

## Use of integrative and complementary practices in patients with COVID-19: A scoping review

Uso das práticas integrativas e complementares em pacientes com COVID-19: Revisão de escopo

Uso de prácticas integradoras y complementarias en pacientes con COVID-19: Revisión de alcance

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### **Abstract**

**Objective:** to map in the literature the recommendations and considerations on the use of integrative and complementary practices in patients with COVID-19, identifying the perspectives and gaps that exist in this production. **Method:** a scoping review, carried out in the following databases: National Library of Medicine via PubMed®, Current Nursing and Allied Health Literature, Scopus, Embase, Web of Science, Latin American and Caribbean Literature on Health Sciences via the National Health Library, Americas Traditional Complementary and Integrative Medicine and in the National Observatory of Traditional, Integrative and Complementary Knowledge and Practices, including 20 studies with different methodological approaches that answered the following question: “What are the recommendations or considerations on the use of integrative and complementary practices in patients with COVID-19?” **Results:** the studies were originated mainly in China, presented varied methodological designs, and addressed 13 of the 29 practices included in the National Policy of Integrative and Complementary Practices. Among these, Traditional Chinese Medicine, with discussions involving phytotherapy, stood out. In general, the practices acted mainly in reducing the symptoms caused by COVID-19 and can contribute to the treatment of the disease. **Conclusion:** although there is an urgent need for more studies that investigate the use of integrative and complementary practices in patients with COVID-19, these therapies can assist in the treatment, in the prevention of diseases, and in the recovery of the patients.

**Keywords:** Complementary therapies; Complementary and alternative medicine; COVID-19; SARS-CoV-2.

### **Resumo**

**Objetivo:** mapear na literatura as recomendações e considerações sobre o uso das práticas integrativas e complementares em pacientes com COVID-19, identificando as perspectivas e as lacunas existentes nessa produção. **Método:** revisão de escopo, realizada nas bases National Library of Medicine via PubMed®, Current Nursing and Allied Health Literature, Scopus, Embase, Web of Science, Literatura Latino-Americana e do Caribe em Ciências da Saúde via Biblioteca Virtual em Saúde, Biblioteca Virtual em Saúde das Medicinas Tradicionais, Complementares e Integrativas das Américas e no Observatório Nacional de Saberes e Práticas Tradicionais, Integrativas e Complementares, incluindo 20 estudos com diferentes abordagens metodológicas que responderam a seguinte questão: “Quais as recomendações ou considerações sobre o uso das práticas integrativas e complementares em pacientes com COVID-19?”. **Resultados:** os estudos se originaram principalmente na China, apresentaram desenhos metodológicos variados e abordaram 13 das 29 práticas incluídas na Política Nacional de Práticas Integrativas e Complementares. Dentre essas, a Medicina Tradicional Chinesa, com discussões envolvendo a fitoterapia, se destacou. No geral, as práticas atuaram principalmente na redução dos sintomas provocados pela COVID-19 e podem

contribuir no tratamento da doença. *Conclusão*: embora exista uma necessidade urgente de mais estudos que investiguem o uso das práticas integrativas e complementares em pacientes com COVID-19, essas terapias podem auxiliar no tratamento da doença, na prevenção dos agravos e recuperação dos pacientes.

**Palavras-chave:** Terapias complementares; Práticas integrativas e complementares; COVID-19; SARS-CoV-2.

### Resumen

*Objetivo:* mapear en la literatura las recomendaciones y consideraciones sobre el uso de las prácticas integradoras y complementarias en pacientes con COVID-19, identificando las perspectivas y las lagunas existentes en esta producción. *Método:* revisión de alcance realizada en las siguientes bases de datos: National Library of Medicine a través de PubMed®, Current Nursing and Allied Health Literature, Scopus, Embase, Web of Science, Literatura Latino Americana y del Caribe en Ciencias de la Salud a través de la Biblioteca Virtual en Salud, Biblioteca Virtual en Salud de las Medicinas Tradicionales, Complementarias e Integradoras del Continente Americano, y en el Observatorio Nacional de Saberes y Prácticas Tradicionales, Integradoras y Complementarias, con inclusión de 20 estudios con diferentes enfoques metodológicos que respondieron a la siguiente pregunta: “¿Cuáles son las recomendaciones o consideraciones sobre el uso de las prácticas integradoras y complementarias en pacientes con COVID-19?”. *Resultados:* los estudios provienen principalmente de China, presentan diseños metodológicos variados y abordan 13 de las 29 prácticas incluidas en la Política Nacional de Prácticas Integradoras y Complementarias. Entre ellas, se destacó la Medicina Tradicional China, con debates sobre fitoterapia. En general, las prácticas tuvieron efecto principalmente en la reducción de los síntomas provocados por el COVID-19 y pueden contribuir en el tratamiento de la enfermedad. *Conclusión:* aunque no exista una necesidad urgente de realizar más estudios que investiguen el uso de prácticas integradoras y complementarias en pacientes con COVID-19, estas terapias pueden ser útiles en el tratamiento de la enfermedad, en la prevención de problemas de salud y en la recuperación de los pacientes.

**Palabras clave:** Terapias complementarias; Prácticas integradoras y complementarias; COVID-19; SARS-CoV-2.

## 1. Introduction

COVID-19 is an infectious disease caused by a virus of the coronavirus family (Sars-Cov-2) discovered in December 2019 in Wuhan, province of Hubei, China. Due to its rapid spread, up to January 19<sup>th</sup>, 2021, more than 93 million cases of the disease were recorded worldwide, with deaths that already exceed two million people (World Health Organization [WHO], 2021).

