

# Use of home remedies for the treatment and prevention of coronavirus disease: An integrative review

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## Abstract

**Background and Aims:** Home remedies are understood to mean medications or tonics prepared at home to treat certain ailments without any prescription or professional supervision. Reliance on home remedies increased during coronavirus disease 2019 (COVID-19). The aim of this integrative review was to identify home remedies used to treat and prevent COVID-19 and discuss implications for nursing practice and health related to the safety and efficacy of home remedies.

**Methods:** Cooper's integrative review method guided this study to identify home remedies used to prevent and treat COVID-19. Google Scholar, BMC, EBSCOhost, Medline, Academic Search Ultimate, Web of Science Core Collections, Science Direct and Global Health were used to search for relevant information on the use of COVID-19 home remedies from 2019 to 2022. The Critical Appraisal Skills Program (CASP) checklist was used to select studies that had to be included. The eligibility criteria included studies on home remedies, written in English from 2019 to 2022. Findings of qualitative, quantitative and mixed-methods research were extracted, and narrative thematic data synthesis was applied.

**Results:** Eleven articles which met the inclusion criteria were found in nine countries: Ghana (1), South Africa (1), Tanzania (1), Togo (1) and Zimbabwe (1), Bangladesh (1), Hong Kong (1), India (2), Iran (1), and Pakistan (1). Findings showed that home remedies are used for the prevention of COVID-19 infection, treatment of COVID-19, and boosting immunity.

**Conclusions:** Home remedies have been found to be more pronounced across all sectors and social strata. More research is needed on the use of home remedies for life-threatening outbreaks. Policymakers and healthcare workers are challenged to encourage the use of home remedies in the prevention of other ailments and epidemics that might occur in the future.

## KEYWORDS

coronavirus, COVID-19, home remedies, integrative review, prevention, treatment

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## 1 | INTRODUCTION AND BACKGROUND

The discovery and consequential spread of the coronavirus disease 2019 (COVID-19) virus caused panic among various countries and communities globally.<sup>1</sup> The WHO<sup>2</sup> reported that by March 2020, 118,000 people were already infected in 114 countries, and the death toll was over 4000. It took 67 days to reach the first 100,000 reported cases. As of August 16, 2022, over 587,455,360 million people were infected globally, with infections rising rapidly in many countries. Many governments were unprepared for the unequal impact of COVID-19 and its moderating effects among different groupings in society. This led to major risks of exacerbating health, social and economic inequities in the long term and creating new vulnerabilities within populations.<sup>3</sup> Before the COVID-19 pandemic, there were already some differences in individuals' access to healthcare in different countries.<sup>3</sup> Research has exposed the socioeconomic inequities in the use of healthcare services.<sup>4</sup> COVID-19 exposed the inequities that resulted in heavy reliance on the use of readily home remedies.<sup>5</sup> These inequalities in modern healthcare partly led to people resorting to the use of other healthcare alternatives, some of them being the use of home remedies.

Studies have revealed that most people who contract COVID-19 develop only mild (40%) or moderate (40%) disease. Fifteen (15%) of patients develop severe illness, while 5% experience critical symptoms with complications such as respiratory failure, acute respiratory distress syndrome (ARDS), septic shock, thrombo-embolism, and/or multiorgan failure, including acute renal failure and injury.<sup>6</sup> Some chronic conditions such as cancer, chronic lung disease, cardiac diseases, hypertension, and diabetes – as well as old age and smoking – have been reported as risk factors for severe disease progression and possible death.<sup>7</sup> Psychological symptoms such as anxiety and depression have also been noted as common amongst people who were hospitalized with COVID-19.<sup>8</sup> Ayele et al.<sup>9</sup> reported that many older individuals sought to manage their medical conditions using different home remedies, and their interactions with other medications are not known. The authors of this article are of the view that similar situations might occur with the increased use of home remedies for COVID-19. Despite the launch of primary health care (PHC) in 1978, which aimed at universal healthcare coverage, indigenous people and underserved communities have limited access to affordable health care. These challenges led to a reliance on nonconventional therapy.

