Complementary and Alternative Medicine offered by nurses in Primary Health Care

Práticas Integrativas e Complementares ofertadas pela enfermagem na Atenção Primária à Saúde

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ABSTRACT The aim of this study was to assess and analyze the provision of Complementary and Alternative Medicine in primary health care by nurses in the city of São Paulo, and the impact of the Covid-19 pandemic on this provision. This was a descriptive time series study conducted with secondary data from the official database of the Informatics Department of the Unified Health System for the period from 2018 to 2020. The results showed that complementary therapies provided by nurses totaled 10,933 procedures in 2018, 24,684 in 2019, and 12,651 in 2020. Between 2018 and 2019, there was a 120% increase in provision, a trend that was interrupted in 2020 due to the Covid-19 pandemic. The provision of these therapies by nurses is a form of holistic care and expanded understanding of the health and disease process. However, despite the great potential for the application of this approach to health care, this category accounts for a small percentage of total services in the community studied.


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Introduction

Health systems in the world that strengthen Primary Health Care (PHC) meet the requirements of social justice and reduction of health inequalities, which is considered one of the strategies to democratically promote social welfare. In Brazil, PHC has been reorganized mainly from family and community care, introducing health practices organized around a geographic and social care space and carried out by Family Health Strategy (FHS) teams. Although the composition of teams has changed recently and the number of Community Health Agents (CHA) has varied, nurses, nursing assistants, and nursing technicians are still involved.

Concerning the practice of traditional medicine, the Declaration of Alma-Ata in 1978 brought the first recommendations. Throughout the world, Traditional Medicine (TM) is either the basis of health care or serves as a supplement to it; in some countries, TM or unconventional medicine is called complementary medicine. Although it is found in all countries and is an important part of health practice, it is often underestimated, especially in Western countries.

In recent years, however, the demand for TM has increased and many health systems have recognized the need to develop an integrative approach to health care that allows the use of complementary practices in a safe, respectful, cost-efficient, and effective manner. Currently, one of the global strategies is to promote, integrate, regulate, and oversee complementary practices in health care.

In Brazil, Complementary and Alternative Medicine – CAM (Práticas Integrativas e Complementares em Saúde – ‘Pics’, in Portuguese acronym) were so named and officially incorporated into the Unified Health System (SUS) in 2006 through the National Policy for Integrative and Complementary Practices (PNPIC). CAM include medical and therapeutic resources that incorporate approaches aimed at stimulating natural mechanisms of disease prevention, health promotion, and recovery through effective and safe technologies. Pics emphasize therapeutic bonding, supportive listening, integration of the individual with the environment and society, and an expanded approach to the health and disease process.

The PNPIC introduced guidelines for the practice of traditional Chinese medicine/ acupuncture, homeopathy, medicinal plants, and phytotherapy, and initiated the implementation of observatories for thermalism-crenotherapy and anthroposophical medicine, with the aim of deepening the knowledge of experiences consolidated in SUS. In 2017, 14 new practices were introduced: Art Therapy, Ayurveda, Biodance, Circle Dance, Meditation, Music Therapy, Naturopathy, Osteopathy, Chiropractic, Reflexotherapy, Reiki, Shantala, Integrative Community Therapy, and Yoga. The Ministry of Health ordinance no. 702 of March 21, 2018, added another 10 new therapies to the PNPIC: Aromatherapy, Apitherapy, Bioenergetics, Family Constellation, Chromotherapy, Geotherapy, Hypnotherapy, Laying on of hands, Ozone Therapy and Flower Therapy.

CAMs are offered at all levels of care in SUS, but it is in PHC, which is considered the organizer of any systemic care, that they find fertile ground to contribute to continuous, long-term, humanized, and comprehensive health care. The incorporation of CAMs into PHC was also supported by the Family Health Support Center (Nasf, Portuguese acronym), due to the possibility of adding an acupuncturist and a homeopath to the team. From then on, CAMs were also included in other government programs and actions, such as the Academia de Saúde and the ‘Cadernos de Atenção Básica’. In the following years, it was included in the National Program to Improve Access and Quality in Primary Care (PMAQ-AB, Portuguese acronym) and in a public notice for research support.

