



## Situational diagnosis of professionals of family health units on phytotherapy

A. S. C. E. Bezerra<sup>a</sup> , S. P. B. Franco<sup>a</sup> , K. C. Mousinho<sup>a</sup> , S. A. Fonseca<sup>a</sup> ,  
T. J. Matos-Rocha<sup>a,b</sup> , J. M. S. J. Pavão<sup>a</sup> and A. F. Santos<sup>a,c,\*</sup>

<sup>a</sup>Centro Universitário Cesmac, Maceió, AL, Brasil

<sup>b</sup>Universidade Estadual de Ciências da Saúde de Alagoas – UNCISAL, Maceió, AL, Brasil

<sup>c</sup>Universidade Estadual de Alagoas – UNEAL, Arapiraca, AL, Brasil

\*e-mail: aldenirfeitosa@gmail.com

Received: June 1, 2019 – Accepted: January 27, 2020 – Distributed: August 31, 2021

### Abstract

The incorporation of the use of phytotherapy in the primary health care is an important gain for the Unified Health System, besides reducing the cost in the treatment of the patient, rescues the popular knowledge and promotes the rational use of the medicinal plants. To determine the situational diagnostic profile of professionals of family health units on phytotherapy. A quantitative observational study was carried out, in which forms were applied to the team of the family health units of the municipality of Marechal Deodoro da Fonseca/Alagoas. Only 23% of the interviewed professionals reported having had contact with scientific information on phytotherapy during professional training. All of them approve the implantation of the official practice of phytotherapy and routinely prescribe phytotherapies and medicinal plants, but they do not know the possible risks of drug interaction with the use of medicinal plants. Health professionals support the official practice of phytotherapy in public health and show interest in participating in courses / training on the subject to better serve the population.

*Keywords:* phytotherapy, medicinal plants, primary health care, health personnel.

## Diagnóstico situacional dos profissionais de unidades de saúde da família sobre a fitoterapia

### Resumo

A incorporação do uso da fitoterapia na atenção primária à saúde é um ganho importante para o Sistema Único de Saúde, além da redução do custo no tratamento do paciente, resgata o conhecimento popular e promove o uso racional das plantas medicinais. Determinar o perfil diagnóstico situacional dos profissionais de unidades de saúde da família sobre fitoterapia. Foi realizado um estudo observacional quantitativo, no qual foram aplicados formulários para a equipe das unidades de saúde da família do município de Marechal Deodoro da Fonseca/Alagoas. Apenas 23% dos profissionais entrevistados afirmaram ter tido contato com informações científicas sobre fitoterapia durante a formação profissional. Todos aprovam a implantação da prática oficial da fitoterapia e prescrevem rotineiramente fitoterápicos e plantas medicinais, entretanto desconhecem os possíveis riscos de interação medicamentosa com o uso das plantas medicinais. Os profissionais de saúde apoiam a prática oficial da fitoterapia na saúde pública e demonstram interesse em participar de cursos/treinamentos sobre a temática para melhor atender a população.

*Palavras-chave:* fitoterapia, plantas medicinais, atenção primária à saúde, profissionais da saúde.

### 1. Introduction

Medicinal plants and herbal remedies are used by Brazilian population for their health care both in traditional medicine/popular as public programs of phytotherapy of SUS (Unified Health System) as integrative practices and complementary to the primary health care (Nascimento Júnior et al., 2016).

Phytotherapy in Brazil programs involve the cultivation of medicinal species, handling and dispensing of herbal medicines, according to medical prescription of health units in the model of the family health strategy (FHS) and the hospital units (Brasil, 2009). The use of herbal

medicine has different goals, among these, the therapeutic resources, the revitalization of traditional knowledge, the preservation of biodiversity, the promotion of Agroecology, social development and education popular environmental and continuous (Antonio et al., 2014). Health care professionals who work directly with the low-income population play an important role in clarifying the doubts of the public about the pharmacological potential of medicinal plants, in the guidance of correct use, on your way to preparation, these prescription or herbal medicines

in health units and in home visits (Machado and Botsaris, 1999; Bauer, 2000). For the requirements of medicinal plants and herbal medicines occur correctly and primarily secure, it is necessary that the professionals are trained to understand the chemistry, toxicology, Pharmacology and active principles of plants medicinal plants (Santos et al., 2011). It takes encouragement and support for use of herbal medicine, in addition to training courses and continuing education for health professionals and particularly the inclusion of complementary practices in curricular arrays of universities, thus forming professionals (Becker, 2012).