In this context, Brazil has stood out for its high contamination rate, occupying the third position in the world ranking of active cases; exceeding eight million infected individuals, and the second position in number of deaths (more than 209,000 death up to January 19<sup>th</sup>, 2021) (WHO, 2021). The situation in the country seems to be even more serious when observing that the disease notification rate represents only 9.2% of the real number of cases (Prado et al., 2020). In addition to that, the infected person can present from an asymptomatic condition to severe symptoms, and there are still no therapies for the prevention or treatment of the disease (WHO, 2021). As a result, it becomes challenging to plan and develop actions and strategies to confront COVID-19, both for managers and for health professionals.

Although there are reports of people who sought non-pharmacological and complementary methods in an attempt to treat the disease, the benefits and safety of these therapies are not fully elucidated (National Center for Complementary and Integrative Health [NCCIH], 2020). Countries like China and India have used their traditional medical systems, Traditional Chinese Medicine (TCM) and Ayurveda, respectively, as a treatment option for infected patients (Ganguly & Bakhshi, 2020; Yang, Islam, Wang, Li, & Chen, 2020).

In Brazil, in May 2020, the National Health Council (*Conselho Nacional de Saúde*, CNS) published Recommendation No. 041 for actions on the use of Integrative and Complementary Health Practices (ICHPs) during the COVID-19 pandemic (Brazil, 2020). This measure had great repercussion and followed the guidelines of the “World Health Organization (WHO) strategies on Traditional Medicine - 2014-2023” (World health Organization [WHO], 2013) and of the National Policy of Integrative and Complementary Practices (*Política Nacional de Práticas Integrativas e Complementares*, PNPIC) (Brazil, 2006), among other documents, to recommend the Ministry of Health, states and municipalities to make wide dissemination and availability of scientific evidence regarding the proper use of the ICHPs during

the pandemic (Brazil, 2020).

However, misinterpretations of this recommendation provided the understanding that the use of the ICHPs was proposed in substitution to drug treatments and as a cure method, opening space for the dissemination of fake news and induction of errors that could be harmful to the health of the population. What was recommended, in fact, was the use of the ICHPs directed to care in the face of physical and emotional distress triggered by the pandemic context, marked by fear of falling ill and dying, exhausting and at-risk work, emotional losses, mourning, insecurity and impoverishment; and, in this way, to provide quality of life and body and mind balance in isolation times (Brazil, 2020).

Therefore, when considering that the ICHPs contribute to quality of life, self-care and the general balance of the individual (Brazil, 2006), its benefits may assist in the management of signs and symptoms triggered by diseases and act in the prevention, promotion and recovery of health. Thus, the possibility of using the ICHPs in assisting patients with COVID-19 in this period of social distancing is emphasized.

Thus, it is understood that it is urgent to investigate what has been published in the national and international literature regarding the use of the ICHPs for patients with COVID-19; in order to disseminate knowledge, avoid new mistakes, and support professionals and researchers in the area, since there is still no consensus.

Therefore, the objective of this review is to map in the literature the recommendations or considerations on the use of the ICHPs in patients with COVID-19, identifying the perspectives and the gaps that exist in this production.

## **2. Methodology**

A scoping review, which followed the recommendations of the PRISMA-ScR (Tricco et al., 2018) international guide and the guidelines proposed by the Joanna Briggs Institute (Peters et al., 2020), observing six stages: (I) elaboration of the research question; (II) identification of relevant studies; (III) selection of studies; (IV) data mapping; (V) collection, summary and description of the findings; and (VI) disclosure of the results. This type of review is suitable for broad topics and allows synthesizing and mapping studies with different methodological designs, in order to track the evidence produced and anticipate the potential of a given area (Peters et al., 2020).

The research question was developed using the PCC strategy (Peters et al., 2020), where: **P**opulation = Patients with COVID-19; **C**oncept = The use of the ICHPs; **C**ontext = The COVID-19 pandemic. Thus, it is intended to answer the following guiding question: “What are the recommendations or considerations on the use of the ICHPs in patients with COVID-19?”

The databases selected to conduct the search were the following: National Library of Medicine (MEDLINE) via PubMed®, Current Nursing and Allied Health Literature (CINAHL), Scopus, Embase, Web of Science, and Latin American and Caribbean Literature on Health Sciences (LILACS) via the Virtual Health Library (BVS). For this, controlled and uncontrolled descriptors were defined (Chart 1).

**Chart 1** - Search terms selected from the PCC strategy. Ribeirão Preto,SP, Brazil. 2020.

Mnemonic PCC	Search terms DeCS/MeSH/Keywords
Population	Does not apply*
Concept	Complementary Therapies Alternative Medicine Integrative and Complementary Practices
Context	COVID -19 Severe Acute Respiratory Syndrome Coronavirus 2

\*The non-use of the *Population* in the search strategy was due to the fact that the authors consider that the descriptors used in the *Concept* include the *Population* under study. Source: Authors.

The search took place from August 12<sup>th</sup> to August 20<sup>th</sup>, 2020. All the descriptors were combined using the Boolean operators AND and OR, originating the search strategies presented in Chart 2.

