

Situational evaluation of brazilian live pharmacy programs



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ABSTRACT

Many of the Living Pharmacy Programs were implemented before the official launch and agreement on the list of herbal medicines selected by the Ministry of Health (MS) and included in the

National List of Essential Medicines (RENAME). The objectives of this study were, through applied forms, to explore the criteria used for the selection of medicinal plants, prescription, follow-up and information to patients. The methodology used was a qualitative and quantitative cross-sectional study carried out through forms applied to the Health Departments of Brazilian municipalities that participated in public notices for financial support, published by SCTIE/MS. Of the 80 forms submitted, approximately 52% were answered. It was found that about 16% of the Programs did not present CFT, that 80 Programs participated in Public Calls of the SCTIE/MS, in the period from month 2012 to month 2021. As for the selection of species, 61% took into account the popular use and 37% the National List of Medicinal Plants of Interest to SUS (RENISUS). According to the dosage scheme, 49% were based on scientific evidence, 20% on popular use and 73% on National Forms of the Brazilian Pharmacopoeia. The prescription of medicinal plants in the Live Pharmacy Programs was carried out in 89% by physicians, 58% by pharmacists and 51% by nurses. Patients who received indications for the use of medicinal plants were around 94%. The Live Pharmacies Programs that are in operation present difficulties, mainly financial, even with the public call notices in the distribution of resources for the creation and maintenance of the Programs, these are still insufficient to meet the local demands.

Keywords: Live Pharmacies, Medicinal plants, Phytotherapy, Public policy.

1 INTRODUCTION

Medicinal plants are important instruments of Pharmaceutical Services, and since 1978, several communiqués and resolutions of the World Health Organization (WHO) express the position of the organism regarding the need to value the use of these natural resources in the sanitary sphere (WHO, 1979; Brazil, 2006a).



In Brazil, the movement of integrative and complementary practices in health emerged in the 1980s and, until 1997, there were 21 phytotherapy programs linked to the Unified Health System (SUS). In 2008, this number jumped to 346 Programs and in 2012, they increased to 815 Phytotherapy Programs (Ribeiro, 2015).

Second, Carvalho and Dresch, (2021), report that the advancement of programs in the country occurred after the publication of Public Policies in 2006, National Policy of Integrative and Complementary Practices to Health (PNPIC) (Brasil, 2006b) and the National Policy of Medicinal Plants and Phytotherapics (PNPMF) (Brasil, 2006c), which made possible the publication of the Ministry of Health's notices for resources to the Medicinal Plants and Phytotherapics programs. The increase in medicinal plant programs in the country was also reported by Ribeiro, (2019), who attributes the publication of the PNPMF, however, it is worth mentioning that the author refers to phytotherapy programs, which are certainly not those that cultivate or distribute Medicinal Plants.

Considering the increase in the number of phytotherapy programs linked to the public health network, and consolidation of other integrative areas (Brasil, 2006b), this proposal was consolidated as the PNPIC in the SUS, published in the form of Ministerial Ordinances No. 971 on May 3, 2006 and No. 1,600, of July 17, 2006. In addition, in the same year the PNPMF was published in the SUS (Brasil, 2006b).

The National Committee of Medicinal Plants and Phytotherapics in the search for the consolidation of the practice of phytotherapy, defined the Phytotherapy Programs as technical and administrative units directed by a professional, whose staff is formed by technicians and community agents, among other professionals in the area of health and the like.

Most phytotherapy programs in Brazil adopted the Living Pharmacies model, the Ministry of Health, published Ordinance 886 of April 20, 2010, which established the program in the SUS (Camargo, 2010). Farmácia Viva was conceived as a pharmaceutical social assistance program based on the scientific use of medicinal and phytotherapeutic plants that comprises "all stages, from the cultivation, collection, processing, storage of medicinal plants, the manipulation and dispensing of masterful and workshop preparations of medicinal and phytotherapeutic plants" (Brasil, 2013a).

After the publication of the National Program of Medicinal Plants and Phytotherapics (Brasil, 2009), some groups, especially those linked to the Living Pharmacy Program of the State of Ceará, began to guide the implementation of programs, based on models I, II and III.

Model I (Brasil, 2010a), refers to the installation of medicinal plant gardens for the purpose of cultivating and ensuring access to medicinal plants in *natura* and guidance on the correct use of homemade preparations; model II, in addition to contemplating what is done in model I, also applies to the production and dispensing of dried and rasured medicinal plants in sachet form, being, the vegetable raw material, submitted to primary operations, in specific areas, according to the Good



Processing Practices (GMP), and model III contemplates the two previous and corresponds to the manipulation of herbal medicines, prepared in specific areas, in accordance with the current legislation Good Handling Practices (BPM), established by the Collegiate Board Resolution - RDC 67/2007, ANVISA (Brazil, 2007) and the prescription and dispensation of herbal medicines in the SUS.

In 2009, the Ministry of Health, through joint action with researchers from several universities, the technical committee of the Brazilian Pharmacopoeia, technicians from the National Health Surveillance Agency (ANVISA) and the Department of Pharmaceutical Services (DAF) released the List of Medicinal Plants of interest to the SUS (RENISUS). The list, with 71 plant species was proposed from a list of 237 plants used by phytotherapy programs distributed throughout the country, according to the International Code of Disease (ICD-10) (Brasil, 2009).

A strong contribution to the increase in the creation of Phytotherapy Programs occurred with the publication of the PNPMF in 2006 and the National Program of Medicinal Plants and Phytotherapies in 2008, which provided funding and implementation of Live Pharmacies (Brasil, 2006b; Brazil, 2006c). Thus, subsidizing regulatory policies for the use of technologies based on scientific evidence and identifying the use of herbal medicines and medicinal plants, not yet incorporated by the official lists that present efficacy and safety, justified the development of this study (Brasil, 2021a).

To survey and characterize the Live Pharmacies in operation in the country and to list the medicinal and phytotherapeutic plants in these Programs, to identify the Brazilian municipalities that have implemented Live Pharmacy programs and remain active, as well as to analyze the methods used to select the species cultivated in the programs that develop cultivation of medicinal plants, make up the objectives of this study.

