchitis
E14	*Guavira (Myrcia guavira)* Guaco *Cipó da Amazônia* Eucalyptus Green multicoloured earth-toned beans Mint Ginger	Diabetes Influenza Kidneys Influenza Influenza Influenza Influenza
E15	Lemongrass	Not Reported
E16	Sweet Basil	Influenza
E17	Jateicaá Puleu	Stomachache Influenza
E18	Puejo *Jateicaá* (*Achyrocline alata*)	Not Reported Not Reported

Figure 2 - Plants used and their respective therapeutical indications mentioned by the male senior citizens. Dourados, Mato Grosso do Sul, Brazil, 2010

Out of the 34 medicinal plants used by male senior citizens, only lemongrass and mint have had their use mentioned in two other research studies involving senior citizens[6-7]. Lemongrass was the plant most commonly used by the residents of a municipality in the countryside of São Paulo, in Southeastern Brazil, and mint was also one of the ten most commonly used in this population[19]. In relation to the use thereof, the indications for morbidity of the respiratory and digestive tracts were the most prevalent, as also shown in other research studies[6-7,9,19].

Representations of medicinal plants among male senior citizens

On being asked about when they used medicinal plants, it was possible to understand how the use of these therapeutical artefacts is part of daily life, bringing reasons of permanency and singularity. The meanings they had were constructed through family relations, as all the subjects said that they learnt about medicinal plants with their ascendant relatives, especially mothers and grandmothers. The acquisition of this knowledge through transmission between generations was reported in other studies, reinforcing the view that the older generation are the guardians of phytotherapy[6,7,20-22]. *For as long as I remember, I have used teas extracted from plants. I have been taking herbal teas since I was 5 or 6 years old, and I remember that my aunt would make the teas for me to drink.*

(The Figure 1 continue in the next column...)

This was something that passed from one generation to another (E1). *Look, it is difficult to say, as my mother always liked herbal teas. She made wide use of orange leaves, lemongrass, pomegranate, and Paraguay tea* (E11). *My mother would do the cooking, and make tea for us to take; in this tea, she would add chicken fat, and give us some to drink at the time; indeed, my brother broke his leg when he fell off a horse, and my father cured him with homemade medication* (E9). *My mother made tea even from goat's beard, like in the Northeast, my daughter, all of them, Northeastern is clove tea, pepper tea, eucalyptus tea. Everyone from the Northeast has this* (E6).

For them, the use of plants is not regarded as consumption of medication, and they are therefore different from the "medicine from the health centre", as they take longer to take effect and are only valid as assistance in the treatment recommended by the doctor, as seen in their statements. *The plant does try, sometimes it helps somewhat [...] and if they say it is good for me then I take it; if they say it's good, I take it* (E7). *From the forest, it only helps, but for serious treatment only medicine fits the bill.* (E8). *I do not use them just for a cough or stomachache, these things, the other is different, that from the medical centre* (E1). *These take longer to become effective, while those from the medical centre are quicker in action* (E2).

For male senior citizens, medicinal plants are complementary therapeutic resources, as treatment with industrialised medication seem not to have much interference. In some cases, the use of medicinal plants takes on a leading role in therapy, such as the treatment of lesser morbidities, these including teas for influenza. A survey carried out in the Brazilian State of Rio de Janeiro, not specifically involving more chronologically advantaged individuals, most of the people interviewed (52.4%) made use of medicinal plants to replace industrialised medication, this being more evident in the age bracket between 50 and 69[4].

Different from industrialised medication, whose usage significance has an ambivalent nature, sometimes related to efficiency, to intrinsic curative qualities, and other times related to adverse reactions, the representations on medicinal plants seem to be anchored in the concept of low risk to health[4,13]. *They do less harm. We take the medicine from the health station, but I know that they are much more harmful than plants. I take chemical medicines knowing that they are poisonous, but I have to take them* (E16). *No. They don't do it. The plant does not cause any harm when taken according to instructions* (E7). *Many plants are good for you if you know how to take them* (E10).

Medicinal plants are seen as non-chemical medication, obtained from nature and which have been tested by their forefathers over the centuries[4]. Based on these perceptions, the presentations of relative security with regard to medicinal plants reinforce only their positive aspects, to the detriment of industrialised medications, considered as having adverse reactions and able to harm health[21].

However, a study conducted in Rio Grande do Sul, about the ten species most commonly used, in five cases there were reports of adverse side effects. In another five cases, contraindications were reported. Considering use during pregnancy, six of the ten plants studied were not recommended to be used during this period[9].

Thus, the adverse reactions of the industrialised medication seem to reinforce the idea that medicinal plants are better as they do not have the side effects that the other medication does. *They are healthier than the medicines made from chemicals, because for senior citizens things are different. The stomach is different. It is bad, everything is chemicals. Then the stomach reacts, and colic comes around. You then go to the doctor and the doctor says: take these pills as well.* (E12).

Thus, the idea made by senior citizens about medicinal plants, constructed throughout their lives, can be summed up thus: they do some good and bring little risk to human health. However, this concept of apparent security seems not to consider adverse reactions and also the toxic effects arising from the use of medicinal plants.

Use of medicinal plants: obtaining and methods of preparation

We see that male senior citizens have the habit of growing medicinal plants in the gardens and yards, as also acquire them from the yards of neighbours, friends and even in other places, such as the swamp near where they live. In a study carried out in the city of Fortaleza, State of Ceará, Brazil, it was observed that nearly half the people interviewed (40%) obtained these plants from their own gardens and yards[7]. *This* sabugueiro*, this dandelion, I have everything at home* (E3). *I pick plants in the swamp, in the bush* (E5). *I never buy them, as these plants are more native. These are things that we find in the swamp, then just pick and bring over.* (E7) *In the bush and the lake, I collect the herbs. This blue snakeweed is from our plantation* (E5) *These I told you about, I have all these in my backyard* (E16).