**Chart 2** - Search strategy by database. Ribeirão Preto,SP, Brazil. 2020.

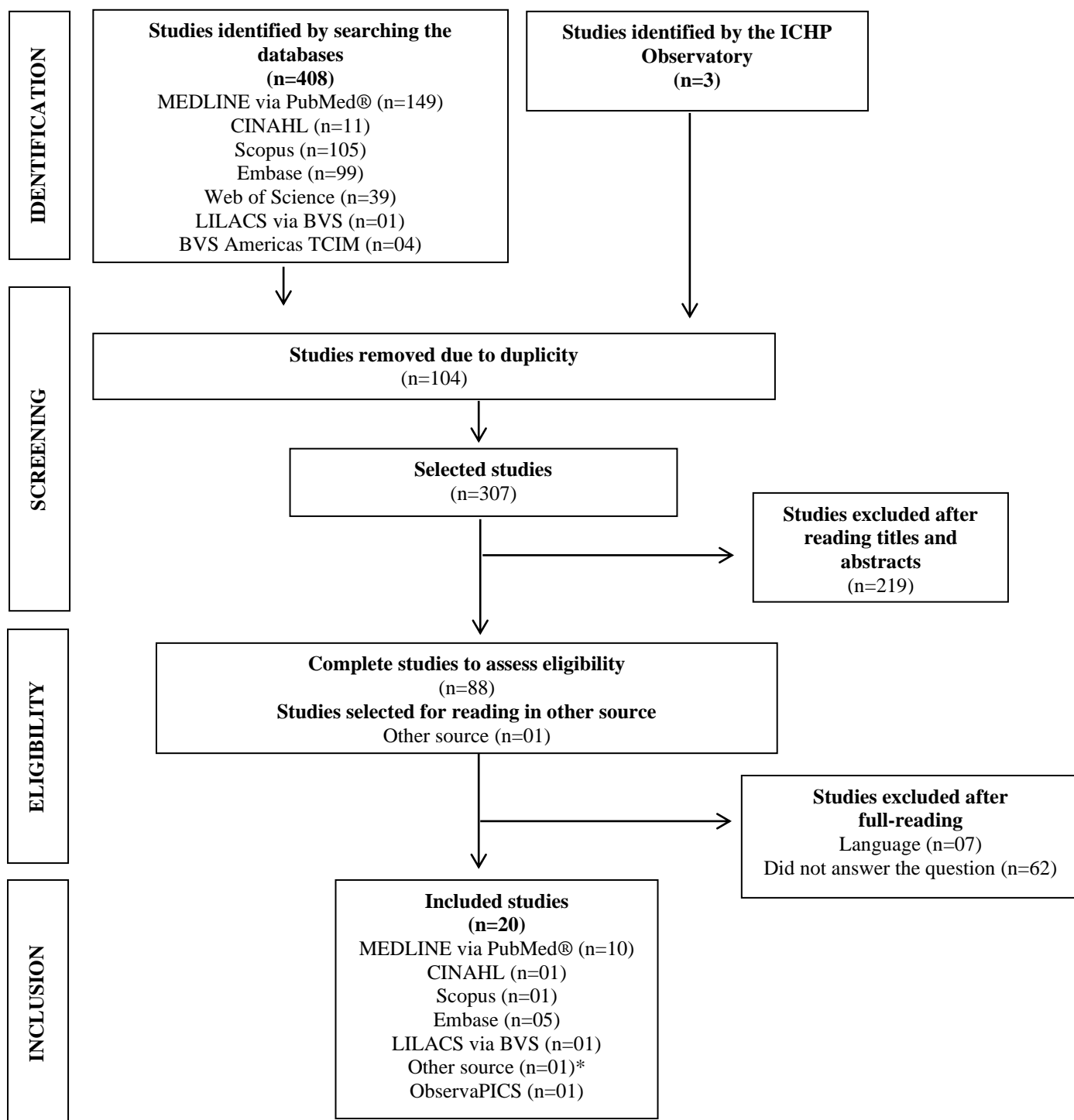
Database	Search strategy
MEDLINE via PubMed®	("Complementary Therapies"[Mesh] OR "Alternative Medicine") AND ("COVID-19" [Supplementary Concept] OR "severe acute respiratory syndrome coronavirus 2" [Supplementary Concept])
Scopus	( TITLE-ABS-KEY ( complementary AND therapies ) OR TITLE-ABS-KEY ( alternative AND medicine ) AND TITLE-ABS-KEY ( covid-19 ) OR TITLE-ABS-KEY ( severe AND acute AND respiratory AND syndrome AND coronavirus 2 )
Web of Science	TOPIC: (alternative medicine) AND TOPIC: (covid 19) TOPIC: (complementary therapies) AND TOPIC (covid 19)
CINAHL	(MH "Alternative Therapies") AND (MH "COVID-19")
Embase	('alternative medicine'/exp OR 'alternative medicine') AND ('coronavirus disease 2019'/exp OR 'coronavirus disease 2019')
LILACS via the Virtual Health Library (BVS)	((("TERAPIAS COMPLEMENTARES") or "TERAPIAS COMPLEMENTARES e integrativas") or "MEDICINA ALTERNATIVA") or "praticas integrativas e complementares" [Subject descriptor] and ("COVID-19") or "novo coronavirus (2019-ncov)" [Subject descriptor]

Source: Authors.

Aiming at maximizing the search field, the BVS evidence map of the Americas Traditional, Complementary and Integrative Medicines (TCIM) was consulted, considering the contributions of the TCIM in the context of the COVID-19 pandemic based on the "COVID-19" outcome (BVS, 2020), as well as the National Observatory of Traditional, Integrative and Complementary Knowledge and Practices (ObservaPICS) housed at the Oswaldo Cruz Foundation in the "COVID-19 & ICHP Special" section (National Observatory of Traditional, Integrative and Complementary Knowledge and Practices, 2020).

In order to assist in the selection and management of studies, the Rayyan QCIR® software was used (Ouzzani, Hammady, Fedorowicz, & Elmagarmid, 2016). During selection, studies that addressed at least one of the 29 ICHPs included in the PNPIC (Brazil, 2006; Brazil, 2017; Brazil, 2018) and published in Portuguese, English or Spanish were included. Review protocols were excluded. From the readings, during phases III and IV, if considered pertinent, other references could be consulted when it was verified that they had not been found in the selected databases. In this case, the search location was considered to be "Other source". The dynamics for the selection of articles is shown in Figure 1.