Nursing triangulates with CAM and PHC. Both this approach and PHC are promising
spaces for professional practice. In PHC, nurses have expanded the clinical scope of their practice by, for example, performing nursing consultations and interventions, prescribing medications, and ordering lab tests according to established protocols. CAMs have been regulated by the Nursing Professional Council, but are not considered exclusive to nursing, as these therapies date back thousands of years\textsuperscript{7-9}.

In this perspective, nurse leadership and autonomy in health care delivery in global and local contexts have been highlighted as an effective strategy to meet the growing demand for health care, while mitigating problems resulting from health worker shortages in some regions of the world. A recent publication identified a shortfall of nearly 6 million professionals, with the most affected regions being Southeast Asia, Africa, and Latin America\textsuperscript{10}.

Regarding the regulation of these practices by nursing, the Federal Council for Nursing (Cofen)\textsuperscript{7} has been trying since 1997 to recognize CAM as a specialty of the profession, based on different therapeutic modalities. In this process, there have been setbacks\textsuperscript{11} and advances\textsuperscript{8}. Since 2018, the following specialties have been recognized: Phytotherapy, Homeopathy, Orthomolecular Therapy, Flower Therapy, Reflexology, Reiki, Yoga, Therapeutic Touch, Music Therapy, Chromotherapy, Hypnosis and Acupuncture. Recently, in 2020, Ozone Therapy was also added to the list of CAMs offered by nursing, subject to special training\textsuperscript{9}.

Considering the fact that nurses are represented in the PHC in the minimum staffing of the FHS and the expanded aspects of the health needs of the users in this context, CAM is an approach that expanded the scope of professional practice.

In this sense, the study aimed to capture and analyze the offer of CAM in healthcare by nurses in the city of São Paulo, as well as the influence of the Covid-19 pandemic on the offer of CAMs.

**Material and methods**

This is a documentary time series study, in which secondary data of CAM procedures performed by nurses in PHC were extracted from the official database of the Informatics Department of SUS (Datasus) using the Tabnet system.

The Tabnet is a generic tabulation program that allows the organization of data from the Datasus portal – \url{http://datasus.saude.gov.br/}. Its goal is to make publicly available information that can contribute to decision-making and development of health programs and policies. The data used in this study is considered part of the movement called Open Science and uses open data to analyze the CAMs. The study was conducted using universal and publicly available data, supporting decision making by health managers in all sectors and interpretation and critical analysis by the scientific community through data reuse.

The following criteria were considered in the selection of data in the Tabnet: 1) type of information; 2) geographic coverage; 3) variables; 4) time period; and 5) type of visualization. To analyze the offer of CAM by nurses and to study the impact of the Covid-19 pandemic on their offer, the following information was collected: 1) total number of outpatient procedures by CAM type; 2) city of São Paulo; 3) total number of outpatient procedures by nurses; 4) time period from January 2018 to December 2020; 5) visualization in table format.

Data were organized and analyzed using Microsoft Excel 2013\textsuperscript{®} software. Percentage analysis was performed for each CAM type offered by nurses and for the total of procedures offered in the city of São Paulo.

Because the study was conducted with secondary data that was publicly and freely available, it was not submitted to the Ethics Committee for Research with Human Subjects. The outcomes of the study were number of visits and types of healthcare intervention offered by the nurses in the PHC, with no
identification of the people involved (neither users nor professionals).

**Results**

The total number of CAM procedure during the period studied was 635,379, including 183,202 in 2018, 290,787 in 2019, and 161,381 in 2020. The CAM offered by nurses involved 10,933 procedures in 2018, 24,684 in 2019, and 12,651 in 2020, which represented approximately 6% of the total procedures in 2018, 8.5% of the total procedures in 2019, and 7.8% of the total procedures in 2020 in the city of São Paulo.

Between 2018 and 2019, the offer of CAM in nursing care increased by 120%. In 2020, it decreased compared to 2019, which was expected in the context of the Covid-19 pandemic. However, the offer by nursing remained significant. **Graph 1** shows the distribution of CAM offered by nurses and by the total number of professions between 2018 and 2020.

