

## Analysis of self-medication in pandemic period: integrative literature review

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**Abstract:** Self-medication is defined as a practice of using over-the-front medication, and under so many uncertainties and the fear of the population, it began to enter a severe emotional state, in which the irrational use of medications and self-medication increased greatly. The present study aims to systematize the knowledge produced in national scientific publications, about the factors that evidence the practice of self-medication in a period of COVID-19 pandemic. Being an integrative literature review,

where the collection was composed of scientific articles taken from electronic bases of scientific publications, and from the evaluations of the publications, 7 articles were selected to make up the analysis and categorization proposed in this study because it met the inclusion criterion. In the end, it was noticed that there was a considerable increase, where their use took the lead, due to the supposed treatments for Covid-19.

**Keywords:** Self-medication. Health education. COVID-19. Indiscriminate use of medications

## 1. Introduction

Coronavirus, or COVID-19, is designated as a respiratory syndrome, with its first evidence in 2019 in Wuhan, China. It spread rapidly throughout the world, and a pandemic scenario was declared in March 2020 by the World Health Organization (WHO). Recently 110 million people have been affected worldwide, resulting in more than 2 million deaths (WHO, 2021).

With the manifesto of social isolation, the use of masks and gel alcohol, they became one of the main measures to combat, however, the idea of having a new virus, little known, related to a large number of deaths, generated in the population a feeling of anguish and fear, which led to the practice of the use of self-medication (SOUZA *et al.*, 2021).

According to Datafolha, through® a recent survey conducted by the Federal Council of Pharmacy (CFF), it showed that 77% of Brazilians perform self-medication. This evidence can be explained many times by the lack of trust in the health professional, by the low access to health systems, or even by the lack of information (SANTOS *et al.*, 2021).

According to the National System of Toxic-Pharmacological Information (SINITOX), the biggest problem of the irrational use of these drugs is in their efficacy and safety, which can be compromised, where numerous intoxications caused by the inappropriate use of medications are recorded, the most manipulated, for the treatment of COVID-19, anti-rheumium, anti-inflammatory drugs, analgesics, vitamin C, azithromycin and chloroquine/hydrochloroxyquina (BAKER, 2020; MÉGARBANE, 2020; KAPOOR, *et al.*, 2020).

Under so many uncertainties and the fear of the population, it began to enter a serious emotional state, in which the irrational use of medications and self-medication increased greatly, trying to protect the lethality of such a disease, where the widespread practice of antibiotics should be discouraged, in which its use can lead to higher rates of bacterial resistance, affecting the volume of diseases and deaths, especially during the COVID-19 pandemic (WHO, 2020; GARCIA *et al.*, 2021).

Thus, self-medication is defined as a practice of using over-the-call medications, as well as the use of drugs in order to treat self-diagnosed diseases or symptoms, and that the lack of reliable information has led people to use their own methods of treatment, causing the induction of certain drugs without medical and/or multi professional supervision. In view of this, the irrational use of medicines has taken over, in charge of the alleged treatment for COVID-19 (MELO *et al.*, 2020).

The construction of the study was induced from the theme self-medication in a pandemic period, resulting in the

guided question: What factors corroborate the practice of self-medication in a covid-19 pandemic period?

The present study is justified by the scarcity of studies addressing this proposal, with the initiative of understanding what are the risks that self-medication can cause to human health. As well as ratifying the incentive of good practices for the rational use of drugs in the midst of the covid-19 pandemic scenario.

Based on these assumptions, the objective was to systematize the knowledge produced in national scientific publications, about the factors that evidence the practice of self-medication in a pandemic period of COVID-19.

## 2. Methodology

It is an article of a bibliographic nature described, through an integrative literature review, which is considered an instrument of practice based on evidence, where for this, a bibliographic survey of articles was carried out, enabling the inclusion of theoretical literature, as well as studies with different methodological approaches - quantitative and qualitative, through a process of systematic analysis and synthesis.

The collection was composed of scientific articles taken from electronic bases of scientific publications, being identified the following: VHL (Virtual Health Library), Scientific Electronic Library Online (SciELO) and Latin American and Caribbean Literature in Health Sciences (Lilacs).

The inclusion criteria adopted for this research were: articles indexed free of charge in full, in Portuguese and published between 2020 and 2021. Exclusion criteria adopted: documents in other formats such as master's and/or doctoral dissertations; review articles; articles not available in full, in a foreign language.

The crossing of the terms occurred using the following key words: Self-medication; Health education; COVID-19; Indiscriminate use of medications. Then, a careful reading of the articles was performed and those that adapted to the proposed theme were selected for analysis, so the main information collected from the articles was used for the discussions of this article expanding the knowledge about the theme addressed.

## 3. Results and Discussion

In the crossing of the descriptors in Health Sciences (DeCS) and Medical Subject Heading (MeSH), through the combination through boolean and connectors, using 3

databases, in all, 23 publications were obtained, among these, 7 were selected to make up the analysis and categorization proposed in this work. Thus, 16 studies were evaluated and excluded because they did not present a theme consistent with the one addressed in this study. From the analysis of the articles, the following were selected (Table 1).

**Table 1.** Articles Selected from the search with the keywords: Self-medication; Health education; COVID-19; Indiscriminate use of medicines (August to September 2021).