**Figure 1** - Flowchart of the selection of studies. Ribeirão Preto, SP, Brazil. 2020.



\*The inclusion of this study was based on the reading of the paper carried out by Ch'ng & Tang (2020). Source: Authors.

### 3. Results and Discussion

All included studies were published in 2020, the year in which the pandemic state was declared by the WHO (WHO, 2021) and addressed 13 of the 29 ICHPs included in the list of modalities of the PNPIC. The summary of the included studies, considering the authors, the year of publication, the country in which the study was developed, the type of study, the ICHPs addressed in the study, and the recommendations or considerations is shown in Chart 3.

**Chart 3** - Summary of the included studies. Ribeirão Preto, SP, Brazil. 2020.

Author (year). Country	Type of study	ICHP	Recommendations or considerations
Ren, Zhang, & Wang (2020). China	Letter to the editor	Phytotherapy (TCM)	The use of the TCM herbal formulas can improve the patient's clinical condition.
Xu & Zang (2020). China	Mailing	Phytotherapy (TCM)	TCM herbal formulas reduce the symptoms of patients with COVID-19.
Wang, Wang, Lu, Li, Song, Nyamangerelt, & Wang (2020). China	Narrative review	Phytotherapy (TCM)	TCM formulas, in a complementary way, enhance the general effects of the therapy.
Xiao, Tian, Zhou, Xu, Min, Lv, Peng, Zhang, Yan, Lang, Zhang, Fan, Ke, Li, Liu, Jiang, Liu, Zhu, Yang, Zhu, Zeng, Li, Zheng, Wu, Lin, Lian, Li, & Tong (2020). China	Randomized clinical trial	Phytotherapy (TCM)	TCM formulas combined with Western medicine offer clinical advantages to the patients.
Chan, Wong, & Tang (2020). China	Narrative review	Phytotherapy (TCM)	Chinese Medicine (formulas) can be considered an adjunctive therapeutic option in the treatment of COVID-19.
Zengli, Xiuhui, Chunyan, Li, Xiaolan, Chun, Yin, Jiaying, Aihua, Honyan, Yuan, Tongzeng, & Xiaojun (2020). China	Case report	Phytotherapy (TCM)	Phytotherapy (TCM formulas) can be considered in the treatment of COVID-19.
H-T. Zhang, Huang, Liu, Zheng, Li, Chen, Xia, & Hong (2020). China	Retrospective case-control	Phytotherapy (TCM)	Phytotherapy is safe for patients with COVID-19 and, combined with Western medicine, can present better results.
Fan, Gu, & Alemi (2020). United States	Systematic review with meta-analysis	Phytotherapy (TCM)	Phytotherapy, in a complementary way, helps to improve the results of the treatment of COVID-19.
Liu, Gao, Yuan, Yang, Shi, Zhang, & Tian (2020). China	Systematic review with meta-analysis	Phytotherapy (TCM)	Integrated medicine has better effects in the treatment of COVID-19 and does not increase the adverse effects of treatment.
Ang, Song, Lee, & Lee (2020). Korea	Systematic review with meta-analysis	Phytotherapy	The combination of phytotherapy and Western medicine improves the patients' symptoms.
A-H. Zhang, Ren, & Wang (2020). China	Letter to the editor	Phytotherapy (TCM)	TCM can be effectively integrated with Western medicine and its use must be guided by specialists.
Xu, Pan, & Jia (2020). China	Feasibility study	Moxibustion	Moxibustion may be able to prevent and treat COVID-19.
Tillu, Chaturvedi, Chopra, & Patwardhan (2020). India	Experts' comment	Ayurveda Yoga	Ayurveda acts in a prophylactic and auxiliary manner in the treatment of COVID-19; and Yoga is useful for preventing and recovering from the disease.
Feng, Tuchman, Denninger, Fricchione, & Yeung (2020). United States	Review	<i>Qigong</i>	<i>Qigong</i> can be useful in the prevention, treatment and rehabilitation of COVID-19.
Mustafa, Shamsuddin, Sulaiman, & Abudullah (2020). Malaysia	Letter to the editor	Apitherapy	Stingless bee honey can be considered in the treatment of COVID-19.
Nascimento (2020). Brazil	Supplement	Aromatherapy	Aromatherapy can be used as a therapeutic support for health professionals, for people with COVID-19 and for the community in general.

Chinese Association of Acupuncture-Moxibustion (2020). China	Guide	Acupuncture Moxibustion	Treatment must follow official recommendations prepared by specialists in the area and consider each patient according to the evolution of the disease.
State Health Secretariat of Santa Catarina (2020). Brazil	Technical note	Acupuncture Moxibustion Apitherapy Aromatherapy Phytotherapy Homeopathy Reiki/Body and manual techniques Music therapy Bach Flowers	Complementary and individual use of the ICHPs to promote physical, mental and emotional balance, helping the patient's recovery.
Gray & Belessis (2020). Australia	Letter to the editor	Phytotherapy (TCM)	TCM can cause adverse effects and, due to the placebo effect, the improvement in the cure rates of COVID-19 cannot be attributed to its use.
Ch'ng & Tang (2020). Malaysia	Letter to the editor	Apitherapy	Treating infected patients with stingless bee honey does not resonate well with the current understanding of COVID-19.

Note: In the "ICHP" column, the practice of the studies that addressed prescriptions based on medicinal herbs, TCM formulas and herbal medicine, was described as "phytotherapy". Source: Authors.

Chinese studies with discussions involving TCM were expressive in this review. This fact was expected since the benefits of this practice have already been experienced at other moments of health crisis, such as in the outbreak of the Severe Acute Respiratory Syndrome in 2003 and the H1N1 influenza in 2009 (Luo et al., 2020). In addition, China, the birthplace of TCM, was the country to report the first case of COVID-19 and, considering the repercussions of the disease, the looks turned to the country and the expectation for possible treatments, it was opportune to present the results of this practice and disseminate the knowledge anchored in its philosophy.