The town of Marechal Deodoro da Fonseca, located in the State of Alagoas, is one of the poles for the implementation of local productive arrangements of medicinal plants. Within this context the objective Situational diagnosis of this municipality with regard to knowledge about herbal medicine by health professionals and the determination of the frequency of prescription of herbal medicines and/or medicinal plants by doctors in family health Units. Such information may serve as a subsidy for the development of guidelines and action plans to the Board of health of this and other cities aimed at the consolidation of Phytotherapy in SUS.

## 2. Material and Methods

This research was approved by the Research Ethics Committee of the CESMAC University Center under the number 449,467, according to the guidelines of resolution CNS/MS 466/12. This is an observational and transversal study. Questionnaires were applied to the professionals of the 15 teams of the Family Health Strategy (nurses, physicians and Community Health Agents (ACS)) in the municipality of Marechal Deodoro da Fonseca – Alagoas, with 13 teams from the urban zone and 2 from the Rural zone. To determine the health professional profile of the units, the total population of physicians (15) and nurses (15) registered in the municipality's SUS were considered individually.

According to the Department of Health of Marechal Deodoro da Fonseca, 107 ACS are registered in the city. For the sample calculation of the ACS number of the health units, the criteria were used: 9.8% of acceptable error and CI of 95%. The hypothetical frequency of the result factor in the population (p) was 50%, since there is no published data on the specific sample. The program used was the OpenEpi-2 program available online and increased by 20%, so that eventual losses did not compromise the representativeness of the sample. Sample stratification procedures were performed so that the participants represented the category evenly. In this way 52 ACS participated in the research.

The research subjects received from the researchers the verbal invitation in person in the positions of the Family Health Strategy (FHS), during their daily work hours. The volunteers who were willing to participate in the study as subject of the research received from the researchers all the necessary information regarding the realization of it in all its stages, being aware that their participation would be according to their Will, and can give up when he's pleased. As a milestone of inclusion for the participation of the subject, the volunteers (over 18 years of age) who

were willing to collaborate, signed the free and clarified consent form drawn up by the researcher based on the guidelines of resolution CNS/MS 466/12 (Brasil, 2012). Being excluded from the research the professionals of medical leave, maternity leave, vacation, who were away from their activities for other reasons and/or in that FHS unit did not exist any of these professionals allocated.

The application of the forms was performed in the work environment, respecting the methods and techniques of a social approach and the importance of resolution 466/12 (Ethics in Health) (Brasil, 2012). It should be emphasized that the same form was applied to all health professionals involved.

The questionnaire was blocked in four groups: the 1st containing questions related to the academic education of the health professional; The 2nd group seeking to collect the opinion of these professionals about the inclusion of phytotherapy in the SUS and, the level of satisfaction of them in relation to the treatment of diseases with medicinal plants or phytotherapies; The 3rd group containing questions about the knowledge of the form of cultivation and of the drug interactions and the 4th and last restrictive block to prescribers (physicians), in order to collect information about the indications and prescriptions of phytotherapies and of medicinal plants, about which plants are prescribed (part used, routes of administration, form of preparation) and the form of knowledge used by physicians to guide the use of medicinal plants and phytotherapeutic drugs.

The data were tabulated in a spreadsheet Microsoft Excel® 2007, where they were analyzed by descriptive statistics to calculate the frequencies and percentage of quantifiable information.

## 3. Results and Discussion

Among the professionals of the Family health strategy teams in the target city of the research, 100% of the nurses, 93% of the physicians and 88.46% of the community health agents belonged to the female gender. Regarding the age group, while most nurses and physicians had between 20-30 or  $\geq 50$  years, community health agents were in the age group of 41-50 years (Table 1).