Tyler<sup>10</sup> asserted that the increased use of herbal medicine could be aimed at capturing traditional healing systems through conventional medicine in Europe and North America, where herbal products were fused together and became known as alternative, complementary, holistic, or integrative medical systems. The increased use of herbal remedies was also a result of increased interest in self-care, which is found to be useful for the health of consumers.<sup>11</sup>

Studies conducted in the United States have further indicated that the use of home remedies is widely practiced by individuals who have economic and social difficulties because of the availability and accessibility of the products.<sup>12</sup>

In South Africa, for instance, the uncertainty created by COVID-19 resulted in many people depending on home remedies, with some even calling on governments to legalize and test some of these natural herbs. At the time, the most used natural herbs in South Africa were Lengana (*Artemisia afra*), Mušukušwane (*Lippia javanica*) and Cannabis.<sup>13</sup> Lengana is believed to be a blood purifier and it is believed to heal common ailments such as cold, fever, and liver diseases. Whereas drinking Mušukušwane is believed to be an immune booster. The most traditional homestead is used during winter to prevent cold and flu.<sup>13</sup> Cannabis is acclaimed to reduce chronic pain and fever. Its uses are under review. Drinking olive oil and eating home-grown nuts were found to allay some COVID-19 symptoms, such as forgetfulness. The consumption of olive oil reportedly improves health as it contains phenolic compounds that continue to be investigated for their scientific use.<sup>14</sup> Eating home-grown nuts (sprouted nuts) has also been found to boost antioxidants and hence helpful in preventing certain ailments.<sup>15</sup> It must be noted that most of these home remedies have not been scientifically tested and hence their interaction with other medications is unknown.

### 1.1 | Formulation of the problem

According to Cooper,<sup>16</sup> the formulation of a problem begins with a definite description of the purpose of the review and an explicit explanation of the subject under review.<sup>16</sup> Furthermore, Cooper<sup>16</sup> states that a well-defined problem and purpose provide a clear problem focus and limits for the integrative review process.

For this review, home remedies are regarded as simple measures of symptom management from minor health complaints or prevention of certain ailments. Such simple measures include the use of tonics, herbs, and spices that are easily available at home.<sup>17</sup> COVID-19 refers to a respiratory tract infection caused by the coronavirus, first discovered in China, in December 2019.<sup>18,19</sup> Treatment means using a combination of approaches (medications, behavioral change, and healthcare for physical, and psychological symptoms) during appropriate periods of time to suit individuals' needs.<sup>20</sup>

### 1.2 | Aim of the study

This integrative review aimed to synthesize published studies' findings on the use of home remedies for the treatment and prevention of COVID-19.

### 1.3 | Objectives

The study's specific objectives were to:

1. Find common home remedies used for the prevention and treatment of COVID-19.

2. Identify specific uses of each home remedy in preventing and managing COVID-19; and
3. Make recommendations for practice and further research.

## 2 | METHODS

The integrative review affords a greater understanding of a particular phenomenon. It provides a blend of information and applicable results for practice, thus appraising the merits of available evidence. Cooper's<sup>16</sup> five-stage process of integrative reviews was used in conducting this review.

The methodology encompasses five stages: (1) problem formulation, (2) search methods, (3) data evaluation (4) data analysis and interpretation, and (5) public presentation of results. Ethical approval and informed consent were not applicable as no human records were used.

### 2.1 | Problem formulation

The problem formulation phase was based on the initial literature search and the researchers' acknowledgment that there is a need for more knowledge of the use of home remedies. Existing knowledge of the use of home remedies was scarce and at times non-existent in some countries. Hence, the need for an integrated review.<sup>21</sup>

### 2.2 | Search methods

The data collection included a literature search. The search strategy was employed over two phases. The initial search was conducted on