The practices made evident above can bring risks concerning quality and also security, as on picking there could be a mistaken identity of the plant. One of the strategies to mitigate this risk would be the use of plantations of medicinal plants, with the respective

species being certified by botanists, and the indication and use under the responsibility of the multiprofessional health team. In a study made about the Phytotherapy Programmes at the Brazilian Single Health System (SUS) in the states and municipalities, it was confirmed that 52.6% of the plantations implemented used plant species coming from the plantations of Universities and 21% from other research institutions, thereby allowing access and rational use of medicinal plants[1].

Regarding preparation, everyone refers to tea taken by decoction or use during the consumption of *chimarrão*, also known as Paraguay tea or *tereré*. *Chimarrão* or Paraguay tea is a typical drink from the South of Brazil which is prepared with yerba maté and normally served hot as an infusion, consisting of leaves and stems, dried and crushed. In the case of tereré, it is made from the immersion of yerba maté in iced water[20]. *Since I grew up, I have also been taken it, I make the tea and then add it to the water of the yerba maté* (E17) *You burn the plant, scrape what remains in the cup and then place the cold water, then put the lid on a bit because it starts to boil. I learnt this with my father and my grandmother* (E1) *The mama do reino, you just need to pick it up and place it in the container, you cover it and don't add any water. Then it boils, and all the water it contains comes off. Then you add a spoonful of burnt sugar, if you wish, and drink it. This is a good medicine for influenza and coughs* (E6). *I put it in a pitcher, I crush it and leave it there, then I put it in water and drink it* (E4).

Medicinal plants and industrialised medication: how they articulate together within the daily therapeutic activities of male senior citizens

We have seen some practices of medication involving the simultaneous use of industrialised medication and medicinal plants, as mentioned by one of the people interviewed, who said that to relieve his "shortness of breath" used both inhalation at the health centre and a concoction of medicinal plants made at home. *My son taught me to mix eucalyptus, green multicoloured earthtoned beans, mint and ginger. Boil and make the concoction. Place in a basin and then inhale as much as you can, before you go to bed. Then, what I do is the following: I do inhalation with Berotec® and serum, and then I lie down and sleep well, thank God* (E14).

These medication practices are techniques of social and cultural production. Perhaps, for a health professional, the inhalation of the homemade mixture of ginger is not suitable, as the inhaled bronchial dilator is the most correct from the scientific standpoint, but this association, in equality, has a meaning for those carrying it out. These practices of medication or these uses of medicinal plants usually take place in silence. These are tactics or knacks that could take on a negative connotation among the health team[23].

A study carried out on British women confirmed that the use of medicinal plants normally occurs without the knowledge of the health professional. Its use is associated to the concept of security and also the lack of knowledge of the side effects and the interference with the efficiency of other medication[13].

These silent practices also find motives in the negative perception of medicinal plants by the health teams, as well as poor academic qualifications in the area of phytotherapy and a fear of reporting the use thereof[1,13].

On looking at the plants used by male senior citizens, it is possible to see that some of them have precautions, contra-indications or harmful interactions between medication, in relation to morbidities and medication used[24]. By way of example, *carqueja* can cause low blood pressure, and its joint use with medication to control high blood pressure or diabetes must be avoided, which is a relevant fact for the sample here considered. In the case of boldo and ginger, they shall not be used in cases of hypertension[24].

Thus, the use of medicinal plants, even though confirmed, seems to be ignored by health professionals, as male senior citizens mention that they have not been informed about possible health risks concerning use together with industrialised medication. The informants are usually friends, relatives and also reference to books that they have at home, without thinking of issues related to the dose of the plant or possible complications or intoxications arising therefrom. *Because some other person was telling me, other people with more experience would take it and then recommend it.* (E5). *The* caboclo *came and said "Do you know about* pau azul*? I didn't say myself. And then he answered: It is good, because it helps in treatment of diabetes". And so I bought it! "* (E7) *In the medicine book it is given as an antibiotic, and serves to cure the blood, and to fight against cancer. It is in the book.* (E9)

The use of medicinal plants by male senior citizens together with industrialised medication can cause interactions between the medication and the plants which could be harmful to health, thereby affecting the treatment of the chronic diseases made evident, as some more studies are still necessary to assess the impact of these interactions involving native plant species.

Conclusion

It has been possible to confirm that the use of medicinal plants has become part of the daily routine

of male senior citizens and also represent a type of complementary therapeutic resource in the treatment of lesser morbidities. The transmission of these practices has taken place throughout their lives and also through their ancestors. For them, plants have a longer effect than industrialised medicines. The concepts about medicinal plants are well anchored in the concept of health, considering that, being natural, they would have less likelihood of triggering adverse reactions.

We also saw that male senior citizens have the habit of growing medicinal plants in their own backyards and gardens, which can bring a risk in case of mistaken identity of the plant. The joint use of industrialised medication and medicinal plants has been observed, but the lack of knowledge about interactions between medication and plants and the consequences of these associations may interfere with the efficiency of the medication used, mainly for the treatment of chronic illnesses such as hypertension and diabetes.

We have seen that, in spite of the use of medicinal plants, the health professionals seem to be unaware of such practices, because in most cases the chronologically advantaged gentlemen carry out this practice in silence. Thus, the contribution of this research study is to address the need for permanent education aimed at phytotherapy, for the health and nursing teams, thereby contributing towards the safe and efficient use of medicinal plants.

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