2 METHODOLOGY

This is a qualitative and quantitative cross-sectional study (Pereira *et al.*, 2018), conducted through the application of closed forms to the managers responsible for Live Pharmacy Programs in activity in Brazil. Two forms were distributed, which were forwarded, via the Google Forms platform, through social networks, directed to electronic addresses of the programs identified by the public call notice No. 2, SCTIE/MS of 2020, which selected projects for Pharmaceutical Services in Medicinal Plants and Phytotherapies (Brasil, 2020^a).

The study population was the Live Pharmacy Programs, implemented by Prefectures and States throughout Brazil, which are in operation until the year 2020. Consultations were held with the Department of Pharmaceutical Assistance of the Secretariat of Science and Technology and Strategic Inputs of the Ministry of Health – DAF/SCTIE/MS to identify the medicinal plant programs of States and municipalities that were active until the beginning of the research.



The study included programs that distribute medicinal plants in the public health network and/or also called Live Pharmacies, according to ordinance 886/2010 of the Ministry of Health, which are active in the country, identified in the list of programs participating in the public call for proposals SCTIE/MS N° 2 of October 14, 2020.

This study was initiated after authorization from the Research Ethics Committee of Faculdade Estácio de Ji-Paraná - Estácio UNIJIPA, under Authorization No. 3,703,846. The Term of Free and Informed Consent (ICF), presents data on the work, objectives and destination of the data collected was applied to the managers, clearly ensuring the free participation and its cancellation at any time. The data obtained were used exclusively for the purpose set forth in its protocol, as recommended in Resolution CNS 466/2012 (Brasil, 2012a).

The results obtained from the answers of the forms were presented taking into account the weight averages of the data, in an objective way, considering that there could be more than one alternative in each question. Data evaluation was performed qualitatively and quantitatively.

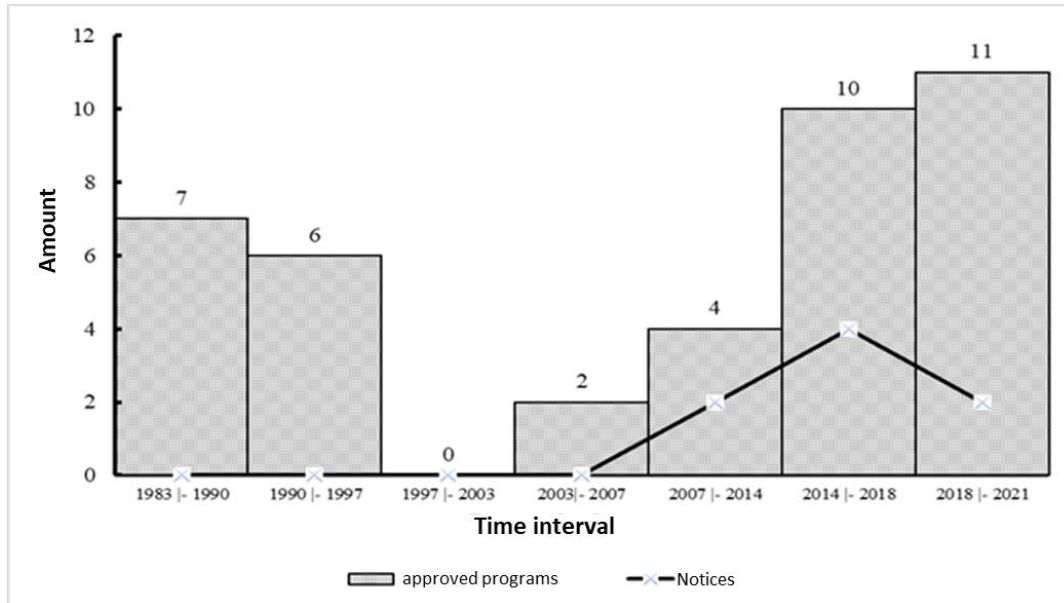
3 FINDINGS

The data referring to form 1 were addressed the conditions that are found in the distribution programs of medicinal and phytotherapeutic plants, such as the list of species, cultivation, fate of plants and pharmaceutical forms produced. In form number 2, we tried to address the questions related to therapy, such as: dosage, follow-up, orientation and adherence to treatment. Of the programs participating in the call for proposals, SCTIE/MS No 2/2020, only 45 responded to the forms.

In the distribution of the programs presented, it was observed: 1 in Amapá, 1 in Tocantins, 1 in Pará, in Bahia there were 2 programs, in Ceará a total of 11, in Maranhão 1, in the States of Pernambuco and Sergipe 3 each, Minas Gerais 20 programs implemented, Rio de Janeiro 4, São Paulo 10, Espírito Santo 1, the Federal District has 2 programs, Goiás 2, Paraná 2, Rio Grande do Sul 12 and Santa Catarina 4 programs. On the map appears the State of Rondônia with 3 green dots, which represent programs that did not participate in the Notices, but are implemented. Figure 1 shows the creation interval in accordance with the publication of the notices in the period from 2012 to 2020.



Figure 1 – Creation of Phytotherapy Programs distributed by periods from 1983 to 2021, related to the publication of public notices to obtain financial resources.



Source: author

Regarding the use of medicinal plants, it was found that, 15.71%, acquires the phytotherapies listed in the National List of Medicines (RENAME) (Brasil, 2020b), in which 12 plant species are inserted, to distribute to the population, 27.14% cultivate medicinal plants and distribute them in natura and dried in the form of sachets, another 7.14%, who do not cultivate, acquire medicinal plants from registered producers and develop inputs and handle herbal medicines and with regard to masterful manipulation, only 12.85% of them manipulate herbal medicines from drugs and pharmaceutical inputs purchased in the market. Of the latter, 37.14% cultivate medicinal plants for the manipulation of the herbal medicines produced in the respective programs.