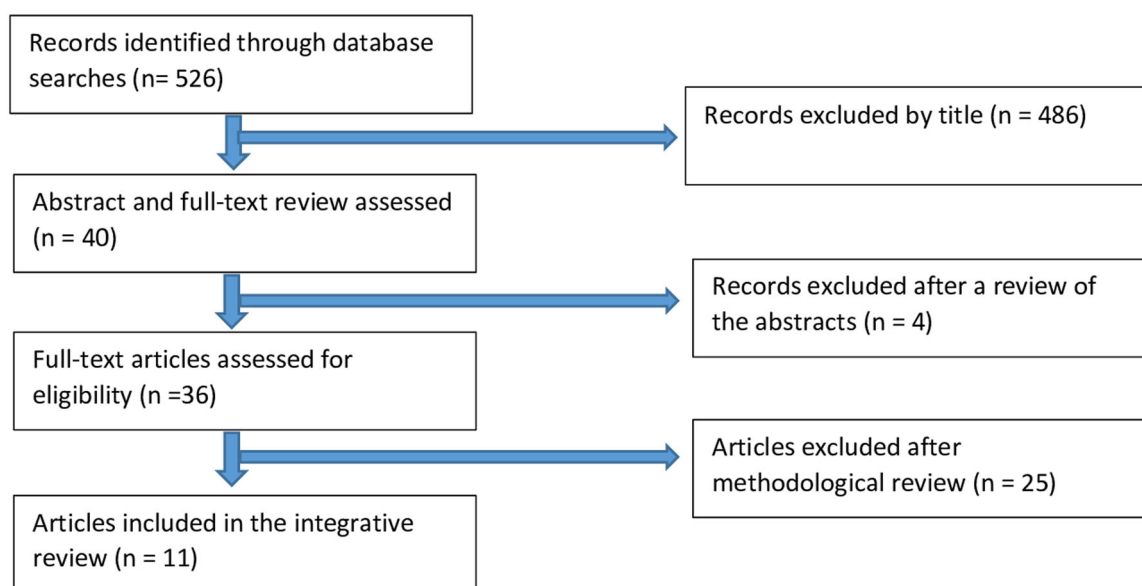
August 2 and September 2, 2021. With the assistance of the librarian, four members (RGM, GBT, VK, and WB) of the research team searched the following international databases: EBSCOhost, Google Scholar, Medline, Academic Search Ultimate, Global Health, Web of Science Core Collection and Science Direct. A combination of search terms, using the Boolean operations 'AND' and 'OR' included: 'Corona virus', 'COVID-19', 'home remedies', 'prevention', 'treatment', and 'integrative review'. The second search was conducted on 15 March 2022, and similar search engines and keywords were used as in phase one; 526 articles were identified. Articles included were from 2019 to 2022.

After scrutinizing the 526 selected articles, 486 articles were eliminated due to the inappropriateness of their titles, resulting in 40 citations. The 40 articles were further screened and four were excluded after the abstracts were deemed inappropriate. These were further assessed for methodological eligibility, and 25 were excluded; 11 articles remained.

Figure 1 outlines the systematic elimination and selection of relevant articles.

### 2.3 | Inclusion and exclusion criteria

Inclusion criteria were limited to original research studies that reported on the use of home remedies. Because of the novelty of COVID-19, the review considered qualitative, quantitative, and mixed-methods approaches, and articles published between 2019 and 2022. All studies were written in English, as this was the only international language known to the researchers. Furthermore, Di Bitetti and Ferreras<sup>22</sup> are of the view that articles written in English are the most cited. Studies were excluded if they did not identify which home remedies were used. Editorials,



**FIGURE 1** Flowchart indicating articles' selection criteria.

commentaries, systematic reviews, dissertations or theses, abstracts, or conference abstracts, those published before 2019, not peer-reviewed, and not focusing on home remedies were excluded.

## 2.4 | Data evaluation

In this stage, the researcher critically evaluates whether the data elements or results are worthy of remaining in the study set. This stage helps to enhance the quality of resources in the review method while at the same time meaningfully addressing the primary sources.<sup>21</sup> The researchers (RGM and GBT) read and evaluated the retrieved articles for repetition, relevance, methodology, quality of samples, and sampling methods. Later, all authors collectively read, discussed, and agreed on the 11 articles that satisfied all the inclusion criteria.

## 2.5 | Selection and quality assessment

Database searches identified 526 articles. Individual articles were arranged according to their title, research design, year, relevance, data analysis, and findings. The 2013 Critical Appraisal Skills Programme Qualitative Research Checklist (CASP) was used to assess the quality of the selected studies. The use of CASP enables the researchers to systematically assess the trustworthiness and relevance of published research papers. Figure 1 summarized the selected articles.

## 2.6 | Data extraction and synthesis

At the beginning of the review, all original papers were read several times to get an overview of the content. Data were extracted to a table by three researchers (RGM; WMB; and GTT) following predetermined criteria according to author particulars and year of publication, study objective, methodology, sampling, and sample characteristics, as well as the use of home remedies for the treatment and prevention of COVID-19 (Table 1).<sup>21</sup> All three authors met and revised the reviewed articles to agree on the final articles to include and make necessary amendments. The three authors conducted an analysis to identify the common themes.

The data analyses included qualitative, quantitative, and mixed-method studies. Directed content analysis was used for data analysis,<sup>23</sup> which encompassed the use of home remedies during the COVID-19 pandemic. A data table was developed to display all extracted categories. As data were further evaluated and salient points became evident, each primary source was reviewed to synthesize findings on the use of home remedies for the treatment and prevention of COVID-19.