Throughout history, TCM has played a key role in the prevention and treatment of various epidemic diseases (Ren et al., 2020). Its complex and comprehensive medical system uses the relationship between man and nature in search of body balance and maintenance of physical and mental well-being. Treatment with this practice can be carried out through the use of medicinal plants (phytotherapy), moxibustion, acupuncture and body and mind exercises, among others, that assist in health care (Brazil, 2006).

In view of this, in this study, phytotherapy stood out for presenting good results when used in a complementary way to the treatment of contemporary Western medicine and aims to treat the body changes caused by COVID-19 (Ren et al., 2020; Xu & Zang, 2020; Wang et al., 2020; Xiao et al., 2020; Chan et al., 2020; Zengli et al., 2020; H-T. Zhang et al., 2020; Fan et al., 2020; Liu et al., 2020; Ang et al., 2020; A-H. Zhang et al., 2020). However, to ensure its success, it is essential to consider the progression of the disease and the severity of the clinical symptoms, as well as to establish the body imbalance that needs to be treated (Xu & Zhang, 2020; Wang et al., 2020; Xiao et al., 2020).

Thus, in patients with mild symptoms, phytotherapy demonstrated an improvement in the immune system and decreased time for the disappearance of symptoms and for the patient's recovery and, consequently, reduced the length of hospital stay in the cases requiring hospitalization. In addition to that, the improvement in the chest images and the increase in the number of people healed were noticeable. However, for severe symptomatic patients, its benefits were more timid (Ren et al., 2020). Therefore, it is observed that this practice reduces the symptoms, especially the mild

ones (Xu & Zhang, 2020; Chan et al., 2020), and slows the progression of the disease, which may impact on the reduction of the mortality caused by COVID-19 (Ren et al., 2020).

Herbal medicines have been prescribed to reduce cough, fever, fatigue, expectoration and reduce lung lesions, in addition to benefiting the patient's mental state (Chan et al., 2020; H-T. Zhang et al., 2020; Fan et al., 2020; Liu et al., 2020). Its use in an integrated way, that is, complementary to Western medicine, provides better outcomes, with fewer adverse effects (Fan et al., 2020; Liu et al., 2020; Ang et al., 2020), increasing the overall effectiveness of the treatment (Wang et al., 2020). However, it is important that this prescription is performed by trained professionals (A-H. Zhang et al., 2020) in order to improve the prognosis and increase treatment safety (Xiao et al., 2020).

In this context, some herbal formulas have been used in China with promising results. *Jinhua Qinggan* granules (decoction of medicinal herbs) were able to reduce the time of infection and promote the absorption of the inflammatory exudate from the lung, without significant adverse effects (Zengli et al., 2020). In addition to that, *Huoxiang Zhengqi* pills and *Lianhua Qingwen* granules (herbal formulas) improved the patients' symptoms and prognosis and reduced the consumption of anti-infectious drugs (Xiao et al., 2020). Such facts strengthen the use of herbal medicines as an adjuvant treatment.

Another practice addressed as complementary to the treatment of COVID-19 is moxibustion (Xu et al., 2020). Its application is based on TCM and is indicated to treat body imbalances, through indirect heating of acupuncture points scattered throughout the body through the burning of medicinal herbs (Brazil, 2006). Due to its anti-inflammatory property, it can be effective in relieving the symptoms and in preventing COVID-19 and, for that, according to the authors (Xu et al., 2020), it is suggested to apply it once a day, in points related to energy and physical imbalances resulting from the disease.

Practices such as Ayurveda and Yoga have also helped in the treatment of COVID-19. Ayurveda uses observations, experiences and natural resources, considering the physical, mental and spiritual body and the energy field, to prevent and cure diseases (Brazil, 2017). Thus, several measures such as the consumption of water and hot foods, decoctions of herbs, gargling with spices, inhalation of aromatic oil vapor, and the use of immunomodulators have been indicated to alleviate the mild symptoms of the disease. This practice advocates Yoga as essential for health in general, which, through breathing techniques, postures and procedures, strengthens the lungs and improves tolerance to exercise, recommending it in order to benefit mental health and reduce the risk of infection by Sars-Cov-2 (Tillu et al., 2020).

*Qigong*, a body and mind practice similar to Yoga, is recommended for the prevention, treatment and rehabilitation of patients with COVID-19, especially older adults (Feng et al., 2020). With the adjustment of movements and posture, this practice promotes body balance, improves organic function and immune response, manages emotions, and strengthens the muscles that assist in breathing. In this context, as older adults are more susceptible to infection and have a worse prognosis, *Qigong* can be useful for these patients in the prevention and treatment of COVID-19 (Feng et al., 2020). In addition to the ICHPs already mentioned, apitherapy and aromatherapy also demonstrate benefits for patients with COVID-19 (Mustafa et al., 2020; Nascimento, 2020). Apitherapy uses bee products, such as honey, to assist in the promotion and maintenance of health and in the treatment of diseases (Brazil, 2018). According to the authors (Mustafa et al., 2020), the properties of honey, which inhibit inflammation and regulate the interleukin-6 cascade (pro-inflammatory cytokine), can limit disease progression. In relation to aromatherapy, it is considered that this practice seeks to balance the body and improve the respiratory and immune systems (Nascimento, 2020). Thus, Nascimento (2020) recommends and guides the use of essential oils according to the symptoms presented by the patient.

Given the above, it is important to recognize the benefits of the ICHPs, especially in a pandemic time. However, the professional who works with these therapies must feel prepared and safe to apply them. In this sense, a small percentage of the



included studies (10.5%) (Chinese Association of Acupuncture-Moxibustion, 2020; Santa Catarina State Secretariat, 2020) denoted conducts that must be followed by professionals working with ICHPs.