**Table 1.** Age group of health professionals of the Family health strategy teams of the municipality of Marechal Deodoro da Fonseca/Alagoas in 2016.

Age	Nurses	Doctors	CHA
	Relative frequency	Relative frequency	Relative frequency
20-30	20%	40%	21.15%
31-40	13.3%	0%	15%
41-50	13.3%	6.67%	38%
51+	20%	26.67%	5.77%
Uninformed	33.3%	26.67%	11.54%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

CHA = Community Health Agent.

As in our study, most of the published studies addressing health professionals show the predominance of females (Marsiglia, 2011). According to our findings, in the study by Sampaio et al. (2013), the interviewed nurses presented a variation of age between 27 and 50 years, the physicians interviewed by Ribeiro and Guimarães (2013) are between 25 and 64 years.

Only 47% of physicians and nurses; and 17% of the CHAS reported some contact with scientific information about the use of medicinal plants and herbal medicines during academic training. However, 13% of the physicians had this contact only during the exercise of the profession. It should be emphasized that only 7% of physicians cited the course on phytotherapy. Also regarding the complementary training of professionals, it was observed that the nurses did not participate in any course, and only 4% of the CHAS participated in courses.

Although in the present study a low percentage of physicians reported contact with education on phytotherapy during academic training, in the works of Rosa et al. (2011) and Fontenele et al. (2013), no physician reported having attended during their training any Discipline that dealt with the subject in question. Regarding the low percentage of search for scientific information on phytotherapy during the practice of the profession, similar behavior was observed in the studies conducted by Silva (2012) where the participants reported not having participated in any Improvement course on phytotherapy, despite being requested. Different results were observed by Sampaio et al. (2013), in which a higher percentage of nurses (27%) Affirmed to have participated in some kind of training in phytotherapy.

Researches carried out by Fontenele et al. (2013) indicated that 90% of physicians and 100% of nurses acquired knowledge about medicinal plants in books consulted outside the higher education institution and 100% of the middle-level professionals obtained Knowledge through information from previous generations' relatives. Sampaio et al. (2013) states that only 20% of the interviewed nurses use Phytotherapy in their daily lives, and the use is done in isolation, claiming that they do not have any further instructions on this practice and cultural appreciation was pointed As one of the main benefits of using herbal medicine. Usually the professionals of these health teams originate from social extracts that use almost exclusively synthetic medications and give little credibility to the treatments based on traditional medicine (Pires et al., 2016). Although the populations assisted by the professionals of this study constantly use phytotherapy based on popular knowledge, it is of paramount importance that health professionals have more in-depth knowledge on the subject, for better To instruct on the safe use of phytotherapics.

Regarding the approval of the implementation of the official practice of phytotherapy in the SUS, more than 87% of the professionals participating in the research support this action. This information resembles the researches by Bruning et al. (2012) and Nagai and Queiroz (2011), in which a unanimous agreement was observed among the professionals regarding the approval of this practice.

In the research of Dutra (2012), 65% of the nurses and 17% of physicians approve the implementation of phytotherapy in the unified health system.

The satisfaction of health professionals about the treatment of diseases with phytotherapeutic drugs and/or medicinal plants is still incipient. Most of the respondents, more than 71%, considered that this practice is sometimes satisfactory. This finding differs from the research by Petry and Roman Junior (2012) that 60% of their participants approved the use of herbal medicine as a complementary therapy, because they did not attack the organism and bring real benefits.

Regarding the knowledge about the risks of drug interaction of medicinal plants with synthetic drugs, most of these professionals reported not knowing the drug interactions.

It should be emphasized that, in relation to those who answered yes, the types of drug interactions cited were varied. Only one (6.66%) Nurse wrote abortion and intoxication, and one (6.66%) Physician responded to increased blood pressure and hyperglycemia. While ACS 12.96% wrote intoxication, 1.85% irritability and 3.7% allergies.