## 3 | FINDINGS

### 3.1 | Characteristics of articles included

Eleven full articles were included for appraisal and review. Reports were published between 2019 and 2022 and were from Africa (South Africa, Togo, and Zimbabwe), and Asian countries (BMC Bangladesh, Hong Kong, India, Iran, and Pakistan). None of the articles was from countries in Europe or the United States. Participants included mainly older individuals, both males and females. Data from the articles that were reviewed and met the inclusion criteria were thematically analyzed. The themes that emerged included remedies for the treatment of COVID-19, remedies for the prevention of COVID-19, and remedies for immune boosters. Refer to Table 2 for a summary of the thematic analysis.

### 3.2 | Theme 1: Remedies for the treatment of COVID-19

Most people who contracted COVID-19 develop mild symptoms and do not get admitted to hospitals but manage their symptoms at home. People in Asian countries like Bangladesh, India, Iran, and Pakistan use a number of plant-based remedies, including a warm mixture of ginger, cloves, coriander, black cumin seeds, and honey, fruits high in Vitamin C, garlic, turmeric, cinnamon, black pepper, Ayurveda and Chinese chaste tree powder, while others drink herbal teas.<sup>24–26</sup> Ginger is used to treat common health problems such as pain, nausea, and vomiting.<sup>47</sup> In other countries such as Pakistan and India, people eat soups, use eucalyptus incense, and wipe their bodies with a tepid sponge to alleviate COVID-19 symptoms, such as fever chills, myalgia, throat aches, and shortness of breath. Similar remedies are used in African countries, such as Zimbabwe and South Africa, where it is common to drink garlic, lemon, and ginger concoctions and practice steam inhalation. In addition, native plants such as zumbani, mango leaves, gum leaves, zumba leaves and warm water are used to treat COVID-19 symptoms and general illness. African communities also use tobacco snuff to help them sneeze and decongest the respiratory system.<sup>30,48</sup>

### 3.3 | Theme 2: Remedies for the prevention of COVID-19

It is globally understood that COVID-19 has no specific treatment. The use of vaccines helped in reducing the intensity of the COVID-19 symptoms Centre for Disease Control (CDC) 2022. However, there are suggestions from different regions around the globe on the use of home remedies to prevent attacks by the virus. Because of the fear of the disease, people are inundated with information about what can help protect them from infection. Reports from Asia and Africa revealed that certain products are used to prevent COVID-19

TABLE 1 Summary of articles: Home remedies used for the treatment and prevention of coronavirus disease (COVID-19)

References	Location	Title	Study aims/objectives	Research methods	Sampling methods & sample	Findings of home remedies used
Adebiyi et al. <sup>17</sup>	Cape Town, South Africa	How South African families protected themselves during the COVID-19 pandemic: A qualitative study	To explore how families protected themselves during the COVID-19 pandemic using a qualitative exploratory design	Qualitative exploratory design	Convenient and snowball sampling - 31 adult participants	Most South Africans used spices, herbs and citrus fruits like garlic and warm water, ginger, honey, and lemon tea to boost their immune system, detoxify, and act as an anti-inflammatory.
Azam et al. <sup>24</sup>	Bangladesh	Some home remedies used for treatment of COVID-19 in Bangladesh	To collect various data on home remedies used by COVID-19-positive patients with or without other treatment and their outcomes in several parts of Bangladesh	Qualitative study	Snowballing - 3 patients were recruited through an informal network of friends, relatives, and neighbors	Plant-based home remedies were used to treat COVID-19 symptoms, including a warm mixture of ginger, cloves, black cumin seeds, honey, fruits high in Vit C, garlic, turmeric, cinnamon, black pepper and honey, and Ayurveda. Slices of ginger and lemon juice, as well as watermelon juice, were taken several times with regular tea. Holy basil, black pepper and Chinese chaste tree powder were regularly taken (three times) during Ramadan fasting (1st seven days of isolation) and four times after the end of Ramadan. All got cured with no side effects.
Charan et al. <sup>25</sup>	India	Use of complementary and alternative medicine (CAM) and home remedies by COVID-19 patients: A telephonic survey	To determine the safety of these interventions' long-term use	Quantitative design	Random sampling - 128 patients telephonic survey	Respondents used turmeric, cumin, coriander, and garlic spices while cooking. They also drank herbal tea or Kadha added with Tulsi (Basil), cinnamon, black pepper, dry ginger, and raisins. Many responded (59.6%) that they had consumed Ayurvedic Kadha home remedies to boost their immunity and prevent infections. They reported no acute or severe adverse effects.
Jesmi et al. <sup>26</sup>	Iran	Lived experiences of patients with COVID-19 infection: A phenomenology study	To describe patients' experiences with COVID-19 infection	Qualitative phenomenological approach	Purposive and snowballing - 14 patients with COVID-19 (9 women and 5 men) aged 20-60 years	Participants were taking vitamins, eating soup, drinking herbal tea, eucalyptus incense and wiping themselves with a wet sponge to strengthen their physical