The “Guide on the use of acupuncture and moxibustion to treat COVID-19 (second edition)” (Chinese Association of Acupuncture-Moxibustion, 2020) guides the use of acupuncture and moxibustion, from suspected cases to recovering patients. In this guide, acupuncture points are indicated to improve lung function and regulate the immune system, and the application of moxibustion under the supervision of a professional is recommended. This document suggests that the patients massage themselves on certain acupuncture points, as well as body and mind exercises, among other activities, with adequate guidance, so that treatment is timely and comprehensive (Chinese Association of Acupuncture-Moxibustion, 2020).

Accordingly, Technical Note No. 10/2020 (Santa Catarina State Secretariat, 2020), of the state of Santa Catarina, recommends the use of ICHPs individually and as a complementary strategy for primary health care. As they harmonize the body and stimulate the immune function, ICHPs are recommended to relieve mild respiratory symptoms and help patients recover. With this, acupuncture, homeopathy, reiki/body and manual techniques, music therapy and Bach flowers, among other practices, are advised in the self-application modality, when possible. In addition to that, it is suggested to suspend collective and face-to-face activities and to encourage the elaboration of teaching materials about the ICHPs, as well as the use of telecare appointments to guide the patients (Santa Catarina State Secretariat, 2020).

It is noteworthy, therefore, that the recommendations for the use of the ICHPs are mainly based on the improvement of the symptoms related to the disease. In this sense, most of the studies in this review (90%) support the use of ICHPs in the complementary treatment of COVID-19. However, two studies (10%) (Ch'ng & Tang, 2020; Gray & Belessis, 2020) are unfavorable to this use.

According to the authors (Gray & Belessis, 2020), there is not enough evidence to recommend practices such as TCM in the prevention and control of COVID-19, and their inappropriate use can generate risks for the patients. In addition to that, the indication of bee honey to act in the progression of the disease is questioned, since this is based only on its anti-inflammatory properties (Ch'ng & Tang, 2020). Therefore, the researchers (Ch'ng & Tang, 2020) claim that it is naive to suggest the effectiveness of some ICHPs in the treatment of COVID-19, while this is restricted only to the management of symptoms.

However, even in the face of controversies, the benefits of the use of ICHPs in the complementary treatment of COVID-19 have been demonstrated; presenting them is essential to expand this knowledge and assist in the care in the face of the patients' suffering.

#### **4. Conclusion**

Although encouraging, the findings of this study do not provide consistent recommendations on the use of the ICHPs in the treatment of patients with COVID-19. However, it is observed that these therapies can contribute in the pandemic context, since they demonstrate a reduction in the symptoms caused by the disease and favor the recovery of the patients. In addition to that, with a possible reduction in the number of hospitalizations or serious complications, the advantages extend to health professionals at different care levels.

Thus, the importance is emphasized of developing guidelines that will allow assistance with greater safety to support and guide the most appropriate therapy, especially in non-routine circumstances, such as the pandemic. The importance of considering and respecting the health protocols and the conditions of each location for the use of any ICP is also highlighted.

Finally, this review has limitations, such as the restriction of languages in the selection stage and the methodological quality of some of the included studies. Thus, it is suggested to carry out new research studies with methodological rigor, discussing the various practices included in the PNPIC, covering the COVID-19 context so that consistent recommendations

may be directed to the clinical practice.