On the other hand, the use of industrialized herbal medicines to meet the prescribers, 33.3% answered that they acquire and 66.7% said they did not acquire. Thus, it was observed that, at the 95% confidence level, it is a value that is within the range of 24% to 42%. Comparing the data with the existing models of Live Pharmacies, the percentage of programs that use raw materials produced in the garden itself, for the manufacture of medicines, would be within the forecast, since almost all the programs handle medicines in the basic forms.

The selection of species, cultivated and/or acquired, was observed in relative frequency, that 25.71% consider the popular knowledge of the medicinal species, by the population of the municipality, 7.61% selected from other programs, and it was also observed that 24.76% considered the ease of finding the species in the municipality and region and 16.19% were selected from the list of medicinal plants published by the Ministry of Health. It was also observed that 8.57% of the programs considered ANVISA's Normative Instruction No. 5, of March 31, 2010, which ensures efficacy and safety (Brasil,



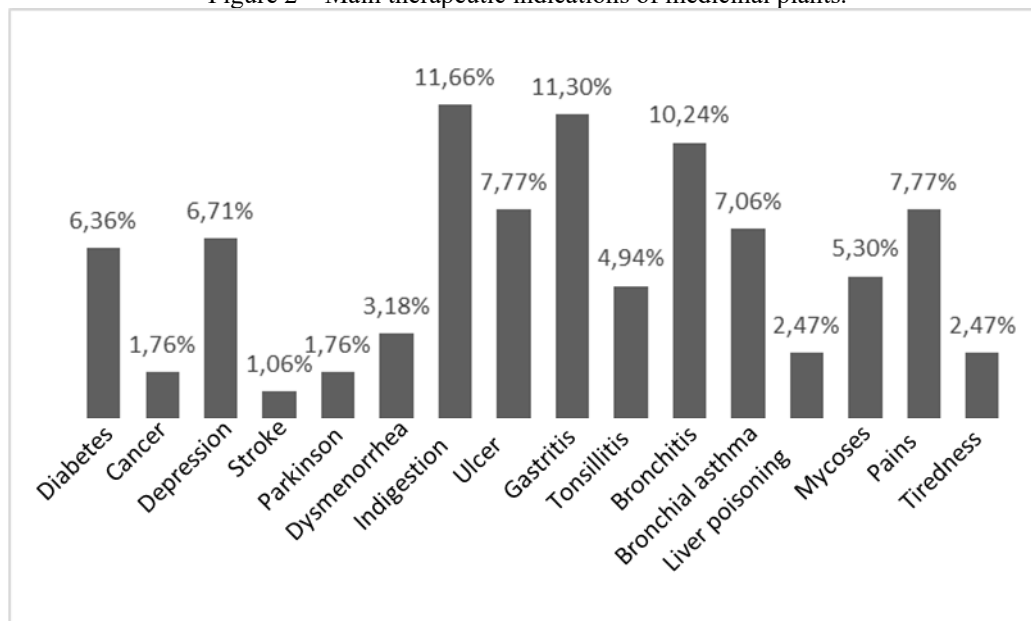
2010b) and 17.14% selected based on the best available scientific evidence regarding effectiveness and safety.

As for those responsible for the selection of the species, it was found that 26.78% were by the Pharmacy and Therapeutics Commission (CFT), of primary care, 7.14% has a specific Pharmacy and Therapeutics Commission for medicinal and phytotherapeutic plants, 16.07% do not have CFT, being inserted by the head of the local Pharmaceutical Assistance, based on the demand of the prescribers. Still, 5.35% considered the requests of patients in the pharmacies of the Basic Health Units, however, of the 45 responses received, 44.64% of the programs answered that the responsibility of selection would not be framed in the previous alternatives.

Thus, it was found that approximately 27% stated that the selection of species is due to the Pharmacy and Therapeutics Committee in Primary Health Care, however, approximately 45% answered that the selection criteria do not present a selection protocol. This last fact corroborates the principle of random selection, not taking into account epidemiological studies of the municipality.

In the therapeutic indications of medicinal plants, it was observed: 6.36% for diabetes mellitus, 1.76% for cancer, 6.71% for depression, 1.06% for stroke, 1.76% for Parkinson's disease, 3.18% for treatment of dysmenorrhea, 11.66% for problems of poor digestion, 7.77% for treatment of ulcers and 11.30% for gastritis, 4.94% for tonsillitis, 10.24% for bronchitis, 7.06% for bronchial asthma, 2.47 in liver poisoning, 5.30% in mycoses, 7.77% for pain relief, 2.47% for fatigue and others, in very small numbers. These species that presented one or two citations can be attributed to regional characteristics, specific to programs, according to the belonging biome (Figure 2).

Figure 2 – Main therapeutic indications of medicinal plants.



Source: author



Training courses and improvement of the team, it was observed that, 18.80% offer refresher courses in phytotherapy with partnership of Higher Education Institutions located in the city or nearby, 3.41% grants full and/or partial scholarships to managers, prescribers and handlers, in specialization courses in phytotherapy offered by HEIs, 19.65% offer periodic lectures with invited professionals, By areas of activity, 20.51% lectures directed to the population, related to the use and conservation of medicinal plants and herbal medicines and 10.25% formation of study groups with participation of patients/users. However, 15.38% of the answers referred to the creation of materials, printed and digital, directed by area of activity and to the patient, which, periodically, configures in a true campaign for the correct use of medicinal and phytotherapeutic plants.

Regardless of whether the program fits into model III of the Living Pharmacies, it was found that practically all of them produce a pharmaceutical form for distribution in the Basic Health Units of the municipality. Thus, it was found that the pharmaceutical form solution represents 6.96%, the syrup appears in 19.62% of the responses, Suspension in 1.26%, suppository in 1.89%, capsules appear in 7.59%, tablets in 4.46%, tinctures are in 17.08% and sachets appear in 9.49%. However, the most complex pharmaceutical forms, such as tablets, capsules, suppositories and suspensions, assume that they are in the programs that have a masterful pharmacy, model III of the Living Pharmacies.

In the programs that develop cultivation of medicinal plants, it was observed that 18.64% of the cultivated species were brought by the local population, 11.86% provided by other gardens in activities in the country, 33.89% from official gardens, 28.81% from gardens graduated from universities and colleges and only 6.77% answered not to cultivate medicinal plants in the program.