It is perceived the lack of knowledge about the subject by professionals, since drug interaction is confounded with symptoms and side effects. This information corroborate the findings of Machado et al. (2012) in which most of his interviewees do not consider the interaction important. It is important to highlight that according to Alexandre et al. (2008), the use of medicinal plants has increased in recent years and that both plants and herbal medicines are characterized by a complex mixture of chemical components, which can present various mechanisms of action, interact with several drugs, and can compromise its efficacy, safety and cause risks to the health of the population.

It was observed that 75.6% of the professionals did not guide the cultivation of medicinal plants at home. The CHAS and the nurses cited three plants as the ones indicated for home cultivation: mint, lemon grass and holy grass; Being the nurses who most orient the cultivation of medicinal plants. The doctors cited, in addition to the three above, Beet, Mastruz, Barbatimão, pineapple and white onion.

According to Souza-Moreira et al. (2010) There is still lack of standardization in the planting, collection and preparation of medicinal plants and that often the plants being collected present strange materials (viruses, fungi, bacteria) that can cause harm to the population and, Lack of knowledge about these techniques the professionals do not guide the use of medicinal plants and consequently the orientation about planting.

Regarding the receipt of information on the use of medicinal plants, it was observed that only 13% of the interviewed nurses received and described the material received: brochures and booklet; 13% of ACS reported that they received some type of information. It should be emphasized that no physician mentioned having received any informative material. Cantarelli (2012) affirmed that professionals make use of phytotherapics, but do not prescribe and that this fact is related to the lack of continuing education on the subject.

It was observed that most health professionals (> 80%) I would like to participate in workshops, lectures and/or trainings on the rational use of plants with medicinal properties. The interest in participating in capacitations on the use of medicinal plants was also observed in 100% of the CHAS in the research conducted by Souza-Moreira et al. (2010).

The important role of ACSs within primary care includes actions of identification, prevention, health promotion and monitoring of families in the territory. In addition, currently the ACSs are important tools in the health actions of the population, thus one of the criteria to select them is that they reside in the community in which they work, with the purpose of facilitating the understanding of the aspects that permeate health and local diseases (Souza et al., 2015).

Regarding prescriptions made by physicians, it was observed that 67% responded that yes/eventually prescribe medicinal plants for the treatment of diseases, and 67% prescribe phytotherapies. A similar result was obtained by Souza-Moreira et al. (2010) who observed that 60% of physicians prescribe medicinal plants and, by Rosa et al. (2011) that 70.4% of the physicians interviewed carry out prescription of phytotherapies. Varela and Azevedo (2014), comments on the concern with these prescriptions, so that they are not a complement that in nothing adds and that instead of bringing benefits, can cause harm to the health of individuals.

It was found that the prescriptions were justified based on the most varied reasons: "I have limited knowledge in the area", "for not having necessary knowledge and experience", "some anti-inflammatory plants for pain and diabetes", "I have not Total knowledge about the efficacy of the treatment", "People always feel good, the elderly prefer these teas" and "because the allopathic ones are not always indicated, and the phytotherapies can be used as adjuvant to the natural response of the organism". The non-adherence to this practice was justified in the following way: "Due to little knowledge of the subject" and "I am not qualified to accomplish such practice".

Pereira et al. (2015), in his research states that only 1.3% of the interviewed professionals reported having an understanding about phytotherapy and that the lack of studies (pharmacokinetics, pharmacodynamics and toxicology) in this area is the main cause of the same Not feel confident of accepting and prescribing phytotherapies. Varela and Azevedo (2014) says that the initiative to insert these contents should be expanded and reproduced in universities to broaden the range of knowledge of these professionals.

Regarding the prescription of medicinal plants, it was observed that Mint was the most prescribed medicinal plant (27.27%), followed by pineapple (9.09%), garlic (9.09%) and beet (9.09%). The other plants cited as prescribed by physicians had a frequency of 4.54% each. Regarding the prescription or indication of phytotherapies, it should be emphasized that each one was cited only once, with the correct therapeutic indication and, in some cases, the indication was not mentioned, in addition, some did not have the mentioned parts used, However, the indicated route of administration was oral (Table 2). It was observed that lambeaches and syrups of home origin were erroneously listed as Phytotherapies.