The most common procedures were needle acupuncture, auriculotherapy, and mind-body therapies from traditional Chinese medicine, accounting for more than 85% of all CAMs offered (see **graph 2**).
Eleven CAM types that were not offered by nurses in 2018 were offered in the following years, including Music Therapy, Biodance, Family Constellation, Circle Dance, Aromatherapy Sessions, Chromotherapy, Geotherapy, Laying on of Hands, Flower Therapy, and Anthroposophical Treatments, and Traditional Chinese Medicine. On the other hand, Reiki was offered only in 2018 by nurses.

Of the total 48,268 CAMs performed by nurses, Auriculotherapy accounted for 64% (n=31,125), traditional Chinese Medicine (mind-body therapies) for 9.6% (n=4,660), Laying on of Hands for 5.8% (n=2,834), Massage Therapy for 2.4% (n=1,171), Electrostimulation for 2.6% (n=1,285), and Meditation for 2.6% (n=1,236). The other practices did not reach 2% of CAMs offered by nursing during the studied period, as shown in table 1.
The highest percentage of the total number of CAMs offered by nursing in the city of São Paulo is accounted for by the following practices: 100% of Naturopathic and Anthroposophical treatments, 76.4% of Flower Therapies, and 70% of Aromatherapies. Nursing has not registered any Bioenergetic, Ayurvedic, Phytotherapeutic, Chiropractic or Thermal treatments in the city.
Discussion

A low percentage of CAMs was offered by nursing in relation to the total CAMs offered in the city of São Paulo. Although nursing is one of the professions in the minimum FHS team, it did not reach 10% of the total number of CAMs offered in any of the three years studied.

The integration of CAM in the SUS can be understood as the institutionalization of these approaches: regulation of the procedure, which requires specific training, and monitoring of the results (numerical recording of the procedures performed) with the aim of improving access, coverage, and quality of care for users. The offer of CAM by nurses (although weak) through SUS can be seen as a strategy to consolidate the professional practice of CAM towards an extended care of the health needs of users, and not only as a more autonomous practice for nursing.

A Brazilian study on CAM in PHC specifically in FHS has shown that professionals in the FHAS teams are the main actors in the expansion of CAMs in SUS and their offer is not an initiative of managers, which suggests that the presence of CAMs is ensured mainly by the interest and willingness of professionals themselves. In this sense, this study suggests that nurses have the potential to expand the scope of their PHC practice through CAM.

Health care professionals understand CAM as a holistic care that provides a new perspective of the person and of the health and disease process, leading those employed in PHC to seek more humane strategies that allow care continuity and longevity, which are essential attributes of PHC. In addition, CAMs are considered interventions based on health promotion and harm reduction as they can increase user autonomy and empowerment through less invasive and less medicalized practices, help meet the needs of the aging population, and provide support treatment for non-communicable diseases.

Between 2018 and 2020, nursing offered 25 modalities of CAM in the city of São Paulo, especially auriculotherapy, which represented 64% of the procedures offered by all PHC professionals.

Auriculotherapy is based on the premise that the auricle is a microsystem that represents the vital and structural organs of the body. Needles, seeds, or crystals are used to stimulate specific spots, which transmit signals to the brain that modulate the physiological functions of each associated structure, rebalancing the central nervous system and alleviating a variety of pathological conditions. It is a relatively simple, easy-to-use, quick and accessible procedure performed by professionals with specialized training. Since it can be non-invasive, side effects are minimal.

As an evidence-based practice, nursing can take advantage of the positive results of auriculotherapy described in the treatment of women with dysmenorrhea and rare diseases. These findings suggest that it is a safe and promising practice for the nursing profession, whether for the care of PHC workers or the general population.

It is worth noting that other professions besides nursing offer CAM in PHC, because its potential in solving health problems is recognized and it is widely accepted by users. In a survey of acupuncture, PHC physicians cited lack of time and inadequate space as barriers to expanding this practice, although they valued its potential in addressing users’ health needs and its high acceptance.