The identification of the species in the programs that cultivate medicinal plants is the responsibility of: 25.45% of the biologists, 23.63% of agronomists and 27.27% attributed to pharmacists. However, in some regions there are technicians who develop through knowledge of past generations, these represent 12.72%. In these results, it is emphasized that the identification process is simply morphological or in specific cases organoleptic.

Regarding the production of plant drugs, it was observed that 65.1% of the programs have a specific area for drying medicinal plants, only 34.9% do not have a drying area. As for the drying mode of medicinal plants, 43.18% have drying in a circulating air oven, 9.09% dry on wire mats placed indoors, 6.81% dry in wooden crates with incandescent light and in the same proportion, 6.81% dry the medicinal plants spreading them on papers, indoors. Still, it was observed that 34.09% stated that they do drying by methods other than those described for Good Production Practices complementary to Phytotherapies (Brasil, 2022).

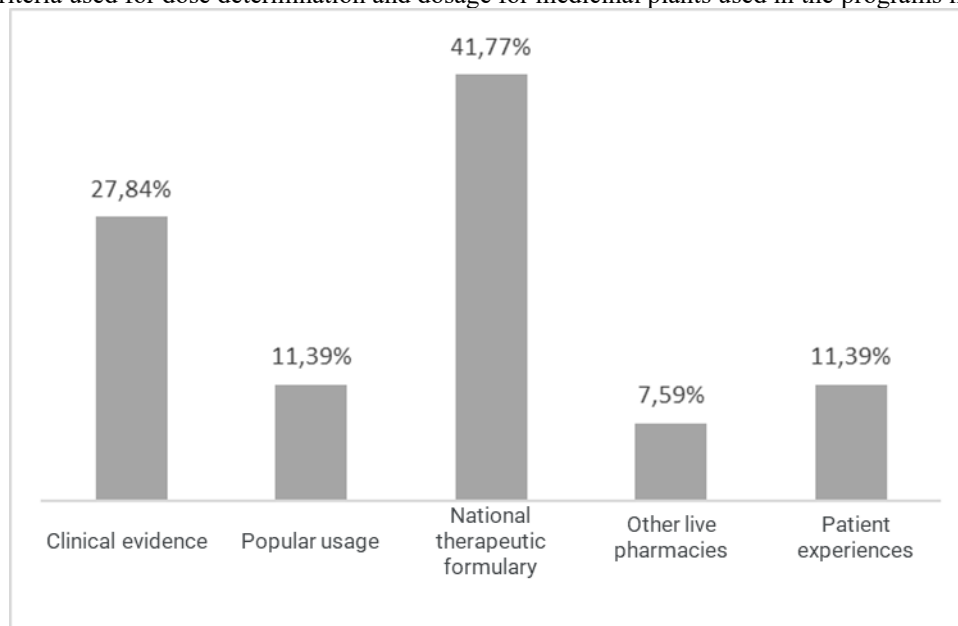
The destination of the cultivated species, it was verified that, 27.94% are destined to the production of raw material to be used in the unit itself, 19.11% are destined to the production of sachets, for local distribution, 20.58% for homemade preparations, type, syrup, tinctures, among others, it was



also verified that 22.05% are destined for the production of seedlings to be distributed to the local community. It was also observed that 1.47% are destined to the production of bottles, which are considered primitive forms where several species are mixed in a single drug, the therapeutic efficacy is widely discussed, since they do not present clinical evidence.

The definition of doses and dosage was one of the questions asked in form 2 and it can be verified that, 27.84%, based on the best available evidence with approval by regulatory agencies, 11.39% were according to the popular use of the species, 41.77% were based on the National herbal therapeutic formula, 7.59% based on other Live Pharmacies programs and 11.39% were based on the experiences reported by patients. Regarding these data, we sought to know which professionals performed prescriptions and it was possible to verify that 19.62% are dentists, 21.49% nurses, 24.29% pharmacists and 37.38% are doctors, it was also verified that 6.54% of the answers were attributed to others, which would certainly be referring to mid-level technicians (Figure 3).

Figure 3 – Criteria used for dose determination and dosage for medicinal plants used in the programs live pharmacies.



Source: author

The follow-up of the medicinal plant user appeared in approximately 50% of the interviewed programs, of which, it is believed at the 95% confidence level, that the average proportion of patients followed by the program is within the range [39%; 58%]. Thus, it can be verified that 20% pointed to clinical examinations performed at the patient's return visit, 8.57% through laboratory tests, 42% patient information, 18% through clinical records, which portray the patient's history before and after treatment, 4.28% through a pharmacovigilance program implemented in the Basic Health Unit and also, 5.71% information from patients or people close to them in reporting the cure of the problem.