(Continues)

TABLE 1 (Continued)

References	Location	Title	Study aims/objectives	Research methods	Sampling methods & sample	Findings of home remedies used
Kretchy et al. <sup>27</sup>	Ghana	Utilization of complementary and alternative medicine for the prevention of COVID-19 infection in Ghana: A national cross-sectional online survey	To assess the role of illness perceptions towards COVID-19 and CAM utilization while documenting the prevalence and pattern of home remedies	Quantitative cross-sectional study	Convenience and snowball sampling – 1195 participants (644 women and 551 men)	Most participants used complementary and alternative medicine (82.5%); 88.1 used vitamins, 23.3% used prayer, and 19.4% used herbs and diet therapy. Home remedies included cloves, pineapple, activated charcoal, dandelion, cashew, turmeric, black pepper, garlic, onion, negro pepper, grains of paradise, pawpaw, lemon, cinnamon, lemongrass, ginger, chilli pepper, neem, hibiscus, moringa leaves, prekese, bitter root, mango, African basil and pear.
Lam et al. <sup>28</sup>	Hong Kong	A public survey of traditional complementary and integrative medicine (TCIM) uses during the COVID-19 outbreak in Hong Kong.	To investigate the prevalence and patterns of TCIM during the pandemic and identify factors associated with its use among the general population in Hong Kong	Quantitative design: Online cross-sectional survey	Simple random sampling followed by snowballing – 632 respondents. Hong Kong residents above the age of 18 years.	44% used TCIM such as vitamins/dietary supplements, and 19.3% used Chinese herbal medicine. 88.8% mostly used it to strengthen their immune system. Commonly used herbal products include: Lingzhi Ganoderma Lucidum (2.5%), Chrysanthemi Flos (1.5%), Isatidis Radix (1.8%), and Glycyrrhizae Radix ET Rhizoma (1.8%).
Mansoor et al. <sup>29</sup>	Pakistan	Surviving COVID-19: Illness narratives of patients and family members in Pakistan	To explore the emic perspective of survivors and their family members with regard to their lived experience of Covid-19	Cross-sectional qualitative research using the phenomenological approach	Purposive non-probability sampling method – 22 individuals (10 family members and 12 survivors)	The most frequently used home remedies included Kalwanji, hot water and green tea, steam, Haldi gargles with warm water, hot lemon water, multivitamins, and honey and neem patty for the treatment and management of COVID-19 symptoms.

TABLE 1 (Continued)