In the research developed by Albertasse et al. (2010) and Araújo et al. (2014) Mint was also one of the most cited plants, however, boldo, lemongrass and holy grass were used in percentages higher than those found in the present study. Silva et al. (2006) stated in their research that 63.8% of the prescribed phytotherapeutic medications are expectorants indicated for respiratory disorders and, according to Silva et al. (2005), 90% of the users reported their therapeutic success. This aspect justifies the frequency of its prescription. One of the phytotherapies cited in this study, the Guaco®, was also mentioned in the research of Silva et al. (2006), the use of syrup as expectorant, much used in pediatrics, but did not adhere to the use of anxiolytics such as Calman®.

In the orientation of the use of medicinal plants and herbal medicines, the majority affirmed that it is based on knowledge of the active principle and not by the use of phytotherapy protocols and 33% through the use of a leaflet. Of the 67% of the physicians who responded that

**Table 2.** Medicinal and phytotherapeutic plants prescribed by the health professionals of the Family health strategy teams of the municipality of Marechal Deodoro da Fonseca/Alagoas in 2016.

MEDICINAL PLANTS	TI	HERBAL	TI
Hortelã (leaves), abacaxi (fruit), alho, beterraba (rhizome) e mastruz	Expectorant (Santos and Silva, 2015; Faustino et al., 2010)	Calman®/ Passiflora®	Soothing (Pantoja et al., 2012)
Erva cidreira (leaves), capim santo (leaves) e camomila	Soothing (Araújo et al., 2014; Ognibene and Marques, 2012)	Abrilar® ( <i>Hederahélix</i> )	Upper airway infections (Lustosa et al., 2008)
Boldo	Abdominal pain (Ognibene and Marques, 2012)	Valeriana	Anxiolytic (Pantoja et al., 2012)
Babosa (leaves) e sambacaitá (leaves)	Anti-inflammatory (Faustino et al., 2010)	Própolis®	Inflammation (Macedo et al., 2007)
Amora (leaves) e pata de vaca (leaves)	Hypoglycemic (Pereira, 2008)	Guaco®	Expectorant (Silva et al., 2006)

TI = Therapeutic indication.



they prescribed only 13% did not respond to the source of guidance they use. This information differs from the research by Fontenele et al. (2013) that the knowledge of most professionals is based mainly on popular culture.

In conclusion, due to the lack of knowledge about the medicinal plants, and the little support found to study the subject and clarify the doubts of the population, the health professionals who target the research do not feel stimulated about the use of plants Medicinal and/or phytotherapics. It is observed that the lack of preparation and knowledge of these professionals regarding the prescription of phytotherapics and medicinal plants, as well as in relation to the orientation of the cultivation of medicinal plants is consistent with that found by other authors. The professionals in question carry out their orientations through knowledge coming from their relatives, friends, neighbors and/or searching in the literature itself. The study reinforces the need to perform incentive actions and continuing education on phytotherapy, in addition, training of professionals and distribution of scientific technical material that minimizes uncertainties regarding the indications of Medicinal and/or phytotherapeutic plants on the part of the prescribers.