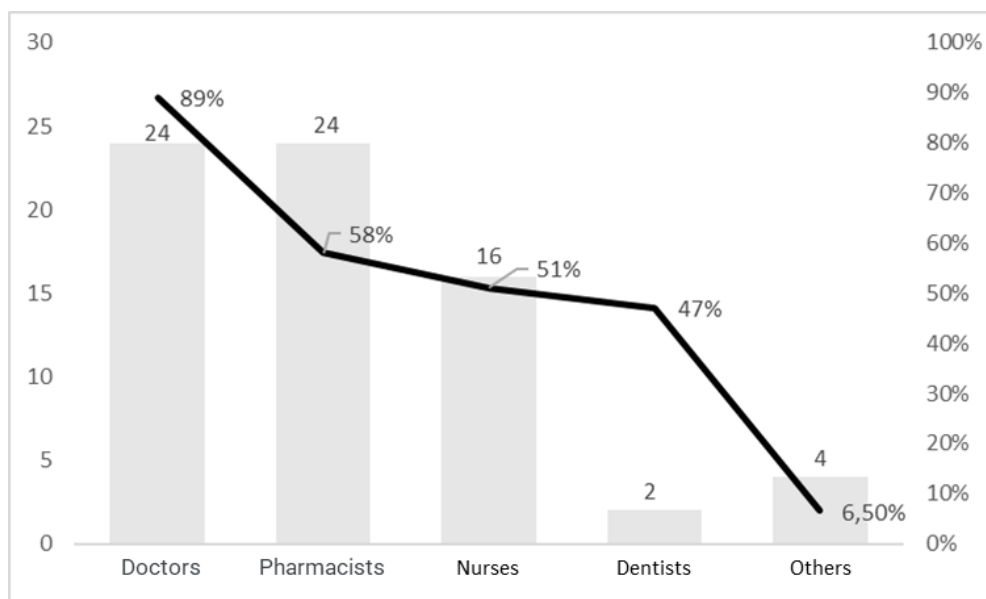


As for the professionals who perform this follow-up, it was verified that 32.43% are pharmacists, 21.62% nurses, 32.43% doctors, which represents an equal percentage to the number of pharmacists and 2.70% of mid-level technicians. The latter are community health agents who were trained in the program and in a certain way, because they do not have professionals available end up working directly in Primary Care, still appear another 10.81% who are mostly involved in health pastorals and / or other religious entities.

In the question of the follow-up of patients using medicinal plants, a relationship was established between the professionals involved in the follow-up with the determination of the dose and dosage of the selected plant species. Thus, it was observed that 22 medical professionals are involved in the definition of dose, based on the best clinical evidence available, 9 nurses consider popular use as a parameter, 33 pharmacists resort to the National Form of the Brazilian Pharmacopoeia (BRASIL, 2021b), 6 dentists, resort to other programs for dose and dosage information and 9 other professionals, who would certainly be involved in mid-level technicians and community health agents, who used information based on experiences with users of medicinal plants.

Concomitantly the determination of dose and dosage, the methods of monitoring patients using medicinal plants are also performed by the professionals who are in charge of the care of the local population. Therefore, it was found that 24 (68%) physicians perform follow-up through clinical examinations, in the same number, 24 (68%), pharmacists do so through laboratory tests, 16 (45%) nurses perform through information provided by patients and only 2 (5.7%) dentists use clinical records for follow-up. Pharmacovigilance was not mentioned by any professional and yet, 4 (6.5%) programs mentioned using other follow-up methods, which were not listed here (Figure 4)

Figure 4 – Percentage of professionals who prescribed medicinal plants and who followed up patients in the live pharmacy programs.



Source: author



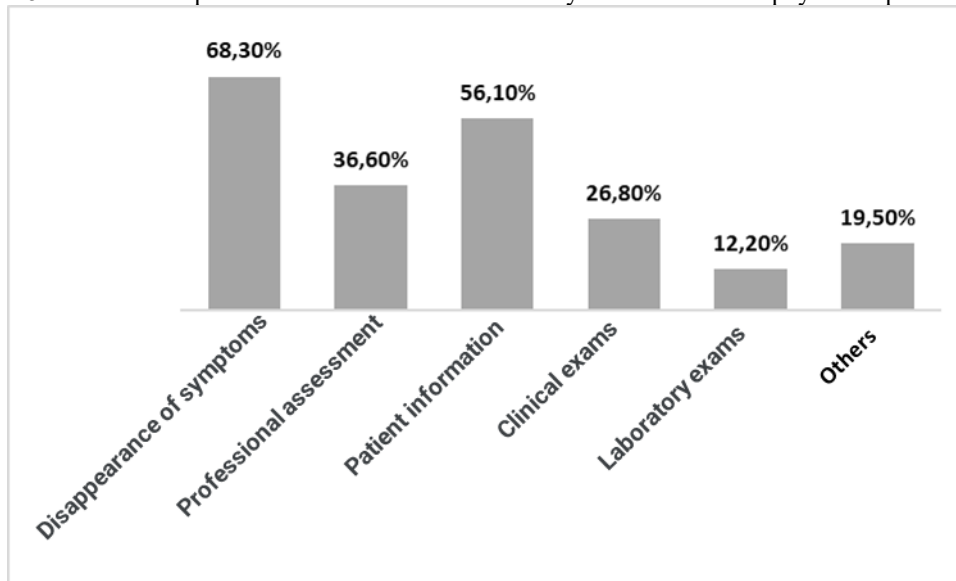
The prescriptions are in charge of the professionals involved in the respective programs of distribution of medicinal and phytotherapeutic plants in the public health network of the municipalities. Among the professionals, it was verified that: 47% of the prescriptions are dentists, 51% are nurses, pharmacists are involved in 58% of the programs, physicians are in almost all the programs evaluated, that is, in 89% of the answers. There are still about 15.6% of prescribers who do not fit into these professions, and are certainly mid-level technicians who are part of the Basic Health Units (Figure 4).

Regarding the acceptance and adherence to treatment with medicinal and phytotherapeutic plants, it was observed that: 93% of the patients adhere to the treatment and only 7% interrupted or did not even start using it. According to the complaints of the latter, 2.89% considered it to have no therapeutic effect, 14.49% stated that the results are time-consuming, 7.24% answered that most of the time the medicines from medicinal plants have bad taste, 1.44% stated that phytotherapies and medicinal plants have complex dosage, 14.49% said they forget to take it, 17.39% say they cannot find the species and phytotherapeutic drugs, 10.14% do not believe in the therapeutic effect of medicinal and phytotherapeutic plants.

The clinical efficacy has been studied over the years, in the distribution programs of medicinal plants in Primary Care in Public Health, thus, the efficacy of the prescribed medicinal plants were evaluated among the professionals and patients involved, which 62.2% affirmed to have therapeutic efficacy and 37.8% did not observe evaluation of efficacy. Regarding the way the evaluation is made, 31.11% took into account the disappearance of the signs and symptoms observed in the return visit, 16.66% attributed the cure evaluated by the professional in consultation, 25.55% through information provided by the patient, 12.22% through clinical examinations performed by the prescriber, 5.55% made through laboratory tests and 8.88% stated that the evaluation did not fit the alternatives presented in the form (Figure 5).