## References

- Ang, L., Song, E., Lee, H. W., & Lee, M. S. (2020). Herbal Medicine for the Treatment of Coronavirus Disease 2019 (COVID-19): A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Journal of Clinical Medicine*, 9(5), 1583. <https://doi.org/10.3390/jcm9051583>.
- Asociación China de Acupuntura-Moxibustión. (2020). Guía sobre el uso de acupuntura y moxibustión para tratar COVID-19 (segunda edición). *Revista Internacional de Acupuntura*, 14(1), 13-16. <https://doi.org/10.1016/j.acu.2020.04.001>.
- Biblioteca Virtual em Saúde. (2020). Medicinas Tradicionais Complementares e Integrativas (MTCI). *Mapa de evidências: Contribuições das MTCI para COVID-19*. <https://mtci.bvsalud.org/pt/contribuicoes-das-medicinas-tradicionais-complementares-e-integrativas-mtci-no-contexto-do-covid-19/>.
- Brasil. (2020). Ministério da Saúde. Conselho Nacional de Saúde. *Nota explicativa: CNS nunca recomendou práticas integrativas em saúde como tratamento medicamentoso de Covid-19*. <http://conselho.saude.gov.br/ultimas-noticias-cns/1202-nota-explicativa-cns-nunca-recomendou-praticas-integrativas-em-saude-como-tratamento-medicamentoso-de-covid->.
- Brasil. (2020). Ministério da Saúde. Conselho Nacional de Saúde. *Recomendação nº 041 de 21 de maio de 2020. Recomenda ações sobre o uso das práticas integrativas e complementares durante a pandemia*. <http://conselho.saude.gov.br/recomendacoes-cns/1192-recomendacao-n-041-de-21-de-maio-de-2020>.
- Brasil. (2006). Ministério da Saúde. *Política Nacional de Práticas Integrativas e Complementares no SUS*. <https://bvsms.saude.gov.br/bvs/publicacoes/pnpic.pdf>.
- Brasil. (2017). Ministério da Saúde. *Portaria GM/MS nº 849 de 27 de março de 2017*. Inclui a Arteterapia, Ayurveda, Biodança, Dança Circular, Meditação, Musicoterapia, Naturopatia, Osteopatia, Quiropraxia, Reflexoterapia, Reiki, Shantala, Terapia Comunitária Integrativa e Yoga à Política Nacional de Práticas Integrativas e Complementares. Diário Oficial da União 2017, 27 de março. [https://bvsms.saude.gov.br/bvs/saudelegis/gm/2017/prt0849\\_28\\_03\\_2017.html](https://bvsms.saude.gov.br/bvs/saudelegis/gm/2017/prt0849_28_03_2017.html).
- Brasil. (2018). Ministério da Saúde. *Portaria GM/MS nº 702 de 21 de março de 2018*. Altera a Portaria de Consolidação nº 2/GM/MS, de 28 de setembro de 2017, para incluir novas práticas na Política Nacional de Práticas Integrativas e Complementares – PNPIC [Internet]. Diário Oficial da União 2018, 21 de março. [https://bvsms.saude.gov.br/bvs/saudelegis/gm/2018/prt0702\\_22\\_03\\_2018.html#:~:text=Alterar%20a%20Portaria%20de%20Consolidar%20a%20Pol%C3%A3tica%20de%20Pr%C3%A1ticas%20Integrativas%20e%20Complementares%20D%20a%20PNPIC.&text=1%20BA%20Ficam%20inclu%C3%ADdas%20novas%20pr%C3%A1ticas,Pr%C3%A1ticas%20Integrativas%20e%20Complementares%20D%20a%20PNPIC](https://bvsms.saude.gov.br/bvs/saudelegis/gm/2018/prt0702_22_03_2018.html#:~:text=Alterar%20a%20Portaria%20de%20Consolidar%20a%20Pol%C3%A3tica%20de%20Pr%C3%A1ticas%20Integrativas%20e%20Complementares%20D%20a%20PNPIC.&text=1%20BA%20Ficam%20inclu%C3%ADdas%20novas%20pr%C3%A1ticas,Pr%C3%A1ticas%20Integrativas%20e%20Complementares%20D%20a%20PNPIC).
- Chan, K. W., Wong, V. T., & Tang, S. C. W. (2020). COVID-19: An Update on the Epidemiological, Clinical, Preventive and Therapeutic Evidence and Guidelines of Integrative Chinese – Western Medicine for the Management of 2019 Novel Coronavirus Disease. *The American Journal of Chinese Medicine*, 48(3), 737–762. <https://doi.org/10.1142/S0192415X20500378>.
- Ch'ng, E. S., & Tang, T. H. (2020). Anti-inflammatory Properties of Stingless Bee Honey May Reduce the Severity of Pulmonary Manifestations in COVID-19 Infections?. *Malaysian Journal of Medical Sciences*, 27(3), 150–152. <https://doi.org/10.21315/mjms2020.27.3.16>.
- Fan, A. Y., Gu, S., & Alemi, S. F. (2020). Chinese herbal medicine for COVID-19: Current evidence with systematic review and meta-analysis. *Journal of Integrative Medicine*, 18(5):385–394. <https://doi.org/10.1016/j.joim.2020.07.008>.
- Feng, F., Tuchman, S., Denninger, J. W., Fricchione, G. L., & Yeung, A. (2020). Qigong for the Prevention, Treatment, and Rehabilitation of COVID-19 Infection in Older Adults. *The American Journal of Geriatric Psychiatry*, 28(8), 812–819. <https://doi.org/10.1016/j.jagp.2020.05.012>.
- Ganguly, S., & Bakhshi, S. (2020). Traditional and complementary medicine during Covid-19 pandemic. *Phytotherapy Research*, 34, 3083-3084. <https://doi.org/10.1002/ptr.6828>.
- Gray, P. E., & Belessis, Y. (2020). The use of Traditional Chinese Medicines to treat SARS-CoV-2 may cause more harm than good. *Pharmacological Research*, 156, 104776. <https://doi.org/10.1016/j.phrs.2020.104776>.
- Liu, M., Gao, Y., Yuan, Y., Yang, K., Shi, S., Zhang, J., & Tian, J. (2020). Efficacy and Safety of Integrated Traditional Chinese and Western Medicine for Corona Virus Disease 2019 (COVID-19): a systematic review and meta-analysis. *Pharmacological Research*, 158, 104896. <https://doi.org/10.1016/j.phrs.2020.104896>.
- Luo, H., Tang, Q., Shang, Y., Liang, S., Yang, M., Robinson, N., & Liu, J. (2020). Can Chinese Medicine Be Used for Prevention of Corona Virus Disease 2019 (COVID-19)? A Review of Historical Classics, Research Evidence and Current Prevention Programs. *Chinese Journal Integrative Medicine*, 26, 243-250. <https://doi.org/10.1007/s11655-020-3192-6>.
- Mustafa, M. Z., Shamsuddin, S. H., Sulaiman, S. A., & Abudullah, J. M. (2020). Anti-inflammatory Properties of Stingless Bee Honey May Reduce the Severity of Pulmonary Manifestations in COVID-19 Infections. *Malaysian Journal of Medical Sciences*, 27(2), 165–169. <https://doi.org/10.21315/mjms2020.27.2.17>.
- Nascimento, A. (2020). *Aromaterapia: o poder das plantas e dos óleos essenciais*. Recife: Fiocruz-PE. ObservaPICS. <http://observapics.fiocruz.br/wp-content/uploads/2020/06/Cuidado-integral-na-Covid-Aromaterapia-ObservaPICS.pdf>.
- National Center for Complementary and Integrative Health. (2020). *In the News: Coronavirus and “Alternative” Treatments*. <https://www.nccih.nih.gov/health/in-the-news-coronavirus-and-alternative-treatments>.
- Observatório Nacional de Saberes e Práticas Tradicionais, Integrativas e Complementares. (2020). *Especial COVID-19 & PICS*. <http://observapics.fiocruz.br/covid-19/>.
- Organización Mundial de la Salud. (2013). *Estrategia de la OMS sobre medicina tradicional 2014-2023*. <http://www.abiomac.org.br/wp-content/uploads/2014/03/Estrategia-OMS-Medicina-Tradicional-2014-2023.pdf>.