## References

- ALBERTASSE, P.D., THOMAZ, L.D. and ANDRADE, M.A., 2010. Plantas medicinais e seus usos na comunidade da Barra do Jucu, Vila Velha, ES. *Revista Brasileira de Plantas Medicinais*, vol. 12, no. 3, pp. 250-260. <http://dx.doi.org/10.1590/S1516-05722010000300002>.
- ALEXANDRE, R.F., BAGATINI, F. and SIMÕES, C.M.O., 2008. Interações entre fármacos e medicamentos fitoterápicos à base de ginkgo ou ginseng. *Revista Brasileira de Farmacognosia*, vol. 18, no. 1, pp. 117-126. <http://dx.doi.org/10.1590/S0102-695X2008000100021>.
- ANTONIO, G.D., TESSER, C.D. and MORETTI-PIRES, R.O., 2014. Phytotherapy in primary health care. *Revista de Saúde Pública*, vol. 48, no. 3, pp. 541-553. <http://dx.doi.org/10.1590/S0102-311X2007000600021>. PMID:25119949.
- ARAÚJO, C.R.F., SILVA, A.B., TAVARES, E.C., COSTA, E.P. and MARIZ, S.R., 2014. Perfil e prevalência de uso de plantas medicinais em uma unidade básica de saúde da família em Camina Grande, Paraíba, Brasil. *Revista de Ciências Farmacêuticas Básica e Aplicada*, vol. 35, no. 2, pp. 233-238.
- BAUER, B.A., 2000. Herbal Therapy: what a clinician needs to know to counsel patients effectively. *Mayo Clinic Proceedings*, vol. 75, no. 8, pp. 835-841. <http://dx.doi.org/10.4065/75.8.835>. PMID:10943239.
- BECKER, M.M., 2012. *Programas de fitoterapia na rede pública de saúde no Brasil*. Florianópolis: Universidade Federal de Santa Catarina, 30 p. Monografia de Especialização em Saúde Pública.
- BRASIL, 2009. *Programa Nacional de Plantas Medicinais e Fitoterápicos*. Brasília: Ministério da Saúde.
- BRASIL, 2012. *Resolução nº 466, de 12 de dezembro de 2012. Aprova as diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos*. *Diário Oficial da República Federativa do Brasil*, Brasília, 13 jun.
- BRUNING, M.C.R., MOSEGUI, G.B.G. and VIANNA, C.M.M., 2012. A utilização da fitoterapia e de plantas medicinais em unidades básicas de saúde nos municípios de Cascavel e Foz do Iguaçu – Paraná: a visão dos profissionais de saúde. *Ciência & Saúde Coletiva*, vol. 17, no. 10, pp. 2675-2685. <http://dx.doi.org/10.1590/S1413-81232012001000017>. PMID:23099755.
- CANTARELLI, A.P., 2012. *Estudo da utilização de plantas medicinais pelos usuários do SUS e das práticas dos profissionais de saúde de doutor Maurício Cardoso em relação à fitoterapia*. Três Passos: Universidade Federal do Rio Grande do Sul, 69 p. Monografia de Especialização em Gestão em Saúde.
- DUTRA, M.G., 2012. Plantas medicinais, fitoterápicos e saúde pública: um diagnóstico situacional em Anápolis, Goiás. *Revista do Mestrado Multidisciplinar em Sociedade*, vol. 1, no. 2, pp. 76-92. <http://dx.doi.org/10.21664/2238-8869.2012v1i2.p76-92>.