Figure 5 – Criteria adopted to evaluate the clinical efficacy of medicinal and phytotherapeutic plants.



Source: author

In view of the fact of adherence to the patient submitted to treatment with medicinal plants, the approach was made in the form applied to those responsible for the medicinal plants programs on the orientations to the patients/users attended in the programs. Thus, it was found that the vast majority of the programs, 30% stated to advise on the dosage, 22.85% on the preparation of infusions or homemade preparations when they are required, 12.14% on the possible side effects of occurring with the treatment, 14.28% on the conservation of medicinal and phytotherapeutic plants. However, 15.71% of the programs responded, being involved the importance of complying with the correct use and still another 5.0% answered to advise on other aspects, such as dissemination of the program, education with plants, among others.

4 DISCUSSION

The notoriety about the vulnerability of phytotherapy programs can be observed with a peak in the increase of programs, in the years 2018 to 2021 (Brasil, 2012b; Brazil, 2013b; Brazil, 2014a; Brazil, 2014b; Brazil, 2016; Brasil, 2017, Brasil, 2018), this can be justified by the SCTIE/MS calls for financial support of programs involving medicinal and phytotherapeutic plants. However, it was also found that, in not being able to participate in the public notices for raising funds for development and maintenance, some programs ceased to exist long before putting their activities into practice.

The number of programs implemented since 1983, some still active, remained practically unchanged until 1997. The following period, from 1998 to 2003, there was no creation of phytotherapy programs inserted in the public health system. From the year 2004, there was a growing increase in the number of phytotherapy programs implemented, observing an upward curve in the period from 2015



to 2021, which, according to Carvalho, 2021, this fact is attributed by the publication of the Public Call Notices, of SCITE/MS.

In Ordinance 886 of April 20, 2010, which establishes the Living Pharmacy within the scope of the Unified Health System (SUS), determines in paragraph 1 of article 1, that it shall carry out all the steps, from the cultivation, collection, processing, storage of medicinal plants, the manipulation and dispensation of masterful and workshop preparations of medicinal and phytotherapeutic plants. However, not all programs follow these models, understood in model I, cultivates medicinal plants and distributes in natura to the population, model II that in addition to cultivation, also produces plant drugs, which are distributed in sachets for the preparation of infusion and model III that involves the manipulation of herbal medicines. It is noteworthy that model III should meet the current legislation for magistral pharmacy (Brasil, 2007).

The evaluation of efficacy, in the hypothesis test, comparing the results, at the significance level of 5%, it was possible to affirm that there is no significant difference between the proportions evaluated. In the hypothesis test, comparing the results obtained with those presented at the conclusion of the doctoral thesis in 2010 (Brasil, 1999), at the significance level of 5% it is possible to affirm that there is no significant difference between the proportions evaluated. In this way, the results contribute to the fidelity of the research carried out.

The dissemination of these programs is of fundamental importance for the knowledge of all and in large part, even for: doctors, nurses and pharmacists, sometimes have no knowledge of the existence in the municipality itself. Ensuring a better quality of life for the population, promoting integration between health professionals and patients, would justify the fact of increasing the dissemination of the programs.

Most of the programs in activities in the country, began their activities based on popular knowledge, passed on by past generations and that last today. It is still observed that, despite the popular movement, there is a great incentive on the part of the public power of some municipalities to implement them. It is undeniable the observation that herbal medicine is not reliable from the point of view of prescribers, who have not recognized it as complementary medicine.

In the matter of professional knowledge, it is evident the lack of qualification of professionals working in the area. In pharmacy it is attributed to the fact that until the year 2002 the training of this professional was basically technical and currently, replaced by a humanist model. This recommendation was attributed to political movements between the Ministry of Health and the Ministry of Education, which determined the new training of health professionals to meet the needs of the SUS.

The cultivation of medicinal plants in the programs has generated uncertainties and unknowns, because due to the territorial extension of the country, with different biomes and climatic conditions, it would be impossible to have a standardization of the species. It is evident that the list of medicinal



plants published by the Ministry of Health could not have this characteristic, but this list has been criticized for not contemplating regional biodiversity.

In the creation of medicinal plant gardens, some programs have adopted acclimatized species in the region and do not have adequate spaces to house them. The identification of the species and guarantee of origin are attributed to the professionals: Agronomists, Biologists, Pharmacists and Technicians, however, it did not show which tests were performed in the identification or if they would only be morphological.

The selection of cultivated species, it can be observed that the minority select from proven clinical evidence and that often end up introducing medicinal plants that have no proof of efficacy. Perhaps one way to this issue would be to resume the creation of official gardens that could provide certified seedlings with proven clinical evidence.

In the development of herbal production, the number of programs that fit the model III of the Living Pharmacies, are few, due to the high investments necessary to meet the RDC 67/2007 of the ANVISA (Brazil, 2007), however, the vast majority produce herbal medicines (tinctures, syrups) without authorization from the responsible agency. Thus, we conclude the evidence of factors that corroborate this situation, which highlights the lack of financial resources and the difficulty of skilled labor.

It is evident that the current legislation, regulating the production and control of herbal medicines, should not be different for the public sector, in which several programs are contemplated. What should be discussed is a form of funding so that programs can equip themselves and meet the regulations of current legislation. This may guarantee the implementation of services with quality and greater credibility, which would undoubtedly lead to greater adherence, both of the professionals involved and of the population.

The fact of the existence of a public policy for the distribution of medicinal plants and herbal medicines in the SUS, does not allow the regulation of the sector, however, a bill would be the way to meet this situation. This fact is observed in the State of Ceará, where after the publication of Law n^o 12,951 on 10/07/1999 (Camargo, 2010b), the programs have sought to adapt to the legislation.

The results obtained show that the phytotherapy programs have been the subject of discussions in many events throughout the country and that in the proportion of municipalities that abandoned the services at the time of extinction of the Central de Medicamentos (CEME), the number of municipalities that have implemented the programs after the publication of the Public Call Notices for financial support. Thus, it is concluded that phytotherapy is in evidence and has become a favorable resource to ensure the population's access to primary health care.