N°.	Origin	Securities	Goals	Results and conclusions	Authors	Year
01	Research, Society and Development.	Self-medication in the COVID-19 pandemic period: Integrative review.	The object was to write the factors that corroborate the practice of self-medication in a covid-19 pandemic period.	The articles showed that self-medication was promoted in the pandemic period, being used both for prevention and treatment of COVID-19.	OLIVEIRA <i>et al.</i>	2021
02	HC Quality Magazine.	Self-medication analysis in the COVID-19 scenario: a rapid systematic review.	The objective of this study was to systematically identify, evaluate and summarize the best available scientific evidence so far on self-medication and its relationship with COVID-19.	After the evaluation process, only one study was selected that showed an overview of the drugs that have been used for this disease.	GENTILEMAN, A. H.; UNGARI, A.Q.	2021
03	Cover Sheet Magazine.					
				Global public health emergency by COVID-19 pandemic: misinformation, information asymmetry and discursive validation.		
				Investigate and discuss the processes and informational dynamics surrounding the global public health emergency by the COVID-19 pandemic, with emphases.		
				In the COVID-19 pandemic there are many tensions, controversies and conflicts between health authorities, researchers, health professionals, critical thinkers and human and social rights defenders.	LIMA <i>et al.</i>	2021
04	Ibero-American Journal of Humanities.					
				Self-medication in the pandemic of the new coronavirus.		
				The present study aimed to expose the inadequate use of prescribed and exempt drugs due to their easy access during social isolation.		
				Incorrect use of these substances can cause serious side effects, other types of pathologies or even dependence.	SILVA <i>et al.</i>	2021
05	Braz. J. H. Pharm.					
				Irrational use of medicinal products and medicinal plants against COVID-19 (SARS-CoV-2):		
				Addressing critical issues related to the irrational use of medicinal products and		
				The dissemination of fake News on social media, dissemination of preliminary scientific results in an irresponsible manner and	LIMA <i>et al.</i>	2020

		An emerging problem.	medicinal plants against infection caused by the new coronavirus.	escalation of prescriptions for drugs without indication.					chloroquine and critically analyze the use of the drug in the context of the pandemic, discussing the role of the media and government authorities.			
06	Ibero-American Journal of Humanities, Sciences and Education - REASE.	Analysis of self-medication during the pandemic of the new coronavirus: a look at azithromycin.	The objective of this work was to conduct a review study on azithromycin resistance promoted by indiscriminate use during the COVID-19 pandemic.	In view of the above, it was found that self-medication has become increasingly frequent in this pandemic period.	LEAL <i>et al.</i>	2021						
07	Brazilian Journal of Health Review.	The risks of hydroxychloroquine self-medication in the face of the COVID-19 pandemic.	Describe the adverse reactions of hydroxychloroquine, as well as describe the risks of self-medication, enumerate the most prevalent and severe drug interactions with hydroxy	Scientific studies to date do not refer to any medicinal product considered effective in the treatment of COVID-19. Like any other hcq medicine has serious adverse effects that can even lead to death, WHH also has potentially toxic drug interactions.	SANTO S <i>et al.</i>	2021						

Source: Author's elaboration.

In view of the pandemic of the new coronavirus, which is an RNA virus, positive sense, not segmented and enveloped that belongs to the family called *Coronaviridae*, being essential action of a pharmaceutical professional, thus assisting in the attention and care in this period. As pharmacological measures, the pharmacist may indicate home isolation, which includes care regarding inaction and hygiene education (CAVALHEIRO & UNGARI, 2021).

The studies brought broad and differing approaches in research on self-medication in the covid-19 pandemic period. It was possible to understand that self-medication can cause undesirable health effects, however a global adversity, for which it has been practiced for many years even before the pandemic. With isolation, a good part of the population used popular knowledge through the Internet, with biased information to lean towards self-care regardless of health knowledge or the assistance of a trained professional (LEAL *et al.*, 2021).

Due to the lack of drugs that act as prophylactic, or that directly assist in the treatment of covid-19, during the pandemic period, a behavioral intensification of the population was observed in self-medicating, believing that thus they would be safer and thus the great demand for dietary supplements, such as vitamins and minerals, to strengthen immunity and prevent virus infection (SILVA, JESUS & RODRIGUES, 2021)

According to Lima *et al.* (2020), this has since caused great and worrying impacts, which has had serious consequences for the global health system. Although several drugs are being tested for the treatment of covid-19, different opinions on efficacy have been misbehest.

Oliveira *et al.* (2021), cites an example of the President of the United States, where the president promotes the use of hydroxychloroquine and azithromycin for the treatment of covid-19, leading countless people to self-Medicare, taking drug overdose. Already to Santos *et al.* (2021), the pandemic crisis caused by covid-19, faced worldwide, caused the population to enter a serious state, in the face of calamity, depression and panic syndrome have increasingly emerged, increasing the use of medications.

#### 4. Conclusions

The consumption of medicines inappropriately by the population had a considerable increase where their use took the lead, due to the supposed treatments for Covid-19. Still, it is emphasized that so far, there is no conclusive scientific evidence to prove the use of certain drugs for the treatment against covid-19.

Thus, later studies may take into account the different problems that self-medication may bring, in the same way that the risks of indiscriminate ingestion of antibiotics and drug interactions may occur. Therefore, too much consumption with medicines used in an erroneous way by the population increased excessively.

The news is still incipient and that the spread of untrue information through social media leads to the population's misinformation about the adoption of self-medication. It is necessary to disperse correct information, updating the population in relation to prevention measures against the virus, avoiding harmful actions, such as self-medication.

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