- FAUSTINO, T.T., ALMEIDA, R.B. and ANDREATINI, R., 2010. Plantas medicinais no tratamento do transtorno de ansiedade generalizada: uma revisão dos estudos clínicos controlados. *Revista Brasileira de Psiquiatria*, vol. 32, no. 4, pp. 429-436. <http://dx.doi.org/10.1590/S1516-44462010005000026>.
- FONTENELE, R.P., SOUSA, D.M.P., CARVALHO, A.L.M. and OLIVEIRA, F.A., 2013. Fitoterapia na Atenção Básica: olhares dos gestores e profissionais da Estratégia Saúde da Família de Teresina (PI), Brasil. *Ciência & Saúde Coletiva*, vol. 18, no. 8, pp. 2385-2394. <http://dx.doi.org/10.1590/S1413-81232013000800023>. PMID:23896921.
- LUSTOSA, S.R., GALINDO, A.B., NUNES, L.C.C., RANDAU, K.P. and ROLIM NETO, P.J., 2008. Própolis: atualizações sobre a química e a farmacologia. *Revista Brasileira de Farmacognosia*, vol. 18, no. 3, pp. 447-454. <http://dx.doi.org/10.1590/S0102-695X2008000300020>.
- MACEDO, A.F., OSHIWA, M. and GUARIDO, C.F., 2007. Ocorrência do uso de plantas medicinais por moradores de um bairro do município de Marília-SP. *Revista de Ciências Farmacêuticas Básica e Aplicada*, vol. 28, no. 1, pp. 123-128.
- MACHADO, D.C., CZERMAINSKI, S.B.C. and LOPES, E.C., 2012. Percepções de coordenadores de unidades de saúde sobre a fitoterapia e outras práticas integrativas e complementares. *Saúde em Debate*, vol. 36, no. 95, pp. 615-623. <http://dx.doi.org/10.1590/S0103-11042012000400013>.
- MACHADO, P.V. and BOTSARIS, A.S., 1999. *Guia de saúde e orientação terapêutica*. Rio de Janeiro: Flora Med.
- MARSIGLIA, R.M.G., 2011. Perfil dos Trabalhadores da Atenção Básica em Saúde no Município de São Paulo: região norte e central da cidade. *Saúde e Sociedade*, vol. 20, no. 4, pp. 900-911. <http://dx.doi.org/10.1590/S0104-12902011000400008>.
- NAGAI, S.C. and QUEIROZ, M.S., 2011. Medicina complementar e alternativa na rede básica de serviços de saúde: uma aproximação qualitativa. *Ciência & Saúde Coletiva*, vol. 16, no. 3, pp. 1793-1800. <http://dx.doi.org/10.1590/S1413-81232011000300015>. PMID:21519669.
- NASCIMENTO JÚNIOR, B.J., TÍNEL, L.O., SILVA, E.S., RODRIGUES, L.A., FREITAS, T.O.N., NUNES, X.P. and AMORIM, E.L.C., 2016. Avaliação do conhecimento e percepção dos profissionais da estratégia de saúde da família sobre o uso de plantas medicinais e fitoterapia em Petrolina-PE, Brasil. *Revista Brasileira de Plantas Medicinais*, vol. 18, no. 1, pp. 57-66. [http://dx.doi.org/10.1590/1983-084X/15\\_031](http://dx.doi.org/10.1590/1983-084X/15_031).