5 CONCLUSIONS

Despite the Public Policies, Ordinances and Resolutions involving medicinal plants, there is a lack of organization of the Ministry of Health, in encouraging the implementation of new programs and directing them to a methodology that guarantees continuity. From the selection of the species, even if they are not cultivated in the programs, but that in a certain way will be used, and can be acquired from accredited producers in the municipality, contributing to the strengthening of family farming.

The programs that were contemplated in Notices published in the period from 2009 to 2020, continue to participate in the public calls, however, without any information about the application of the money received. It is imagined that these programs, in a certain way, including the Fiscal Responsibility Law, at some point should explain the transfer of funds.

It is concluded that seeking partnerships with Higher Education Institutions, Institutes and other companies that can provide assistance, if not technological, but administrative, advisory, among others, could be a path to the success of the program. Linked to this, the local dissemination and training of prescribing professionals would be of great value for the consolidation of phytotherapy programs in the Public Health Network, which will undoubtedly benefit millions of patients/users in the Primary Care of the SUS.



REFERENCES

Brasil, (2007) Vigilância Sanitária. Resolução da Diretoria Colegiada (RDC) n. 67, de 08 de outubro de 2007. Dispõe sobre Boas Práticas de Manipulação de Preparações Magistrais e Oficiniais para Uso Humano em farmácias. Brasília. DOU, 2007.

Brasil, (2008) Ministério da Saúde. Gabinete do Ministro. Portaria Interministerial nº 2.969, de 9 de dezembro de 2008. Aprova o Programa Nacional de Plantas Mediciniais e Fitoterápicos e cria o Comitê Nacional de Plantas Mediciniais e Fitoterápicos. Brasília, 2009. 136p.: Il. – (Série C. Projetos, Programas e Relatórios).

Brasil, (2009) Ministério da Saúde. Secretaria de Ciência, Tecnologia, Inovação e Insumos Estratégicos em Saúde. Departamento de Assistência Farmacêutica e Insumos Estratégicos. Relação de Plantas Mediciniais de Interesse ao SUS, publicada em 06 de março de 2009. Brasília – DF

Brasil, (2010) Ministério da Saúde. Agência Nacional de Vigilância Sanitária. Diretoria Colegiada. Instrução Normativa (IE) No 5 de 31 de março de 2010. Estabelecida a lista de referências bibliográficas para avaliação de segurança e eficácia de medicamentos fitoterápicos. Brasília. DOU, 2010b.

Brasil, (2010) Ministério da Saúde. Gabinete do Ministro. Portaria nº 886, de 20 de abril de 2010. Institui a Farmácia Viva no âmbito do Sistema Único de Saúde (SUS). Brasília, 2010a. Disponível em: https://bvsms.saude.gov.br/bvs/prt0886_20_04_2010

Brasil, (2012) Ministério da Saúde. Conselho Nacional de Saúde. Resolução nº 466, de 12 de dezembro de 2012. Estabelece diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos: Publicada no DOU nº 12 – quinta-feira, 13 de junho de 2013 – Seção 1 – Página 59. Brasília – 2012b.

Brasil, (2013) Ministério da Saúde. Agência Nacional de Vigilância Sanitária. Resolução da Diretoria Colegiada (RDC) n. 13, de 14 de março de 2013. Dispõe sobre as Boas Práticas de Fabricação de Produtos Tradicionais Fitoterápicos. Brasília. DOU, 2013.

Brasil, (2021) Ministério da Saúde. Secretaria de Ciência, Tecnologia, Inovação e Insumos Estratégicos em Saúde. Política Nacional de Plantas Mediciniais e Fitoterápicos. Plantas Mediciniais de Interesse ao SUS – Rénisus. Publicado em 09 de agosto de 2021. Brasília - DF

Brasil, Ministério da Saúde. Agência Nacional de Vigilância Sanitária. Diretoria Colegiada. Instrução Normativa (IE) No 130 de 30 de março de 2022. Dispõe sobre as Boas Práticas de Fabricação complementares a Fitoterápicos. Brasília. DOU, 2022.

Brasil. (1999) Governo do Estado do Ceará. LEI Nº 12.951, de 07.10.99. Dispõe sobre a Política de Implantação da Fitoterapia em Saúde Pública no Estado do Ceará. Publicado no D.O de 15 de outubro de 1999. Ceará – CE.

Brasil. (2006) Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Política Nacional de Práticas Integrativas e Complementares no SUS - PNPIC-SUS /Ministério da Saúde, Secretaria de Atenção à Saúde, Departamento de Atenção Básica. - Brasília: Ministério da Saúde, 2006b. 92 p. - (Série B. Textos Básicos de Saúde)

Brasil. (2006) Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Política Nacional de Plantas Mediciniais e Fitoterápicos no SUS - PNPMF-SUS /Ministério da Saúde, Secretaria de Atenção à Saúde, Departamento de Atenção Básica. - Brasília :Ministério da Saúde, 2006c. 60 p. - (Série B. Textos Básicos de Saúde)



Brasil. (2012) Ministério da Saúde. Secretaria de Ciência, Tecnologia e Insumos Estratégicos edital N° 1, de 26 de abril de 2012. Seleção de propostas de arranjos produtivos locais no âmbito do SUS, conforme a política e o programa nacional de plantas medicinais e fitoterápicos. Publicado no DOU, N° 82, sexta-feira, 27 de abril de 2012b. Brasília. DF

Brasil. (2013) Ministério da Saúde. Secretaria de Ciência, Tecnologia e Insumos Estratégicos edital n° 1, de 24 de maio de 2013 Seleção Pública de Projetos de Arranjo Produtivo Local de Plantas Medicinais e Fitoterápicos no âmbito do SUS. Publicado no DOU, N° 100, segunda-feira, 27 de maio de 2013b. P.124 Brasília. DF

Brasil. (2014) Ministério da Saúde. Secretaria de Ciência, Tecnologia e Insumos Estratégicos edital n° 1, de 30 de maio de 2014 Seleção Pública de Projetos de Arranjo Produtivo Local de Plantas Medicinais e Fitoterápicos no âmbito do SUS. Publicado no DOU, N° N° 103, segunda-feira, 2 de junho de 2014b. Seção 3. p.141 Brasília. DF