References	Location	Title	Study aims/objectives	Research methods	Sampling methods & sample	Findings of home remedies used
Marevesa, Mavengano & Nkamta <sup>30</sup>	Zimbabwe	Home remedies as medical development in the context of the COVID-19 pandemic in Zimbabwe: A cultural memory paradigm	To investigate the home remedies' medicinal contribution during the pandemic in Zimbabwe	Qualitative exploratory design	Purposive involving: herbalists, health personnel, pastors, and church members (Sample size not specified)	Zimbabwe's traditional medicines include Zumbani, moringa, steaming with mango leaves, tobacco snuff, gum leaves and Zumba leaves and drinking garlic, lemon, and ginger concoctions to treat Covid-19 symptoms and general illness.
Mshana et al. <sup>31</sup>	Tanzania	Contested or complementary healing paradigms: women's narratives of COVID-19 remedies in Mwanza, Tanzania	To explore how women and community members dealt with suspected symptoms of COVID-19 in Mwanza, Tanzania	Qualitative longitudinal study	Purposive sampling – 18 participants (women aged 27-57 years)	There is wide use of traditional remedies to treat and prevent suspected COVID-19 symptoms, such as steaming with local herbs and other ingredients, eating fruits, vegetables, ginger, cloves, and other spices, and drinking a concoction of ginger, red onion, garlic, lemon, and honey with warm water.
Sadio et al. <sup>32</sup>	Lome <sup>1</sup> -Togo	Assessment of self-medication practices in the context of the COVID-19 outbreak in Togo.	To estimate the prevalence of self-medication to prevent COVID-19 and its associated factors in Lome <sup>1</sup> -Togo	Quantitative cross-sectional study	Random sampling – 955 respondents who had never tested positive and been hospitalized from 5 sectors i.e., health care, air transport, police, road transport and informal sectors	Self-medication prevalence achieved a 95% confidence interval. Most respondents used Vit C (27.6%) and traditional medicine (10.2%) of an unknown mixture to treat COVID-19. The study warned against the excess use of Vit C, which causes kidney stones.
Singh et al. <sup>33</sup>	India	Spices and herbs: Potential antiviral preventives and immunity boosters during COVID-19	To highlight the potential of common spices and herbs as antiviral agents and immune boosters	Quantitative study	Convenience sampling method – 531 people of different ages from 13-68 years. Online survey	To combat COVID-19 infection and boost the immune system, 98.6% reported that spices are helpful; 78.1% were taking Kadha, 86.1% reported that Kadha have no side effects, and 13.9% reported side effects. Most respondents were using Tulsi drops, Vitamin C and Chyawanprash to boost their immunity. Spices and herbs with antiviral properties such as cinnamon, turmeric, black

(Continues)

TABLE 1 (Continued)

References	Location	Title	Study aims/objectives	Research methods	Sampling methods & sample	Findings of home remedies used
Singh et al. <sup>33</sup>	India	Patient experiences and perceptions of chronic disease care during the COVID-19 pandemic in India: A qualitative study	To describe the lived experiences and challenges faced by people with chronic conditions, their coping strategies, and the social and economic impacts of the COVID-19 pandemic	Exploratory qualitative design	Purposive sampling method – 41 participants (25 men and 16 women) with chronic conditions (hypertension, diabetes, stroke, and cardiovascular disease)	pepper, basil, giloy, neem, cloves, ginger, and garlic were used to combat infections and boost immunity. Steam inhalations, drinking herbal juices, decoction (Kadha) and hot water were taken as preventive measures for COVID-19.

Abbreviation: COVID-19, coronavirus disease 2019.

infection.<sup>17,32,45</sup> Some preventative remedies include steam inhalation, drinking herbal juices, decoction (Kadha) and hot water; these are mainly used in Asian countries like Bangladesh, Pakistan, and India.<sup>24,29,45</sup> Vitamin C and concoctions containing garlic, lemon and ginger, other native herbs and warm water are commonly used in Africa.<sup>30–32</sup> Despite having no pharmacological rationale for using these remedies, they have proven effective.

### 3.4 | Theme 3: Remedies as immune boosters

The overarching concern for people infected with COVID-19 is whether their bodies will withstand the effects of the virus. Many people worry about how strong their immune system is and therefore want to strengthen their body's defences. People believe that certain natural remedies help boost the immune system. Such remedies include different spices, herbs and citrus fruits, garlic and warm water, ginger, honey, and lemon tea.<sup>17</sup> Lam et al.<sup>28</sup> agrees that taking multivitamins, a supplementary diet containing high proteins, and using Chinese herbal medicine help boost the immune system. In India, natural spices such as Kadha and turmeric (known to have no side effects) have proven to boost immunity. Turmeric has been used to treat wounds, colds, and liver diseases.<sup>49</sup>

## 4 | DISCUSSION AND RECOMMENDATIONS

This integrative review intended to synthesize published studies on the use of home remedies for the treatment and prevention of COVID-19. The review analyzed 11 articles and extracted three themes, namely remedies for the treatment of COVID-19, remedies for the prevention of COVID-19, and remedies to boost the immune system.