Brazil is not the only country using CAM in PHC. A study with Portuguese PHC workers on CAM offer, specifically on the practice of yoga, highlighted the importance of bonding with users and showed that the practice of yoga in this context is feasible and safe, with high rates of adherence and satisfaction. Yoga significantly improved all domains of the practitioners’ quality of life after 24 weeks of practice: general health and psychological, physical, social, and environmental well-being. The mapping conducted in this study showed that the practice of yoga was almost null, not reaching 1% of the 48,268
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This shows that although yoga was well accepted by users in the Portuguese study, it is not yet widespread in Brazilian nursing, especially in the city of São Paulo.

While CAMs are seen as a complementary approach in healthcare based on the hegemonic biomedical model, it is believed that nursing has great potential for its delivery because of its tradition of taking a more holistic and integral view of care. In the last decade, the offer of CAMs has increased, especially in PHC. The data from Tabnet confirmed this trend in the city of São Paulo, showing an increase in the offer of CAMs between 2018 and 2019, which chronologically followed the adoption of the Municipal CAM Program.

The Covid-19 pandemic changed the pattern of CAM offering, even though the number of CAMs provided by nurses was higher in 2020 than in 2018, both in terms of number and percentage compared to all occupations. The total number of CAMs provided by all occupational groups decreased by 12% in 2020 compared to 2018 and by about 44% compared to 2019. This shows that the offer of CAMs in the first year of the Covid-19 pandemic had a different impact on each occupational group.

Despite efforts to map and analyze the offer of CAMs by nurses in the city of São Paulo in this study using official data, the numbers may not be accurate, as PHC demand is complex and makes it difficult to properly capture all activities performed by professionals. In addition, a concern in disclosing a CAM practice might exist because some professionals in the team may not be aware or value alternative practices; some CAMs are little known and have only recently been included and regulated in SUS. As shown by a previous study that compared the data on CAMs in the PMAQ-AB and surveys with managers, 14.7% of professionals classified CAMs as ‘other’, even though 26 types were described in the questionnaire. Data also indicated that CAMs can be perceived as a spontaneous need service rather than a planned practice.

According to a survey conducted between 2004 and 2015, the practice of Tai Chi Pai Lin, Lian Gong, and meditation have been expanding in the PHC in the city of São Paulo. Compared to the period studied in this research, from 2018 to 2020, nursing accounted for about 9% of the offer of mind-body therapies from traditional Chinese medicine; meditation accounted for 15% of the CAMs offered.

Between 2014 and 2016, the city launched a CAM training program for a thousand new professionals to offer body practices to the users of Basic Health Units (UBS). In addition, Decree 204/2019 was also instituted to strengthen and disseminate the CAM municipal program. Nation-wise, the course in auriculotherapy promoted by the Ministry of Health has already trained more than 4,000 health professionals from PHC. All these initiatives have favored the use of CAMs and the expansion of the offer to users; however, this study highlights that the nursing category has the potential to expand the scope of CAM practice and that the comparative percentage with other categories was low.

CAM offered by nurses includes individual activities, such as auriculotherapy, and collective activities, such as the mind-body therapies from traditional Chinese medicine, meditation, circle dance, art therapy, music therapy, and others. By incorporating this approach into healthcare, nursing can expand the understanding of care based on the mind-body relationship and even provide for the need for social interaction with group practices. The practice of nursing has been developed to provide care in a more humanistic and holistic way that can address the complexity of health and disease processes. The offer of CAM in PHC follows this dynamic, gaining space among professionals and acceptance among users every year.

CAM emphasizes light technologies and humanization, such as support and listening, which are fundamental to promote the necessary care process in the PHC context,
contrast to the complaint-treatment approach and medicalization of life. According to this understanding, CAM in PHC and SUS, offered by nursing, can be another approach and appropriation of integral care. This understanding is supported by research with users who confirmed that the offer of CAM increased dialog and negotiation with professionals about their health needs. CAMs were offered as an alternative to conventional treatments and as complementary practice, and in some situations, it even became the only treatment delivered by PHC professionals28.