Brasil. (2014) Ministério da Saúde. Secretaria de Ciência, Tecnologia e Insumos Estratégicos edital n° 2, de 24 de agosto de 2015. Seleção Pública de Projetos de Arranjo Produtivo Local de Plantas Medicinais e Fitoterápicos no âmbito do SUS. Publicado no DOU, N° N° 103, segunda-feira, 2 de junho de 2014b. Seção 3. p.141 Brasília. DF

Brasil. (2016) Ministério da Saúde. Gabinete do Ministro. Portaria n° 1.850, de 13 de outubro de 2016. Aprova o repasse dos recursos de investimento e custeio, em parcela única, para os Municípios e Estado selecionados pelo Processo Seletivo Dirigido à Região Norte. 2016. Brasília. DF

Brasil. (2017) Ministério da Saúde. Secretaria de Ciência, Tecnologia e Insumos Estratégicos Aviso de Chamada Pública SCTIE-MS No - 1/2017 de 16 de novembro de 2017. Seleção Pública de Projetos de Arranjo Produtivo Local de Plantas Medicinais e Fitoterápicos no âmbito do SUS. Publicado no DOU, N° N° 219, 16 de novembro de 2017. Seção 3. p.123 Brasília-DF.

Brasil. (2018) Ministério da Saúde. Secretaria de Ciência, Tecnologia e Insumos Estratégicos edital n° 1, de 5 de novembro de 2018. Seleção Pública de Projetos de Arranjo Produtivo Local de Plantas Medicinais e Fitoterápicos no âmbito do SUS. Publicado no DOU, 5 novembro de 2018. Brasília. DF

Brasil. (2019) Ministério da Saúde. Secretaria de Ciência, Tecnologia e Insumos Estratégicos Edital SCTIE/MS n° 2, de 13 de junho de 2019. Seleção Pública de Projetos de Arranjo Produtivo Local de Plantas Medicinais e Fitoterápicos no âmbito do SUS. Publicado no DOU, 2019. Brasília. DF

Brasil. (2020) Ministério da Saúde. Secretaria de Ciência, Tecnologia, Inovação e Insumos Estratégicos em Saúde. Departamento de Assistência Farmacêutica e Insumos Estratégicos. Relação Nacional de Medicamentos Essenciais: Rename 2020 [recurso eletrônico] / Ministério da Saúde, Secretaria de Ciência, Tecnologia, Inovação e Insumos Estratégicos em Saúde, Departamento de Assistência Farmacêutica e Insumos Estratégicos. – Brasília: Ministério da Saúde, 2020b. 217 p.

Brasil. (2021) Agência Nacional de Vigilância Sanitária (ANVISA). Formulário de Fitoterápicos da Farmacopeia Brasileira, aprovado pela Resolução da Diretoria Colegiada – RDC n° 463, de 27 de janeiro de 2021. Brasília. DOU 2021b.

Brasil. Ministério da Saúde. Secretaria de Ciência, Tecnologia e Insumos Estratégicos. Departamento de Assistência Farmacêutica (2006). A fitoterapia no SUS e o Programa de Pesquisa de Plantas Medicinais da Central de Medicamentos/Ministério da Saúde, Secretaria de Ciência, Tecnologia e Insumos Estratégicos, Departamento de Assistência Farmacêutica. – Brasília: Ministério da Saúde, 2006a. 148 p. – (Série B. Textos Básicos de Saúde)



Brasil.(2020) Ministério da Saúde/Secretaria de Ciência, Tecnologia, Inovação e Insumos Estratégicos em Saúde. Edital SCTIE/MS Nº 2, de 14 de outubro de 2020. DOU Publicado em: 19/10/2020a | Edição: 200 | Seção: 3 | Página: 102

Camargo, E. E. S.; Bandeira, M. A. M.; Maldonado, J. L. M.; Nunes, J. T.; Oliveira, A. G. (2010) Diagnóstico del programa Farmacias Vivas del estado de Ceará Brasil. Anuario de investigación en etnomedicina, medicinas complementarias y utilización de plantas medicinales, v. 1, p. 13-19, 2010a.

Camargo, Ely Eduardo Saranz. (2010) Diagnóstico dos programas de plantas medicinais e medicamentos fitoterápicos, visando subsidiar a distribuição no Sistema Único de Saúde. / Tese (Doutorado) – Universidade Estadual Paulista. “Júlio de Mesquita Filho”. Faculdade de Ciências Farmacêuticas. Programa De Pós Graduação Em Ciências Farmacêuticas. Araraquara, 2010. 2010. 220 F.

Carvalho, J.G., Dresch, R.R.(2022) Análise dos programas de fitoterapia e de farmácias vivas no sistema único de saúde. Revista Fitos. Rio de Janeiro. 2022; Supl (1): 22-34 | e-ISSN: 2446-4775. <https://doi.org/10.32712/2446-4775.2022.1165>

Organização Mundial da Saúde (OMS). Alma-Ata (1979) - Cuidados primários de saúde. Relatório da conferência internacional sobre cuidados primários de saúde. Brasília: Organização Mundial da Saúde/Fundo das Nações Unidas para a Infância; 1979.

Pereira, A. S. et al. Metodologia da pesquisa científica [recurso eletrônico] – 1. ed. – Santa Maria, RS : UFSM, NTE, 2018. 1 e-book

Ribeiro, L.H.L. (2019) Análise dos programas de plantas medicinais e fitoterápicos no Sistema Único de Saúde (SUS) sob a perspectiva territorial. Ciências & Saúde Coletiva, 24(5): 1733 – 1742, 2019. DOI: 10.1590/1413-81232018245.15842017

Ribeiro, L.H.L.(2015) Território e macrossistema de saúde: os programas de fitoterapia no Sistema Único de Saúde (SUS). Tese de Doutorado apresentada no Instituto de Geociências (IG) da Universidade de Campinas (Unicamp). Fapesp. 2015.