During the epic COVID-19 pandemic, everyone was overwhelmed and in fear of the outcome of the infection. Many people opted to complement modern medicine with home remedies to accelerate their recovery. Others felt it was better to use remedies that typically relieve similar symptoms as those of COVID-19. Consequently, they opted to use home remedies such as holy basil, lemon, ginger, black pepper, and Chinese chaste tree powder.<sup>24</sup> Fortunately, many were cured without any side effects. Other remedies included warm mixtures of ginger, cloves, coriander, black cumin seeds, honey, fruits high in Vitamin C, garlic, turmeric, cinnamon, and black pepper. To alleviate symptoms of the virus, such as fevers, myalgia, throat aches, and shortness of breath, people wiped their bodies with warm, wet sponges. They also prepared tonics from garlic and performed steam inhalations. These strategies are congruent with the findings by Nuertey et al.,<sup>50</sup> who reported that the use of specified herbs, certain tree leaves, and steam inhalation is generally believed to kill SARS-CoV-2. Specific remedies like garlic are common and can be used in different forms, such as powder, raw, in oils, and as an extract. Garlic has been found to



TABLE 2 Thematic analysis

Main theme	Code in texts
Remedies for the treatment of COVID-19	<p>The Ministry of Health and AYUSH in India advised people to use natural home remedies as potential alternative treatments.<sup>34</sup></p> <p>Home remedies, such as salt/vinegar, warm water gargles, ginger, peppermint, eucalyptus, chamomile, hot water with honey, lemon and cinnamon, and garlic have therapeutic values. Steaming, and inhalations with essential oils like peppermint, menthol, eucalyptus or frankincense are helpful.<sup>35</sup> In support of the therapeutic value of baking soda, vinegar, lemon juice, and apple cider vinegar,<sup>36</sup> claim it is a miraculous cure for everything, including COVID-19.<sup>37</sup> found that Nigeria and Madagascar used steam inhalants as anti-Covid agents.<sup>38</sup> reported that gargling with warm saline and coconut oil for 30 s, followed by a rinse of water, is proven to be effective and safe for reducing pain and swelling.</p> <p>The top five plant species identified to fight COVID-19 include <i>Camellia sinensis</i> (1.0), <i>Allium sativum</i> (0.984), <i>Azadirachta indica</i> (0.966), <i>Zingiber officinale</i> (0.966), and <i>Syzygium aromaticum</i> (0.943).<sup>28,39</sup> According to a study in Pakistan,<sup>29</sup> revealed that many survivors of COVID-19 and their families navigate through complementary healing practices, and there have been increased Google searches for home remedies to treat chest pain.<sup>40</sup></p>
Remedies for the prevention of COVID-19	<p>Home remedies are frequently used and found to have a positive effect on the symptoms of COVID-19, in strengthening the physical condition, and regaining lost energy.<sup>26</sup> Nine compounds of spices were used in India as preventative measures against COVID-19.<sup>41</sup></p>
Remedies as immune boosters	<p>Indian traditional systems, such as Ayurveda, Siddha, Unani, homeopathy, and yoga are used to improve and boost the body's immune system.<sup>24,42,43</sup></p> <p>Traditional Chinese herbal medicine concoctions are used to treat the novel coronavirus.<sup>44</sup></p> <p>Zimbabwe's traditional concoction of ginger, garlic, tobacco snuff, lemon leaves, guava tree leaves, and honey is used to treat COVID-19.<sup>30</sup></p> <p>Nine spice compounds that fight COVID-19 are used in India.<sup>41</sup></p> <p>Spices and herbs, such as Kadha, are used with fewer side effects to combat<sup>45</sup> and treat COVID-19.<sup>30</sup> The use of immune-boosting ancestral remedies, such as spices and flowers, was reported to defend against the Corona attack.<sup>46</sup> About 88.8% of respondents in Hong Kong used traditional complementary and integrative medicine to strengthen the immune system, 25.3% used vitamins, and 19.39% used Chinese herbal medicine.<sup>28</sup></p>

contain allicin, a sulfur-containing phytonutrient likely to be the source of its antibacterial and antiviral properties.<sup>51</sup> Afolabi et al.<sup>52</sup> further reported that many people attest to being cured after consuming herbs and vegetable leaves. Abdalla and McGaw<sup>53</sup> assert that using natural products has a long history in human existence.

Some countries have approved the use of natural products in the management of COVID-19.<sup>24,28,30</sup> However, there is little or no clinical evidence of their efficacy and safety. Natural products may hold great potential in the fight against COVID-19, but without detailed clinical trials, their potency against the virus and their safe use need to be established.

The prevention of SARS-CoV-2 has become increasingly important in many countries as a way of curbing the condition and avoiding morbidity. India, Pakistan, Hong Kong, Iran, South Africa, Zimbabwe, and other countries use traditional medicine to prevent COVID-19. There are several spices and herbs in use common to these countries. Their use is also attributed to the herbs and vegetables being more readily available than in Western medicine.<sup>54</sup> Commonly used products include herbal juices, decoction (Kadha) and concoctions with Vitamin C, garlic, lemon and ginger, hot water, and steam inhalations. Natural products possess promising antiviral effects against human CoVs, which may guide the development of novel antiviral prophylactics. Soleymani et al.<sup>55</sup> also supports the use of plants and natural products, as several plants and natural remedies have been deemed effective in preventing COVID-19.