- OGNIBENE, C.E.F. and MARQUES, L.C., 2012. Produção e comercialização de fitoterápicos à base de *Hederahelix*: avaliação comparativa dos produtos disponíveis no Brasil. *Revista Brasileira de Medicina*, vol. 69, no. 10, pp. 256-260.
- PANTOJA, M.A., SILVA FILHO, A.C., MELO, M.I.C., ARAÚJO, F.P., RIBEIRO, K.N., FARIAS, M.M. and PINTO, M.A.S.C., 2012. Estudo etnobotânico de plantas medicinais no bairro São Lázaro. *Anais Programa Ciência na Escola*, vol. 1, no. 1, pp. 48-52.
- PEREIRA, I.G.R., 2008. *Prevalência do uso de fitoterapia em pacientes do programa em geriatria do Hospital Universitário de Brasília-HUB*. Brasília: Faculdade de Ciências da Saúde, Universidade de Brasília, 130 p. Dissertação de Mestrado em Ciências da Saúde.
- PEREIRA, J.B.A., RODRIGUES, M.M., MORAIS, I.R., VIEIRA, C.R.S., SAMPAIO, J.P.M., MOURA, M.G., DAMASCENO, M.F.M., SILVA, J.N., CALOU, I.B.F., DEUS, F.A., PERON, A.P., ABREU, M.C., MILITÃO, G.C.G. and FERREIRA, P.M.P., 2015. O papel terapêutico do Programa Farmácia Viva e das plantas medicinais no centro-sul piauiense. *Revista Brasileira de Plantas Medicinais*, vol. 17, no. 4, pp. 550-561. [http://dx.doi.org/10.1590/1983-084X/14\\_008](http://dx.doi.org/10.1590/1983-084X/14_008).
- PETRY, K. and ROMAN JÚNIOR, W.A., 2012. Viabilidade de implantação de fitoterápicos e plantas medicinais no Sistema único de Saúde (SUS) do município de Três Passos-RS, Santa Catarina, Brasil. *Revista Brasileira de Farmácia*, vol. 93, no. 1, pp. 63-67.
- PIRES, I.F.B., SOUSA, A.A., LIMA, C.A., COSTA, J.D., FEITOSA, M.H.A. and COSTA, S.M., 2016. Plantas medicinais: cultivo e transmissão de conhecimento em comunidade cadastrada na Estratégia Saúde da Família. *Revista Brasileira de Pesquisa em Saúde*, vol. 18, no. 4, pp. 37-45. <https://doi.org/10.21722/rbps.v18i4.16729>.
- RIBEIRO, K.S. and GUIMARÃES, A.L.A., 2013. O uso de medicamentos à base de plantas medicinais por médicos do SUS no município de Teresópolis, RJ. *Revista Agrogeoambiental*, vol. 1, no. 1. <http://dx.doi.org/10.18406/2316-1817v1n12013581>.
- ROSA, C., CÂMARA, S.G. and BÉRIA, J.U., 2011. Representações e intenção de uso da fitoterapia na atenção básica à saúde. *Ciência & Saúde Coletiva*, vol. 16, no. 1, pp. 311-318. <http://dx.doi.org/10.1590/S1413-81232011000100033>. PMID:21180838.
- SAMPAIO, L.A., OLIVEIRA, D.R., KERNTOPF, M.R., BRITO JÚNIOR, F.E. and MENEZES, I.R.A., 2013. Percepção dos enfermeiros da Estratégia Saúde da Família sobre o uso da fitoterapia. *Revista Mineira de Enfermagem*, vol. 17, no. 1, pp. 76-84. <http://www.dx.doi.org/10.5935/1415-2762.20130007>.
- SANTOS, L. and SILVA, H.C.H., 2015. Levantamento de plantas medicinais utilizadas em garrafadas no assentamento Rendeira em Girau do Ponciano - Alagoas: implicações para conservação de espécies lenhosas. *Revista Ouricuri*, vol. 5, no. 2, pp. 81-104.
- SANTOS, R.L., GUIMARAES, G.P., NOBRE, M.S.C. and PORTELA, A.S., 2011. Análise sobre a fitoterapia como prática integrativa no Sistema Único de Saúde. *Revista Brasileira de Plantas Medicinais*, vol. 13, no. 4, pp. 486-491. <http://dx.doi.org/10.1590/S1516-05722011000400014>.
- SILVA, J.B., 2012. *As práticas de uso de plantas medicinais e fitoterápicos por trabalhadores de saúde na atenção básica*. Ribeirão Preto: Universidade de São Paulo, 69 p. Dissertação de Mestrado em Enfermagem. <http://dx.doi.org/10.11606/D.22.2012.tde-15012013-113218>.
- SILVA, M.I.G., GONDIM, A.P.S., NUNES, I.F.S. and SOUSA, F.C.F., 2006. Utilização de fitoterápicos nas unidades básicas de atenção à saúde da família no município de Maracanaú (CE). *Revista Brasileira de Farmacognosia*, vol. 16, no. 4, pp. 455-462. <http://dx.doi.org/10.1590/S0102-695X2006000400003>.
- SILVA, M.I.G., SOUSA, F.C.F. and GONDIM, A.P.S., 2005. Herbal Therapy in Primary Health Care in Maracanaú, Ceará, Brazil. *The Annals of Pharmacotherapy*, vol. 39, no. 7-8, pp. 1336-1341. <http://dx.doi.org/10.1345/aph.1E178>. PMID:15897267.
- SOUZA, J., ASSAD, F.B., BARBOSA, S.P., BADAGNAN, H.F., ALMEIDA, L.Y. and GARLA, C.C., 2015. Situações de saúde mental nas unidades de saúde da família: percepção dos agentes comunitários de saúde. *Texto & Contexto Enfermagem*, vol. 24, no. 1, pp. 204-211. <http://dx.doi.org/10.1590/0104-07072015002850013>.
- SOUZA-MOREIRA, T.M., SALGADO, H.R.N. and PIETRO, R.C.L.R., 2010. O Brasil no contexto de controle de qualidade de plantas medicinais. *Revista Brasileira de Farmacognosia*, vol. 20, no. 3, pp. 435-440. <http://dx.doi.org/10.1590/S0102-695X2010000300023>.
- VARELA, D.S.S. and AZEVEDO, D.M., 2014. Opinião de médicos e enfermeiros sobre o uso da fitoterapia e plantas medicinais na Atenção Básica. *Revista de APS*, vol. 17, no. 2, pp. 204-213.