- Ouzzani, M., Hammady, H., Fedorowicz, Z., & Elmagarmid, A. (2016). Rayyan — a web and mobile app for systematic reviews. *Systematic Reviews*, 5, 210. <https://doi.org/10.1186/s13643-016-0384-4>.
- Peters, M. D. J., Godfrey, C., McInerney, P., Munn, Z., Tricco, A. C., & Khalil, H. (2020). Chapter 11: Scoping Reviews (2020 version). In: Aromataris E, Munn Z (Editors). *JBIM Manual for Evidence Synthesis*, JBI. <https://synthesismanual.jbi.global>. <https://doi.org/10.46658/JBIMES-20-12>.
- Prado, M. F. D., Antunes, B. B. P., Bastos, L. D. S. L., Peres, I. T., Silva, A. A. B. D., Dantas, L. F., & Bozza, F. A. (2020). Analysis of COVID-19 under-reporting in Brazil. *Revista Brasileira de Terapia Intensiva*, 32(2), 224-228. <https://doi.org/10.5935/0103-507x.20200030>.
- Ren, J-L., Zhang, A-H., & Wang, X-J. (2020). Traditional Chinese medicine for COVID-19 treatment. *Pharmacological Research*, 155, 104743. <https://doi.org/10.1016/j.phrs.2020.104743>.
- Secretaria do Estado de Santa Catarina. (2020). Secretaria de Estado da Saúde. Superintendência de Planejamento em Saúde. Diretoria de Atenção Primária à Saúde. *Nota técnica 10/2020*. Orientação para profissionais de saúde no uso de práticas integrativas e complementares no período de pandemia do COVID-19 – versão 1. [https://www.saude.sc.gov.br/coronavirus/arquivos/Nota%20Tecnica\\_10\\_DAPS\\_SPS\\_SES\\_PICS.pdf](https://www.saude.sc.gov.br/coronavirus/arquivos/Nota%20Tecnica_10_DAPS_SPS_SES_PICS.pdf).
- Tillu, G., Chaturvedi, S., Chopra, A., & Patwardhan, B. (2020). Public Health Approach of Ayurveda and Yoga for COVID-19 Prophylaxis. *The Journal of Alternative and Complementary Medicine*, 26(5), 360–364. <https://doi.org/10.1089/acm.2020.0129>.
- Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., & Weeks, L. (2018). PRISMA Extension for Scoping Reviews (PRISMA ScR): Checklist and Explanation. *Annals of Internal Medicine*, 169, 467–473. [10.7326/M18-0850](https://doi.org/10.7326/M18-0850).
- Wang, S., Wang, Y., Lu, Y., Li, J., Song, Y., Nyamgerelt, M., & Wang, X. (2020). Diagnosis and treatment of novel coronavirus pneumonia based on the theory of traditional Chinese medicine. *Journal of Integrative Medicine*, 18(4), 275–283. <https://doi.org/10.1016/j.joim.2020.04.001>.
- World Health Organization. (2021). *WHO Coronavirus Disease (COVID-19) Dashboard*. <https://covid19.who.int/>.
- Xiao, M., Tian, J., Zhou, Y., Xu, X., Min, X., Lv, Y., & Tong, X. (2020). Efficacy of Huoxiang Zhengqi dropping pills and Lianhua Qingwen granules in treatment of COVID-19: A randomized controlled trial. *Pharmacological Research*, 161, 105126. <https://doi.org/10.1016/j.phrs.2020.105126>.
- Xu, J., & Zhang, Y. (2020). Traditional Chinese Medicine treatment of COVID-19. *Complementary Therapies in Clinical Practice*, 39, 101165. <https://doi.org/10.1016/j.ctcp.2020.101165>.
- Xu, J., Pan, L., & Jia, C. (2020). Exploration on the feasibility of moxibustion in prevention and treatment of COVID-19 from the perspective of modern medical mechanism. *World Journal of Acupuncture – Moxibustion*, 30(2), 81–84. <https://doi.org/10.1016/j.wjam.2020.06.001>.
- Yang, Y., Islam, M. S., Wang, J., Li, Y., & Chen, X. (2020). Traditional Chinese Medicine in the treatment of patients infected with 2019-new coronavirus (sars-cov-2): a review and perspective. *International Journal of Biological Sciences*, 16(10), 1708-1717. [10.7150/ijbs.45538](https://doi.org/10.7150/ijbs.45538).
- Zhang, A-H., Ren, J-L., & Wang, X-J. (2020). Reply to “The use of traditional Chinese medicines to treat SARS-CoV-2 may cause more harm than good.” *Pharmacological Research*, 157, 104775. <https://doi.org/10.1016/j.phrs.2020.104775>.
- Zhang, H-T, Huang, M-X., Liu, X., Zheng, X-C., Li, X-H., Chen, G-Q., & Hong Z-S. (2020). Evaluation of the Adjuvant Efficacy of Natural Herbal Medicine on COVID-19: A Retrospective Matched Case-Control Study. *The American Journal of Chinese Medicine*, 48(4), 779–792. [10.1142/S0192415X20500391](https://doi.org/10.1142/S0192415X20500391).
- Zengli, L., Xiuhui, L., Chunyan, G., Li, L., Xiaolan, L., Chun, Z., & Xiaojun, W. (2020). Effect of Jinhua Qinggan granules on novel coronavirus pneumonia in patients. *Journal of Traditional Chinese Medicine*, 40(3), 467–472. [10.19852/j.cnki.jtcm.2020.03.016](https://doi.org/10.19852/j.cnki.jtcm.2020.03.016).