In a study conducted with nurses working in FHS teams, it was found that the lack of knowledge about PNPIC, the lack of interest of managers, and the lack of investment and training made it difficult to implement CAMs in PHC, while the motivation of professionals and the positive reception by users were considered to be conducive29,30.

The year 2020 has been a prominent year for nursing for three reasons: because it has been defined by the Pan American Health Organization (PAHO) and the World Health Organization (WHO) as the international year of nursing and midwifery professionals; because of the Nursing Now campaign, which since 2018 has promoted education and training focused on the leadership of nurses; and, unexpectedly, because of the greatest health challenge in Brazil and the world in recent times, the Covid-19 pandemic. In the face of this critical pandemic scenario, CAMs can support nurses’ appreciation and leadership in health care. They can even be the bridge to reorder the health practices of nursing in PHC, considering the third and fourth wave after the pandemic: chronic patients whose treatments were interrupted by the pandemic and the increase of mental disorders caused by social isolation and loss of family members due to Covid-19.

With this in mind, a recent publication categorized CAM contributions in the fight against Covid-19 into five main groups: phytotherapy, mind-body therapies, traditional Chinese medicine interventions, dynamized homeopathic and anthroposophical medicines, and nutritional supplements that act on the immune response, mental health, and complementary clinical treatment of Covid-19 infections28. As shown in this study, nursing in the city of São Paulo offered yoga, mind-body therapies from traditional Chinese medicine, meditation, and aromatherapy techniques, with the possibility of adopting other CAMs for the treatment of the post-pandemic problems in the community.

In this way, the offering of CAMs by nurses in PHC through SUS can be considered an effective and innovative practice, since it favors light technologies and distances itself from the hegemonic care of social medicalization, which considers care as the consumption of health products: medical consultations, examinations, and medications. CAMs are seen as a differentiated approach to promoting comprehensive, longitudinal care with an expanded understanding of the health and disease process focusing on social well-being and improved quality of life; hence, a promising perspective for nursing. However, this study has shown that the offer of CAMs by nursing is still low in the city of São Paulo.

**Limitations of the study**

As a limitation of this study, CAMs may have been underreported by nurses in PHC because of difficulties in accurately estimating the number of services provided through CAM. It is possible that records of the activities are inadequate, as CAMs may be offered in nursing consultations and group practices without, for example, being registered under CAM.

**Contributions to the field**

CAM offered by nurses in PHC is an example of activities that bring together diverse potential, comprehensive and humanized care, and an expanded understanding of the health and disease process, but also have the potential
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to promote greater appreciation and leadership of the nursing practice in healthcare. The correct documentation of CAM procedures by nurses is essential to enhance this practice by nurses.

Conclusions

The offer of CAMs by nurses in PHC increased in the city of São Paulo between 2018 and 2019, although this increase was interrupted by the Covid-19 pandemic in 2020. The percentage CAMs offered by nursing is low, with less than 10% of the total CAM procedures in the three years studied.

The offer of CAM during the Covid-19 pandemic has been difficult due to the required social distancing and the suspension of group and elective activities, but CAMs might have potentials in dealing with the problems that can emerge with the third and fourth post-pandemic waves. From this point of view, nursing can expand the use of CAMs in individual and collective contexts, with the aim of providing integral care, but also of increasing the value and leadership of nursing in healthcare.

In this article, the offer of CAMs by nursing in PHC was assessed, taking into account the limitations of the obtained data, such as incorrect classification of procedures (as may occur, for example, in a nursing consultation). The importance of appropriate recording of these procedures by health professionals in SUS is emphasized. Investment in research on CAMs and nursing are encouraged, both to monitor the expansion of these approaches and to understand their impact on the care provided by nursing in SUS.

Collaborators

Pereira EC (0000-0003-4077-9998)*, Souza GC (0000-0003-4714-9462)*, and Schweitzer MC (0000-0001-9833-2932)* contributed equally to the preparation of the manuscript: collection and analysis of data, literature review, drafting, and final review of the article.

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