Immune-boosting food and herbal supplements can help in the prevention and management of patients with COVID-19. Natural compounds may provide alternative prophylaxis by boosting the immune response in the preexposure stage.<sup>55</sup> This review revealed that most people in Africa and Asia use products such as spices, herbs, citrus fruits, garlic, ginger honey, and lemon teas, as well as warm water<sup>17,45</sup>; the results of which have proven effective. It is within this premise that the authors are of the view that home remedies can be used as a preventive measure.

The authors acknowledge that healing with home remedies is as old as mankind. Some of these remedies have a proven history of effectiveness and people relied on them for treating certain ailments.<sup>56</sup> An observation was made that in some instances those who sought medical care also combined it with home remedies.<sup>57</sup> An essential list of home remedies needs to be developed to provide guidelines about their actions and side effects. The authors further recommend more research inquiry into all remedies used in different countries as a way of complementing and advancing modern medicine.

## 5 | LIMITATIONS

Search strategies for this review were a limitation.<sup>21</sup> Search engines are reported to only identify half of the suitable studies because of the unreliable use of terms.<sup>21</sup> COVID-19 is a new

condition hence more studies are yet to be conducted. To avoid both publishing and language bias, all articles deemed to be relevant to the topic were included if they were peer-reviewed, regardless of the journal they were published in. This is a limitation as it could have included those journals deemed as predatory. Although there was no limitation in language, all included articles were in English.

## 6 | IMPLICATIONS FOR NURSING PRACTICE

The findings could help nurses advocate for the use of home remedies to boost individuals' immunity and fight disease. Furthermore, the beneficial value of traditional medicine should be well understood, so that correct information is given to communities. Traditional practitioners were included as part of the caring and curing team during the HIV pandemic. With COVID-19 there were not included as full participants in some countries.<sup>58</sup> Consultation with them is needed and they should make part of the health care team.

## 7 | IMPLICATIONS FOR RESEARCH

Further research on the efficacy and effectiveness of home remedies should be conducted to provide empirical evidence about their use and effectiveness. There are numerous home remedies that were found to be commonly used such as Lengana (*Artemisia Afra*), Cannabis and Mušukušwane (*Lippia Javanica*). These need to be further studied and to be tested in scientific laboratories to ensure that they are effective and do not interfere with other medications.

## 8 | IMPLICATIONS FOR THE HEALTH POLICY

Policies on the use of home remedies should be available to regulate their use and effectiveness. The WHO should provide clear guidelines on the use of home remedies as an alternative treatment to fight COVID-19. An essential home remedies list should be developed regarding its usage. It has started in other countries such as South Africa where cannabis is used for medicinal purposes for cancer and other chronic conditions. Such policies should be made universal.

## 9 | CONCLUSION

Generally, the use of home remedies remains a vital therapeutic measure for COVID-19. Further research and a rigorous approach should be explored on the effectiveness and safety of home remedies. Generally, spices, herbs, and plant-based products are commonly used to boost immunity and fight COVID-19.

## AUTHOR CONTRIBUTIONS

**Rakgadi Grace Malapela:** Conceptualization; Data curation; Formal analysis; Methodology; Project administration; Resources; Validation; Writing – original draft; Writing – review & editing. **Gloria Thupayagale-Tshweneagae:** Conceptualization; Data curation; Formal analysis; Methodology; Writing – original draft; Writing – review & editing. **William M. Baratedi:** Conceptualization; Data curation; Formal analysis; Methodology; Writing – original draft; Writing – review & editing.

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## CONFLICT OF INTEREST

The authors declare no conflict of interest.

## DATA AVAILABILITY STATEMENT

The authors confirm that the data supporting the findings of this study are available within the article and the supplementary material has been included.

## ETHICS STATEMENT

Existing information from published, reviewed journals, on the effective use of home remedies, was used. Therefore, ethical approval and informed consent were not required as no human records were used. PRISMA guidelines will be used to publish key findings in a peer-reviewed journal.

## TRANSPARENCY STATEMENT

The lead author Rakgadi Grace Malapela affirms that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

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